Unesco Programme
on Man and the
Biosphere (MAB)

United Nations
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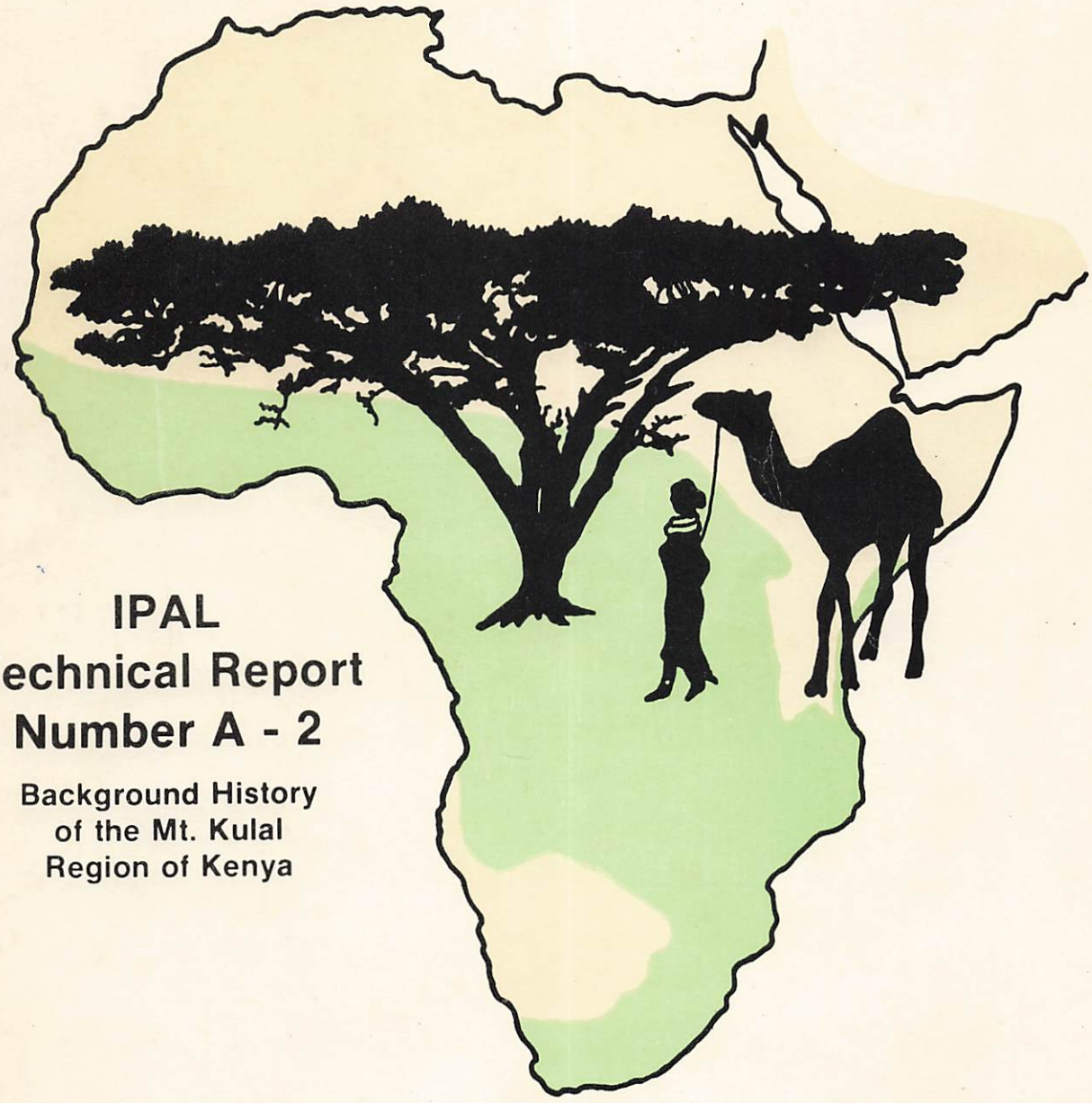
Integrated Project in Arid Lands (IPAL)



IPAL
Technical Report
Number A - 2

Background History
of the Mt. Kulal
Region of Kenya

MAN AND THE BIOSPHERE
PROGRAMME

Project 3: Impact
of Human Activities
and Land Use Practices
on Grazing Lands

IPAL Technical Report Number A - 2

BACKGROUND HISTORY OF THE MT. KULAL REGION OF KENYA

by

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December 1979

UNEP - MAB Integrated Project in Arid Lands

SUMMARY INTRODUCTION TO IPAL AND THE TECHNICAL REPORT SERIES

The Integrated Project in Arid Lands (IPAL) was established by UNESCO with financial support from UNEP in 1976 with the aim of finding direct solutions to the most urgent environmental problems associated with desert encroachment and ecological degradation of arid lands. It forms part of the international UNESCO programme, Man and the Biosphere (MAB) which has links not only with UNEP's Desertification Unit but also with FAO, in response to the Plan of Action adopted by the 1977 United Nations Conference on Desertification. It is an example of the type of pilot activity that UNESCO and UNEP, together with other organizations and a number of governments, are trying to promote to provide the scientific basis for the rehabilitation and rational management of arid and semi-arid zone ecosystems, through integrated programmes of research (including survey, observation and experimentation), training and demonstration. Phase III of the project, 1980-1983, is supported by funds in trust to UNESCO provided by the Federal Republic of Germany.

During the first phases of IPAL, a co-ordination unit was established in Nairobi and the initial field work started in the arid zone of northern Kenya in a working area of 22,500 km^2 situated between Lake Turkana and Marsabit Mountain. The project now operates five field stations at Mount Kulal, Olturot, Kargi, Korr and Ngurunit, with the project headquarters in Marsabit which is the administrative centre of the District. Since its establishment the project has researched several aspects of experimental management of the region, concentrating upon 'human ecology' of the nomadic pastoralists in dynamic inter-relationship with the animals, plants and the other resources of a drought-prone, uncertain environment.

During the next three years (1980-1983), the investigations in progress will be extended and intensified to develop resource management plans of models for the area, taking into account the increasing human population, the trend towards sedentarization, the degradation of primary productivity, and the increasing incidence of soil erosion, all of which are factors resulting in the necessity for constant famine relief measures in this region. Results obtained in the project are the subject of a number of training workshops and seminars in which Kenyan and regional scientists from the Sudano-Sahelian region participate.

This report is one of a series published by IPAL describing technical findings of the Project and, where appropriate, giving management recommendations relating to the central problems of ecological degradation in the arid zone. The reports are divided into the following categories distinguished by the base colours of their covers:

A. general, introductory and historical: white

B. climate and hydrology: blue

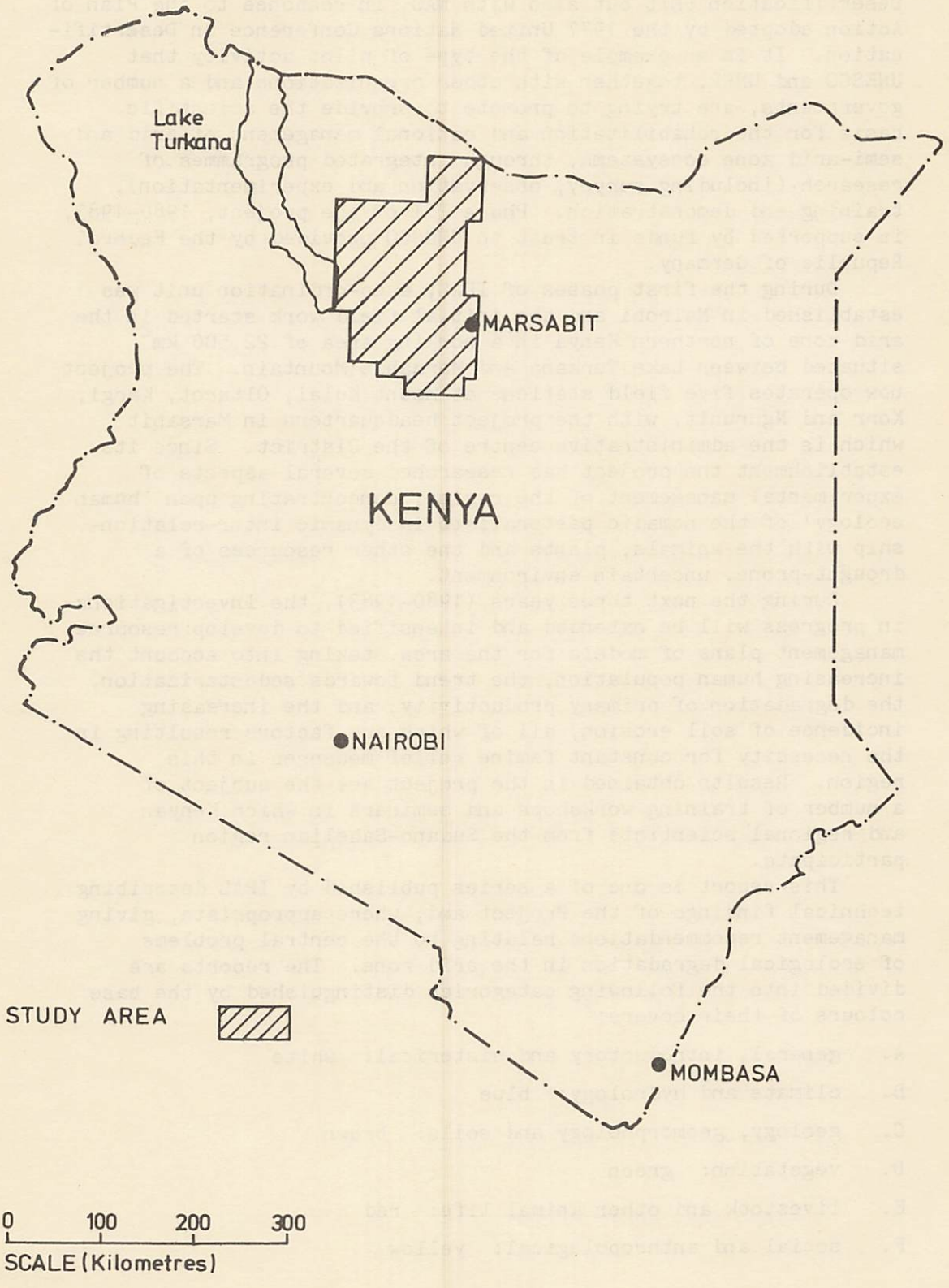
C. geology, geomorphology and soils: brown

D. vegetation: green

E. livestock and other animal life: red

F. social and anthropological: yellow

Location of IPAL study area



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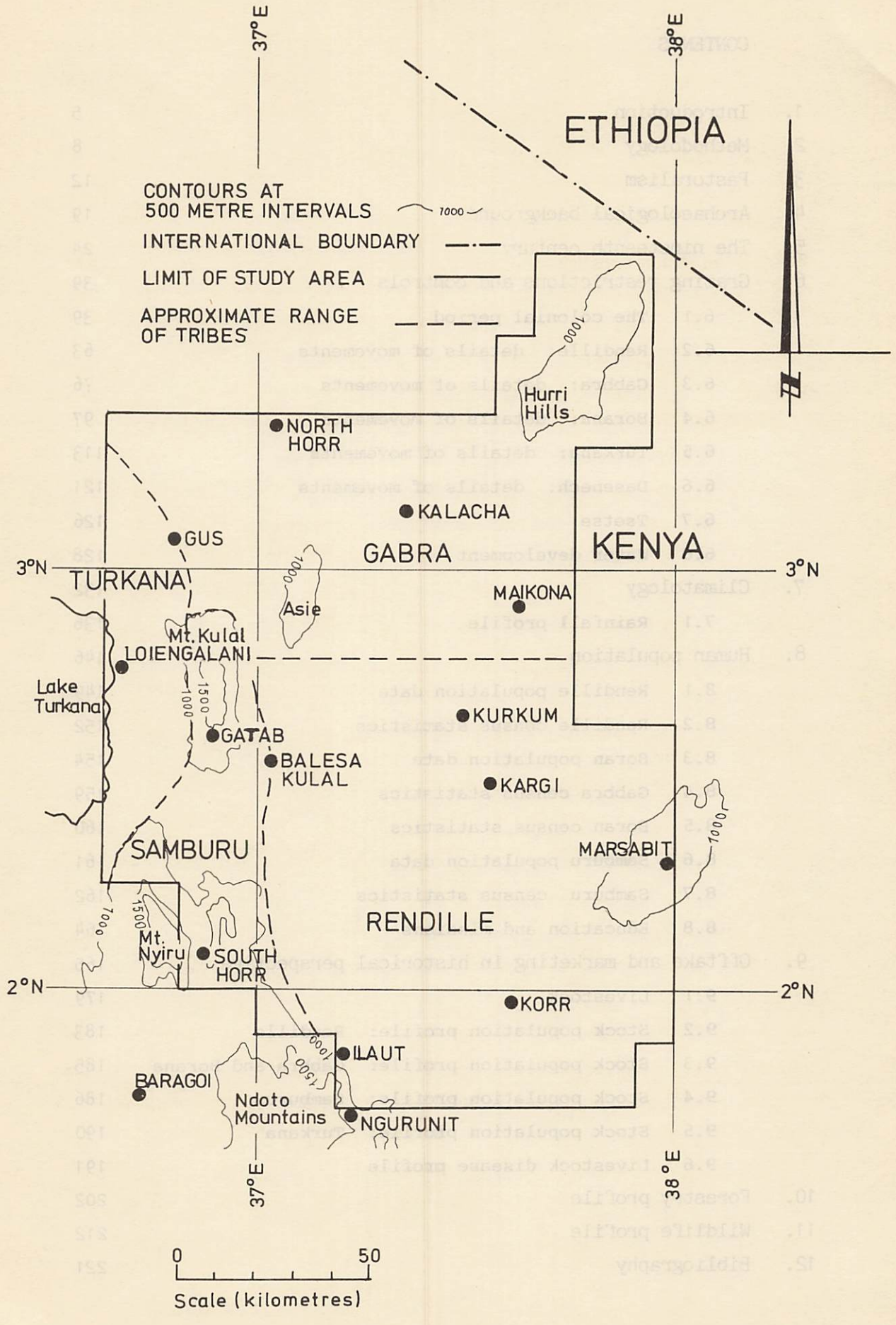
The study area



1. Introduction

Project

UNESCO/UNEP Intergrated Project in Arid Lands.

Consultancy

Background History of the Mt. Kulal Region of Kenya.

Aims and objectives of the consultancy

To document the various pressures and influences which have been exerted on the Project's study area both from within it and from the larger Lake Turkana region. This will assist in more accurate projection by the IPAL of the long-range, trends and temporary fluctuations in environmental change as well as in the human and stock populations. In addition it will provide another perspective to the present research undertakings on the ecology of the area.

Duration of the consultancy

4 March 1978 to 3 November 1978.

Conduct of research

An extensive and detailed archival search was undertaken at the Kenya National Archives in Nairobi. In addition, a series of field interviews was conducted among the Gabbra, Boran, Samburu, Rendille, Dasenech, and Elmolo societies. (See section 2 Methodology.)

Field assistance

The consultant wishes to express his thanks and appreciation to Isaac M. Learamo, Khalif Ahmed Yussuf, Hussein Ahmed Yussuf, and Isaac Assura for their meticulous translation efforts and for sharing their knowledge about their own communities. He also wishes to thank the Fathers F. and R. Tyroller of the Catholic Mission, North Horr and the Rev. and Mrs. R. Swart of the African Inland Mission, Ileret, for their kind and generous hospitality.

The consultancy and its integration

This report is envisaged as a research tool as well as an historical perspective of the trends and fluctuations which have occurred. Its operational premise is that each IPAL scientist (and other interested persons) can consult those sections which are applicable to his own investigation.

The core sections from the historian's point of view and those headed 'Archaeological background', 'The nineteenth century', 'Grazing restrictions and control: the colonial period', and 'Offtake and marketing in historical perspective'. For the pastoralists of Kenya's north, the nineteenth century was a time of traditional herding strategies. Maximization of herd size was the priority, as it is today. While this may have occurred without regard for the overall environmental consequences, ecological checks and balances limited both human and livestock populations. Movement to limited water and pasture was always a necessity especially in the dry seasons and in droughts.

The pastoralist was responsive to his own needs, the requirements of his livestock and the local conditions, and severe widespread environmental destruction was apparently avoided. In contrast, the colonial period was a time when the herdsmen lost some of their flexibility, both ecologically and economically. Particular localities were used more intensively than formerly, with less time for recovery (either by decree or as a result of 'new developments' such as national parks, commercial ranches, missions, schools, shops and water pumps), and the traditional mechanisms for coping with ecological and economic crises began to break down. Not surprisingly, increased local desertification and famine sometimes resulted.

For the person who feels he knows enough about pastoralism as an economic mode, the section 'Pastoralism: an introduction' need not be read. This section, however, was necessary in order to elucidate some of the basic premises upon which the report is based.

Some of the headed sections, and appended details, are provided with only limited comment or analysis, because they are well outside the author's own field of expertise. However, it has been included in view of the perspective, principally comparative, that may provide others, and its interpretation is left to them to articulate.

Throughout the profiles and appended details, a year-by-year chronology has been used to allow cross-referencing between topics. Thus the section on climatology can, for example, when juxtaposed with the 'Livestock disease profile' or the various 'Details of movements', provide a clearer understanding of events.

Three additional points need to be made. Boran is used as an inclusive reference for the Borana and the Gabbra when the distinction was not required or could not be made. Secondly, a fair amount of data on the Samburu and Dasenech has been included. Although the Samburu are peripheral to the IPAL study area, their location at the edge of what was once white settler country resulted in their often being, if not seriously studied, at least observed. In the hope that this material might provide comparative data it has been included. Although the Dasenech are similarly peripheral to the study area, they are included because they exerted a considerable influence on government policy and the pasturing of animals in the colonial period and in an earlier period had much closer ties with both the Samburu and Rendille.

Finally, information on vegetation other than forests is only covered in the 'Details of movement' sections. A study of the grazing areas and soil types for the NFD (as well as a separate study of the pastures west of the lake) was done in 1943 by D.C. Edwards. This 'Report on the Grazing Areas of the Northern Frontier District of Kenya' (Kenya National Archive, reference PC/NFD/5/5/1; Turkana Grazing Areas is PC/NFD/5/5/2) establishes a classification of vegetation cover.

Within each type of cover the dominant woody elements, shrubs, and grasses are recorded. Since this document needs to be consulted directly by a botanist, no attempt to synthesize this material has been made. A comparison of the vegetation as it existed 35 years ago with today could prove very illuminating. Since this report was written, the following technical reports have been published on vegetation in the Mt. Kulal study area, but no such comparative study has just been attempted.

Herlocker, D.J. *Vegetation of southwestern Marsabit District.* IPAL Tech. Rep. D.1 1979.

Synott, T.J. *A report on the status, importance and protection of the montane forests.* IPAL Tech. Rep. D.2a 1979.

Synott, T.J. *A report on the prospects, problems and proposals for tree planting.* IPAL Tech. Rep. D. 2b.

Herlocker, D.J. *Implementing forestry programmes for local community development, southwestern Marsabit District, Kenya.* IPAL Tech. Rep. D.2c 1979.

2. Methodology

The historical summary of the nineteenth century presented in this report is based upon oral source material collected by the consultant. In the other sections of the report the oral material was used as a check on the written sources. The oral traditions comprised myths of origin, macro-traditions of societies and areas, and micro-traditions of territorial sections and clans within societies. Through interviews among the various neighbouring societies of northern Kenya, i.e. Samburu, Rendille, Gabbra, Borana, Turkana, Elmolo and Dasenech, similar information was correlated using parallels and convergences to confirm or deny traditions and chronology.

The vast majority of this oral material was collected between September 1975 and April 1977 when the consultant was a post-graduate student at the School of Oriental and African Studies, University of London, and a research associate of the British Institute in Eastern Africa. Some additional interviews were conducted during the period of this consultancy. The total number of individual interviews conducted and considered in the findings of this report is nearly 200.

The written sources which were consulted are of two types. The earliest eye-witness material consists of the journals and reports of travellers and adventurers. L. von Hohnel (1888) was the first to provide observed information on the area. He was followed by a number of others including Smith, Austin, Cavendish, Tate, Hobley, and Arkell-Hardwick. The routes taken by these early travellers are detailed in *The National Atlas of Kenya* (3rd edition, 1970,p.83). The bibliography should be used as a guide to each traveller's written accounts.

The second type of written source is archival material. IPAL's study area has at various times been part of three administrative districts. Although principally this has been Marsabit District, the fact that neither Marsabit District nor the IPAL study area in any way represents a self-contained grazing ecosystem means that the societies who live within them have been profoundly affected by surrounding districts. The difficulty in locating archival material on the region encompassed by or related to the IPAL study area is therefore not due to its scarcity, but rather to the periodic changes in administrative district structures. Information exists on rainfall, livestock and human population, epidemics and epizootics, etc., but it is buried within the annual reports, safari journals, intelligence reports and correspondence of the various districts, which complicates its retrieval. It is primarily from this source that the various categorized profiles of this report are drawn.

To acquaint the reader with the origins of the profile material, the following brief outline is offered of the early administrative boundaries in northern Kenya.

All of the area under discussion was included in the original East African Protectorate and which was declared in 1895 extended from the coast to the Rift Valley. Various changes occurred on the periphery of this region. Those most related to this study include the transfer of the southern part of Turkanaland from Uganda's Eastern Province (along with Nyanza and part of Naivasha) in 1902; the demarcation of the boundary between the Protectorate and Ethiopia in 1907, guaranteeing an open frontier with free access to grazing and water for those societies who lived on both sides of the frontier; and the 1926 transfer of Uganda's 'Rudolf Province' which was added to the Turkana District of Kenya Colony (so renamed in 1920).

Until 1907, when a Northern Frontier District was officially proclaimed with headquarters at Meru, these northern regions of the Protectorate were administered from Naivasha. When in 1909 G. Archer organized the first government station on the Crater Lake he took over the site from the Boma Trading Company (the site of the Government Station was shifted to its present location in 1915). The various districts which came to be part of the NFD under Meru included Marsabit, Moyale, Mandera, Wajir, Garba Tula, and Archer's Post.

The first of various sub-police posts, which would be established and then withdrawn over the coming years, was constructed in 1911 on the shores of Lake Turkana at Loiyangalani (it was abandoned in 1915). The purpose of this post was to control the influx of Ethiopian hunters and raiders who followed a route along the lake's eastern shore. Other future sites included Maikona, Kalacha and North Horr.

Wajir was occupied in 1912 to prevent the Boran-speaking groups, deemed to be the original 'owners', from being driven off by Somali peoples.

Garba Tula District, originally called Bulesa, came into existence in 1917 when it ceased to be a sub-district of Wajir. From 1919 to 1921 it reverted to sub-district status under Wajir but under the Military Administration beginning in 1921 it again became a district.

In October of 1921, the NFD came under the military rule of the 5th King's African Rifles from Marsabit. A number of district names were changed and some restructuring occurred. Each district was seen as the administration for a particular 'tribal' group. Thus, for the Samburu, who had until this time been administered partly from Marsabit and partly from Archer's Post, a separate district (which also included the Elmolo and some Turkana) was established with headquarters at Barsaloi.

Marsabit District now became known as Gabbra District with responsibility for the Gabbra and Rendille. The military also established the Sakuri-Tana River District (Garissa), when in 1921 the region was transferred from the control of the Senior Commissioner, Jubaland. Prior to 1920 it had been part of Tanaland Province.

The other districts administered by the military and making up the NFD were: Moyale, responsible for the Boran, Adjuran, Sakuye, and Burji groups in the north; Gurreh District (Mandera), overseer to the Gurreh peoples; Wajir for the variety of Somali groups, and Garba Tula with responsibility for the Boran, Sakuye and Adjuran in the south.

On 1 September 1925 the region was officially handed back to civilian administration, the actual takeovers being staggered. Samburu reverted on 31 August 1925; Marsabit on 1 September 1925; Moyale on 18 September 1925 and Sakuri-Tana River on 12 October 1925. Wajir and Gurreh, delayed by a shortage of administrators, reverted at the end of the year.

The Northern Frontier District was also for a short period upgraded to a province but it reverted to district status in 1934. In 1946 it again received the status of a province. With the return of civilian administration restructuring of districts again occurred. Sakuri-Tana River District was renamed Garissa; Gurreh, renamed Mandera, remained an independent district until 1929 when it became a sub-district of Moyale (until 1941).

From 1925 Garba Tula was unadministered until in 1929 it and

Samburu District were merged to form Isiolo District and Barsaloi was closed as a district headquarters. In 1934 a separate Samburu District was established with headquarters at Maralal, within Rift Valley Province. In 1935 this was merged with Laikipia District and Maralal became a sub-station for the administrative centre of Rumuruti. In 1947 Samburu became a district of its own.

3. Pastoralism: an introduction

Within a broad belt beginning in the east from the Horn of Africa, covering both southern Ethiopia and northern Kenya, and continuing westward into the southern portion of the Sudan and eastern Uganda, the majority of societies have an emotional and economic commitment to herding. The socio-economic strategy of pastoralism relies on livestock to transform the energy stored in the grasses, herbage and shrubs of the local area into a form easily available to the local population, i.e. as milk, blood and meat products. Livestock, especially large stock such as cattle, camels and in some cases horses, is property which represents wealth, social status and by extension influence. The major focus of aspiration in this area is the acquisition of stock.

Livestock provides a basis for subsistence and is the essential factor in establishing and maintaining nearly all social relationships. It is essential to an understanding of pastoralism as practised in the Lake Turkana basin that these two aspects be distinguished. The loss of livestock must be seen as a social and an economic disaster. Notions of poverty relate not to the ability to survive physically, but to insufficient herds to live as a herdsman. Among the Dasenech, for example, the term *dies* means 'poor' as well as being the referrent for those who form the fishing element in the society.

Stock breeding provides the pastoralist with staple food. Ideally he lives off the replenishable products of his herds rather than slaughtered beasts. Slaughtering for meat, unless for a special ritual occasion, generally occurs only when other forms of food are in short supply. Thus, it is in the dry season that small stock and cattle are regularly slaughtered and cattle

bled. Ritual occasions, which invariably include the slaughtering of animals for meat-feasts, take place conspicuously more often in the dry season.

A side effect of ritual slaughter occurring most often in the dry season is to reduce the animal population when grazing and water are at a premium. Another device for the long-term conservation of herds is the exemption of female animals from slaughter, trade or exchange. Among camel herders as well, the ox-camel is the primary sacrificial beast.

In all these societies, social relationships and social values are focused on rights and obligations expressed in terms of cattle and/or camels to the virtual exclusion of small stock. Despite their important economic role, i.e., their hardiness in converting less edible vegetation into human food, small stock are seldom the subject of rivalry or dispute, and never the principal object of exchange in bridewealth negotiations. In the sphere of social relations their greatest use is in everyday expressions of friendship, exchanges which often serve to keep lines of communication open and active. Spencer concludes, 'Because they are easy units of the economy, they have less importance, and because they have less importance, their value in expressing, forming, or moulding social relationships is muted' (Spencer, 1973).

Stock serves a second crucial role as the means of maintaining and forming social linkages; 'pathways of stock exchange are usually analogous to pathways of social interactions'.

Every individual is the centre of a unique cluster of personal relationships entirely different from that of every other man. Birth establishes the agnatic members of his cluster, his marriage expands it to a particular group of affines and throughout his life the deliberate creation of bond friendships expands the network.

The individuals in a herdsman's cluster of relationship are all potential sources of assistance when he needs help, and people whom he will help when called upon to do so. With each relationship the herdsman maintains reciprocal rights to claim gifts of

domestic animals, a conscious translation of social relationships into stock. Since all rights are reciprocal, an individual without stock becomes isolated from potential pathways of co-operation and mutual insurance in times of hardship and must therefore survive outside the pastoral economy.

Patrilineal kinship is the rule in the Lake Turkana region. It is based on rights in stock for a set of men descended from a common grandfather, the usual extent of lineage knowledge. Usually the most powerful economic and socially binding forces are within the descent lines. In almost all cases a man does not achieve independence until marriage so that the 'minimal patrilineage of two generations manifests these economic and social ties into their strongest forms' (Carr, 1976). When the patrilineage increases by a generation with the marriage of sons and the birth of their children, the economic and social bonds between brothers in the lineage decrease as new minimal patrilineages come to dominate.

The elementary production unit, the family, is subject to an irregular food supply which corresponds to the unpredictable vegetation upon which its herds feed. The fact of the economic reverses which threaten the family's stability, and that of the society as a whole, results in the broad sharing of personnel and production property between domestic groups. Loans of labour in the form of unmarried sons to assist in herding, the dispersing of herds or certain beasts to other herdsmen to create viable herds or promote better management and the gift or loan of animals in times of need, be it economic or ritual, are all aspects of such sharing. Agnates are a source for such assistance.

Additional pathways of stock exchange and social relations centre around marriage. Bridewealth is paid by all pastoralists in varying amounts. In all cases it is large stock, cattle and camels, that are seen as the most significant in bridewealth transfers although small stock are usually more numerous. Among the Samburu and Rendille the large stock received by the bride-givers number eight cattle and eight camels respectively. Among

the Turkana and the Dasenech there is no convention for the number of stock transferred. With the Dasenech no discussion of exact numbers ever occurs since the bride-givers are not thought of as merely the father but as the bride's family, a number that can obviously vary widely. The transfer of bride-wealth gives access to an entirely new range of individuals within the wife's kinship group to whom the husband-herdsman can turn for the sharing of herding labour, the loan of beasts to provide feasts or for ritual slaughter, and for sharing in times of famine, disease or other hard times. If a man prospers, i.e., his herds grow, he is likely to take additional wives. Polygamy is a preference among all pastoralists of the area although it is a practical proposition only among the cattle herders.

Bond friendships are exceptionally valuable for expanding an individual's lines of social and economic co-operation. They are deliberately selected to fill the gaps in a herdsman's range of relationships which are not filled through ties of kin-ship or marriage. Formed at various times of an individual's life, they vary in strength of obligation and duration. While bond friendships provide support and co-operation in the same way as ties with agnates and affines, they are often especially useful for rallying support in disputes and in opening new fields for establishing further economic or social relationships.

The gerontocratic authority of age-set systems covers the same region of East Africa in which the socio-economic strategy of pastoralism dominates. Named age-sets are corporate groups of men which are organized by generation or cycle. Initiated together, the age-mates of a single corporate group or age-set move through a finite series of hierarchically organized age-grades such as warriorhood and elderhood. Each grade confers a status to which are ascribed specific rules governing privileges and responsibilities; but among age-mates in an age-set an equality of status and identity of role exists.

The corporate group having the grade of elder is the immediate

source of political authority, and the age-set system is the main field in which it is exercised. The status of elder comprises the role of control in all significant family and settlement affairs, e.g., the leading of ritual, the adjudicating of disputes, the negotiating of bridewealth, etc.

In most situations, younger persons defer to the demands and authority of the elders. Their stock accrued over the years has been converted to social relationships and used in the formation of wide-ranging social networks. The social prestige which is acquired gives the elders pre-eminence in bringing equally wide-ranging social pressure to bear in support of their decisions. It is the manipulation of social pressure rather than access to ritual curses which serves as the coercive force influencing behaviour and creating stability. The egalitarian nature of the societies puts each individual, in either the hub of his own unique social network or about the rim of many other networks, in a position to manipulate as well as to be manipulated in socio-economic situations. The effect is that decision and direction come from the elders as a corporate group in the form of public consensus, and never as the directive of a single individual.

The basic differences between the societies of the Lake Turkana basin are found in their individualized pattern of economic activity, dependent on the localized character of the environment they occupy and the different types of livestock they herd. Each society is capable of dealing with environmental fluctuations around the mean conditions under which it survives. It does so by adjusting its movement, shifting its emphasis to particular animal types and/or increasing the supplemental products of non-pastoral activities. Extreme events or ecological crises can be devastating. The intensity of the crises can be seen as the degree of deviation away from the mean conditions of survival. If the imbalance is too great to stabilize within the pastoralist framework, survival necessitates the adoption, either as an individual or within small groups, of another mode of economic existence with new mean conditions.

Within the environmental framework, prolonged drought, the failure of seasonal vegetation, the presence of trypanosomiasis, anthrax, rinderpest or other diseases of animals, smallpox, whooping cough or other diseases of human population, the hostility of neighbouring societies, etc., result in imbalances which must be stabilized. For example, under even 'normal' conditions herdsmen experience seasonal drought, i.e., dry seasons with limited pasturage. To adjust to this imbalance, herds are shifted to locations where adequate vegetation is available.

Should there not be sufficient rains to create a wet season, the result is the continuation of the dry season progression. The number of water points continues to diminish and the vegetation cover supports less and less livestock. The traditional adaptation for this kind of occurrence is to overstock when drought does not exist, thus ensuring that some animals survive from which whole herds can again be built. The concomitant effects of increased herds on existing pasturage lands are clear. Should stock growth continue unchecked, the need for increased grazing could lead to a number of stabilizing effects, including among others, long-distance moves to rarely used pasture or hostilities with neighbouring societies to gain use of new pastures (other dimensions of this type of problem might include concomitant human population growth, etc.). Either of these measures could result in herd losses, the former due to limited personal knowledge of the new area, the latter from reprisal raids.

The environmental effect is to allow the recovery of overutilized pasturage in preparation for renewed expansion following the return of normal conditions. Should the demand on the society's adaptive strategy prove too great to be met through adjustments within the pastoral strategy, fishing, hunting-gathering and agriculture provide alternative adaptations for survival.

In this way pastoralism is best seen as an adjustment to a particular set of ecological conditions, along a continuum of numerous potential economic possibilities. At one extreme is a

completely sedentary agricultural existence, while at the other is a totally nomadic existence, lacking any agricultural products (this is a hypothetical position in the case of pastoralism, a recorded possibility among hunter-gatherers). Along this continuum an infinite variety of pastoral economies with different patterns of animal husbandry, various combinations of agricultural adjustments and degrees of hunting, gathering and fishing can be identified. Each one is an adjustment to particular localized conditions at specific points in time. Thus any society's location on this conceptual continuum would represent a stable adjustment to their special environment. This adjustment must however be viewed as a dynamic one, which allows a group to move from point to point along the continuum as conditions change.

Non-herding forms of subsistence practised in the region, cultivation and gathering, and to some extent hunting and fishing, are directly dependent on ecological conditions which occur seasonally. As a means of subsistence these alternative economic activities are limited for all but some small groups of people. The limited technological level, coupled with unstable seasons which can vary drastically from year to year, make them generally unreliable as more than supplementary activities.

Agricultural products are the most significant dietary supplement of herdsmen. Some societies, such as the Dasenech, live in an area favourable to cultivation. More common is the trading of pastoral products, e.g., skins, fat, animals, for agricultural products as well as for craft requirements, e.g., pots, utensils, and spears.

Sporadic gathering is done even by the wealthiest herding families, especially the collection of fruits and berries by children and young girls who like their sweet taste. More substantial foods such as roots are usually only collected by herdsmen in times of hardship. Honey, which is eagerly sought after, is the virtual monopoly of the hunting-gathering groups and herdsmen must trade for it.

Wild animals exist in large numbers in certain localities and

were probably more numerous in the past, yet little is known about the significance of hunting in the diet of the pastoralists. The products of wild animals, from ostrich feathers to giraffe-hide water containers, have served important functions throughout the region. It seems exceedingly likely that wild animals were hunted in times of prosperity as well as times of economic crises (for more details see section 11. Wildlife). Also fish, despite its professed avoidance and association with the poorest economic and social status, is caught and eaten as an alternative means of subsistence.

In the Lake Turkana region communities of hunter-gatherers and fishermen have provided alternatives to pastoralism in times of extreme imbalance in the environment. The term 'ndorobo', applied to these communities, is here used as an economic mode and not as an ethnic referrent. To 'become ndorobo' is thus an adaptive strategy employed by the small communities living in the mountain forests or along the shore of the lake. For the pastoralists these communities have served as a refuge for the odd member or members of impoverished or defeated societies. Among the ndorobo, the former herdsman adopted his hosts' economic mode, a condition in which he could remain or from which he could return to pastoralism when the crisis was resolved. In this way the individual adaptive strategies of the various societies of the Lake Turkana basin formed an economically interrelated unity.

4. Archaeological background

In the Near East, the domestication of animals, to which African domesticated species are ultimately linked, is at least 8,000 to 9,000 years old; nomadism is older. Wild species of domesticated stock, e.g., sheep, goats, horses, camels and cattle, all follow seasonal pastures and move from watering place to watering place. Observations of seasonal change and the natural renewal of pastures and water points made nomadic patterns of existence possible. With the initial domestication of a single species the same routes used by the wild variety could be followed more or less annually.

The inclusion of two or more species of domesticated stock in the economy, each with individual pasturage and water needs as well as varying rates of travel, led to the herders making predictions of pasture and water supply locations, and by extension, to the broadening of a particular species' habitat.

One plausible hypothesis for the rise of pastoralism is its emergence from more or less settled agricultural communities. The existence of wild animals grown accustomed to feeding on plants cultivated by man and thereby adjusted to man's presence suggests conditions under which wild species might have been caught. Whatever the domestication process, the control of a food supply, e.g., milk for drinking and meat for eating as required or desired, meant that man was free from his reliance on migratory game. The cultivation of food crops or the harvesting of their wild varieties supplied vegetable matter to the diet. The resulting increase in food yield from a limited area probably led to semi-permanent settlements and a corresponding increase in population density (it is interesting to note in this respect, that the Dasenach, the only society in the Lake Turkana basin that employs both pastoral and agricultural production, is also the only one with a traditionally semi-permanent settlement pattern). Similarly, with domestication of animals the scale of a man's organized life and his relations with other men expanded and assumed a greater significance.

In East Africa the species used in pastoral economies are not indigenous to the region. Pastoralism must therefore be seen not as a development of an existing nomadic system, but adoption and adaptation of a new economic strategy. Around 7000 BP the Rift Valley lakes provided abundant grazing and watering for wild game. In their turn, these herds of game served as a focal point for the life of the exclusively hunter-gatherer population, usually described as Late Stone Age, who occupied East Africa.

At this date Lake Nakuru, which also encompassed Lake Elementaita, covered over 1,000 square kilometers and stood 180 meters higher than today. Only a narrow piece of land at Gilgil separated it from Lake Naivasha. From the years 8000 to 4000 BP

Lake Turkana stood at least 80 meters higher than today, and was intermittently linked with the Nile system. Lake Stefanie was at least 20 meters deep between 6000 and 5000 BP and connected via the River Sagan with Lakes Abaya and Chamo in southern Ethiopia. The Chalbi Desert was similarly a lake several meters deep as late as 2000 years ago.

Phillipson, in a recently presented hypothesis for the introduction of food production into East Africa, has suggested that the Late Stone Age hunter-gatherers of this region took advantage of the perennial food supply offered by these lakes and turned increasingly to fishing by about 8000 BP. By implication he goes on to suggest that these semi-permanent fishing settlements further served to assist the introduction of domestic stock and ultimately of pastoralism as well (Phillipson, 1976. All the following quotations are from this paper).

Human occupation sites at the 80-meter lake level of Lake Turkana evince almost exclusively lacustrine fauna, which indicate the dominance of fishing. There is also evidence of hippo and turtle from the lake and zebra and small antelopes from the environs. Vegetable matter is unknown. Stone tools on these sites include choppers, scrapers, anvils and pounding and grinding stones. Pottery from this period with 'wavy-line' decorations appears to be an independent invention. Fishing was done with barbed harpoon points made of animal bone and inserted into spearing shafts. A line was tied in grooves around the base of the barbed point. When a speared fish dived with the point embedded, the shafts floated and were retrieved while the fish was hauled in by the line.

This adaptation was not unique, as there is evidence of comparable sites on other lakes from roughly the same period. Sites on former lakes fed by rivers in what is today semi-desert land across a broad belt of the southern Sahara from the Nile Valley westwards exhibit similar adaptations (e.g. Lake Chad which was from 10,000 to 7000 BP much more extensive than today). 'Research has shown that these fishing people's cultures

represented a basically similar response to similar environmental conditions, rather than a single uniform culture.'

Today these fishing communities have disappeared in all but a few particularly favourable locations such as Lake Turkana. The true importance of these fishermen was the settled way of life which they were very able to follow because of the limited effort required to ensure an adequate food supply. 'Almost certainly it was these semi-permanent riverine and lake-side settlements which first proved receptive to the advent of food production techniques to Sub-Saharan Africa.' Phillipson has suggested that these circumstances were favourable for the domestication of indigenous grains such as sorghums and millets. This domestication of cereals allowed a semi-permanent settlement pattern to be retained as the deterioration of the environment, begun several centuries earlier, began to accelerate by 5000 to 4000 BP. Domestic cattle were widespread in central Saharan regions by 5000 years ago 'and their southward spread, which was doubtless accelerated by the desiccation which set in shortly after that date, is well attested'. (The dated finds of excavations of pastoral sites in places like Algeria are so far earlier than those from Egypt.) Crucial to an understanding of the introduction of pastoralism is the degree to which livestock were being herded. The issue revolves around knowing whether the herders were following in the steps of natural climatic change or creating the habitats they now exploit.

Exploratory excavations conducted by Phillipson at two sites on the former 'lake' Chalbi have yielded dates from 2500 to 1300 BC and from AD 500 to 1500. The former, with its developed stone industry, elaborately decorated pottery and stone bowls, covers 25,000 square meters and is over 30 times larger than fishing settlement sites occupied about the same time or slightly earlier. Although the bone evidence remains inconclusive due to poor preservation, the significant absence of fish bones coupled with the site size and a correspondingly large population suggests the 'probability is high that pastoralism played at least a

significant part in the economy, but further excavations are needed to prove this conclusively'. The abundant water and accompanying pastures are seen by Phillipson as having provided a rich environment, so that the pastoralists like the fishermen were able to maintain a settled life in marked contrast to the existence of the pastoralists today. All of this is seen as indicating that pastoralism entered East Africa 'not through a major influx of people from the north, but by diffusion to local people who had established semi-permanent settlements some thousands of years previously'. (This is in contrast to the spread of cattle southwards from East Africa which it has been suggested was accomplished by a single people in a limited period of time.)

No iron was excavated at either of the Chalbi sites by Phillipson, nor was any found at another probable pastoral site at Kulchurdo cave, dated c. AD 1500, on Marsabit Mountain. This would seem to indicate that pastoralism predates iron-age technology east of Lake Turkana. Further support for this idea is found at the deep wells in the North of Kenya such as those outside Marsabit town. These wells are still dug and cleared with wooden sticks in the belief that the use of iron tools would result in the water supply failing.

It has also been suggested that another way of looking at the introduction of pastoralism to East Africa is through a negative form of a desiccation hypothesis, specifically, that pastoralism was an adaptation prohibited to the Late Stone Age hunter-gatherers until the fall of the lake levels uncovered an adequate area of suitable habitat. The higher lake level period resulted in large areas of potential pasturage, as in the case of the former 'lake' Chalbi, being unsuitable for domestic stock. Lakes at overflow level caused wide areas of damp or swampy ground. Rivers flowed more consistently during this period and were less subject to seasonality. This view sees pastoralism, an open environmental strategy, as severely limited and depressed into closed habitats with limited grazing resources during the

era of expanded lakes. The onset of pastoralism is from this perspective a function of the rate at which the environment was drying out.

Thus, the archaeological record's indication that 3000 BP marks the existence of cattle, sheep and goats in the Rift Valley region, southern Kenya, and northern Tanzania, may only be the date of pastoralism's expansion as a successful adaptation. It is entirely possible that domestic species were present in East Africa at an earlier date, but their low density could have been below the level of 'archaeological visibility', with the spread of pastoralism being a slower process than the archaeological evidence currently suggests.

No precise ethnic identification of these early fishing or pastoral communities is at present possible. The various prohibitions regarding social interaction with potters, smiths, tanners, weavers, and the like, which express the traditional contempt in which many East African and Ethiopian pastoralists hold craftsmen-producers, further complicate the issue. The pastoralists' preference for leaving others to produce in these fields makes it difficult to identify a specific style or even artifact type with a particular social unit, whether clan, section or society. Alternative means of investigation, such as the tracing of dietary habits, settlement patterns or house forms might prove valuable. Up to the present, however, few such attempts have been made, and the amount of archaeological research on the post-*Homo erectus* period, especially along the eastern side of the Lake Turkana basin, remains exceedingly small. Future research and publications by archaeologists such as Phillipson, L. Robbins, J. Barhelme, and R. Foley will hopefully assist in supplying the missing pieces.

5. The nineteenth century

The peoples recognized today as an ethnic unity are not now, nor have they ever been, static entities. Rather they are dynamic communities capable both of absorbing outsiders of

similar or disparate ethnic and linguistic backgrounds, and of sustaining population loss. The notion that such societies are of single origin ignores the dynamics of community. The following summation is exceedingly relevant to an understanding of the present day communities in northern Kenya:

> Any 'ethnic' group exists only to the extent that it is asserted to exist at any given point in time by the group itself and by the larger social network of which it is part. Such groups are constantly redefined and change their forms at amazingly fast rates. Yet through the physical maelstrom, some 'names' maintain a long historical continuity because at frequent intervals it has been in the interests of the conscious elements bearing this 'name' to reassert the heritage, revalorize the mythical links, and socialize members into the historical memory. (Wallerstein, 1973).

The societies encountered today have emerged through interaction, fusion and adaption. They have not avoided contacts in order to preserve the pure blood of the ancestors, but rather have successfully assimilated diverse population elements and their ideas, and in the process have been altered and transformed.

The notion of single origins, especially in these regions, is often bound up with the 'Hamite'-'Cushite' dichotomy. The proud, imposing and noble pastoralist early caught the imagination and romatic admiration of European observers who rewarded him, especially as he was lighter-skinned than his agricultural neighbours, with an innate superiority of 'Hamitic' origin. With exceptional mental dexterity on the part of 'Hamite' theorists, the 'Hamites' were also credited with the origins of anything 'civilized' from iron working to the construction of Zimbabwe. These misconceptions simply do not stand up to scientific enquiry but rather reflect an earlier European generation's presumptions and prejudices.

The complex nature of the origins and composition of today's recognized societies is beyond the scope of this report. In exceedingly simplified form, what existed both to the west and to the east of Lake Turkana were, for lack of a more inclusive term,

clan units. Some of these units were recognized corporate groups, others were no more than loosely linked groups of people who spoke the same language and moved in bands or shared the same residential locations. From these clans, which can be traced west of the lake through their retention of a particular range of ritual and cultural features, it is possible to reconstruct the various groups which formed the basic elements of the present communities which we differentiate with the names Turkana, Karamojong, Jie, etc. (For a detailed analysis see Lamphear, 1979.)

Of those societies which emerged, the one of particular consequence for the region east of the lake was the Turkana. Pastorally oriented clan elements, dispersing primarily from the Koten-Magos hill country in present-day eastern Uganda, descended the Uganda escarpment to the east. Here these migrant pastoralists merged with earlier occupants of these regions, among whom the traditions recount were elements of the Boran, the Rendille, the Samburu, the Pokot and the Dasenech. The traditions which make reference to the Samburu elements (Ngikor) and the Pokot-Dasenech elements (Nyupe) are numerous, whereas the references to the Boran and the Rendille are meagre.

Those texts which suggest a Boran presence in areas today occupied by the Turkana west of the lake almost always indicate that this occupation predates the formation of Lake Turkana, at a time when the Boran, Rendille, Ngikor, and others existed as a single society. The myth concerning the Lake's creation is a story widely recounted by the various peoples living in the Lake Turkana basin. It serves as a watershed to mark a particular point in time beyond which tradition has no recollection of past events at the society level and beyond which it is inconceivable to speak of particular societies as a recognizable unit.

The historical traditions consistently record that the Ngikor and Nyupe elements dominated the region immediately west of the lake in the period prior to the emergence of the Turkana as a political entity. While the remembrances of this period are not very detailed, they do enable us to draw a general outline of historical developments. What the basic corporate social segment

of these communities was is beyond the range of oral sources. The economic existence of these communities appears to have been pastoral, with a significant degree of hunting and gathering activities likely. To survive in these same localities today, the Turkana dwell in mobile household units of from four to seven houses; there is nothing environmentally to suggest that these earlier occupants could have existed in numerically larger units.

From oral texts and age-set reconstructions the migration of the proto-Turkana pastoral elements down the escarpment and toward the lake can be dated to the late seventeenth and early eighteenth centuries. During the period 1800 to 1840 the basic Turkana society as we know it probably came into existence. During this period of emergence, elements of the earlier occupants, especially tne Ngikor and possibly the Rendille, were absorbed while others were driven from the region. The Nyupe elements were dispersed. Some, who later emerged among the Pokot, moved south, while others moved north to interact with peoples in the Omo delta area. From these Dasenech society was born.

To the east of the lake the picture is less clear, although the evidence suggests the existence of pan-Cushitic language clans predating the formation of today's recognizable societies, e.g., the Odola clan among the Rendille, the Gabbra and the Garre; the Marle-Galora links among the Rendille, the Elmolo and the Dasenech. Research on the details of these reconstructions was however, not possible since they appear to lie in northern Somalia.

As Samburu elements, as well as various Rendille elements (today remembered in the origin traditions of the Nebei, Rungumo and Galdeilon clans), were driven from west of the lake, they entered on the intricate processes of fusion and assimilation which were already occurring among those population segments who inhabited the regions from the Kerio Valley to the eastern shore of the lake. The dominance of traditional associations with particular localities, e.g., mountains and waterholes, as the place of origin of particular clans or sub-clans supports the idea that at least certain proto-Rendille and proto-Samburu elements lived in their present localities for a long time.

Claims of this type, to particular locations, are not uncommon and are known elsewhere as justifications for a society's continued occupation of a region. In this case, however, the traditions of neighbouring societies support those Rendille and Samburu claims to their present region (e.g., families of Dibsahai to Korole, and Masula to Nyiro). Ultimately there emerged from this interaction the Rendille and Samburu societies.

To the north similar processes were occurring among the various Oromo or Boran language groups which were to result eventually in the distinctive Borana, Gabbra and Sakuye societies in southern Ethiopia and northern Kenya. There is no reason to doubt the centre of Boran dispersal being the current Borana homeland in southern Ethiopia. The historical ties of the major Gabbra sections are also with these regions, as is shown by the locations of their ritual centres: the Algana to Gopso, the Gara to Sumbur, the Golbo to Melbana, and only the Odola to a site in Kenya, Turbi.

From the origin traditions of the Gabbra, their distinctiveness from the Borana is clear. Although the possible emergence of the Algana from Borana society cannot be denied, an analysis of the various traditions also reveals Gabbra linkages to the Wata, the Sakuye, the Gurre and many other Somali sections (one such anlaysis can be found in Goto, 1972).

The discrepancy between the Borana and Gabbra denial of having ever occupied mountains Nyiro (Shill) and Kulal (Hanqu), and the Samburu protestations of having driven the 'Boran' from these locations during the Kipeko age-group (initiated c. 1837 to 1851) is probably connected with the existence of a community called the 'Wardai Galla'. To begin with, the Samburu do not distinguish (and neither for that matter do the Rendille or Dasenech) between the Gabbra and the Borana but refer to them all as Boran; which 'Boran' they drove from these areas is therefore problematical. The Borana, on the other hand, record in their traditions their invasion and occupation of the Dirre-Liban area, taken from the Wardai Galla in the late seventeenth century.

After this time the Wardai are associated with the Wajir - El

Wak region of northern Kenya until c. 1800 when they again came under pressure from the Borana (and possibly Gabbra and Sakuye elements) as well as Gurre and Adjura Somali. Today the Wardai no longer exist as a society (Boran informants suggest the Orma at the coast are a remnant element but no research exists to confirm or deny this link), only their lowland association in northern Kenya, the extent of which is unknown, is remembered. I would therefore suggest that at least elements of the Wardai, under increased pressure from the north, may have used the excellent grazing of the Nyiro-Kulal region and have been ousted in the first half of the nineteenth century by the expanding Samburu. The presence and, in the event, defeat of the Wardai in this locale could also then account for various ties that the Masula section claims with the Boran in its traditions of origin.

Traditions indicate that for several generations Boran and Gabbra occupation in northern Kenya was limited to the Huri Hills and the plains of Dida Galgalla south of Moyale. Moving south into these waterless areas after the first rains fell, they then trekked back into the well-watered plateau areas of southern Ethiopia. This is not to deny that the Boran were aware of locations to the south, but Koroli, Kalacha and Marsabit are only associated with the mounted raids their horsemen made on the Rendille, Samburu and Laikipiak.

Not until the 1897 advance of the Emperor Menelik's Pax-Amharica began to reach the Boran country in southern Ethiopia and cause the concerted migration to the south did the Boran peoples begin to apply real pressure on the grazing of northern Kenya. In 1897 Delamere found no Boran living on Marsabit Mountain but this changed a year to two later when a Boran elder named Dambi Halake Kulcha led his settlements onto the mountain from Tullu Arbor in Dirre.

The Laikipiak, whom the Boran groups mention their having raided at Marsabit, remain another elusive community in any attempt to define the nineteenth century population distribution and

occupation of the north. It is clear that their cattle in the north grazed from the Leroghi Plateau in the east to the Merille River and the Laisamis area; in the first half of the nineteenth century their grazing may have extended up to Marsabit.

The established picture of the Laikipiak is of a Maasai division which by the mid-nineteenth century had become increasingly aggressive so that by the 1870's they were seeking control of the Lake Nakuru area. The Purko and Kisongo Maasai made an alliance which resulted, according to Maasai traditions at least, in the total defeat of the Laikipiak; during the Lainer (c. 1866 to 1886) age-group the surviving vestiges of the Laikipiak were said to have been assimilated by other Maasai, after which the Laikipiak as a society ceased to exist. This is, however, clearly not the case, but only an interpretation which has resulted from studying Maasai traditions in isolation from those of the Rendille, Samburu and Borana.

As the Maasai continued their southward migration at least a significant core of the defeated Laikipiak were not absorbed by other Maasai but instead moved north. Here the Laikipiak began an extended period of confrontation with the Samburu and Rendille. The Rendille in particular recall battles with the Laikipiak at the Merille River and to the east of Marsabit, all after the Maasai claim to have totally destroyed the Laikipiak. In the late 1890's (during the Borana age-group of Adi Doyo, 1897 - 1905) the Laikipiak remained a powerful enough force to threaten the Dirre homeland of the Boran. They were only defeated and driven back toward Marsabit with the aid of mounted warriors summoned from deep in the heart of southern Ethiopia. The Laikipiak were soundly defeated (the Boran traditions describe it as a massacre) and their animal herds captured. In the decade immediately after 1900 the Laikipiak ceased to survive as a unique community and were assimilated by, among others, segments of the Borana, Gabbra, Samburu and ndorobo groups.

During much of the nineteenth century the Samburu and Rendille societies were far less confined than was to be the case at the end of the century. With the Laikipiak to the south on the

Leroghi Plateau, across the Ndoto - Mathews region to the east and intermittently as far north as Marsabit, and with the Boran groups predominantly grazing in southern Ethiopia to the east of Lake Stefanie, a considerable tract of land remained over which the Samburu and Rendille were able to range in their search for the pasture and water which their stock required.

The Irbandiff age-group of the Rendille, initiated into warriorhood c. 1825, are the last warriors recorded as having made use of the Kerio Valley region for pasturage, as well as the first to make use of the areas around Kokoi and Surge on the northeast of Lake Turkana. With the ever-expanding Turkana reaching the northern Kerio and beginning to apply sporadic pressure on those areas at the southern end of the lake, the Samburu, unable to turn south because of the Laikipiak, found themselves grazing further north along the eastern side of Lake Turkana. By at least the Kipeko age-group, c. 1837 to 1851, the grazing area of the Samburu had already been extended from Mounts Nyiro and Kulal in the south to Marsabit in the east and to 'Wato' in the north. As described in Samburu tradition: 'This lake and the place called Wato, that was the end of Samburu [land], and the other way as far as Baringo, the place where the Pokot live now, all were Samburu; by Marsabit the plains of Gilgil were Samburu. That's where Samburu cattle reached'.

Increasingly in the second half of the nineteenth century it was the Wato region which supported the cattle herds of the Samburu. While the precise limits of Wato remain undefined, it included the mountains around Dharrar and Surge, and the region from the northeast corner of Lake Turkana to Lake Stefanie, whose water was also drunk by Samburu cattle.

The Surge and Dharrar areas were principally cattle country, while the low-lying plains areas below supported the camel herds of the Rendille. It was in these areas that members of the age-group of Dibgudo dwelt about whom it is said that they were circumcised (1867), married (1878), and their wives gave birth there. Another version records the arrival of the Rendille in the areas two years before the Dibgudo age-group married, while

the soon-to-be-initiated warriors of Dismala were uncircumcised youngsters. The vegetation of the country, joined with the traditions, suggests that the main centre of Rendille settlements was in the Kokoi area with the Sibiloi and Banya locations on the lake as well as others further inland serving as grazing for their mobile stock camps *(fora)*.

The Dasenech recall the Rendille as less 'nomadic' than the Samburu in their settlement and grazing habits and recall the Samburu as always appearing to be on the move. This is probably explained by the location of the Rendille settlements near Kokoi. Here the Rendille had a permanent water supply at hand whereas the traditions reflect that the Samburu, further inland to the north and east, found it necessary to follow an east-west transhumant pattern, e.g., 'The Samburu had their place, their place where they ate the grass and then always moved. They moved to us when their place didn't have rain and was dry; when it rained, they moved away, back to their place'.

During these days, boundaries existed between the various societies in the Wato area, but they were of a rather flexible sort. Some of these boundaries, e.g., that between the Samburu and the Hamar people, were maintained by force of arms. The Hamar recall the Samburu as being so powerful that they merely 'danced' into Hamar settlements and threatened the Hamar into defeat.

A Dasenech tradition tells of the Dasenech entering the mountain grasslands near Lake Stefanie and finding a spear in the ground, clearly indicating the trepidation involved in violating a known grazing boundary. 'The Dasenech went up to the spear but could not go past, nor could the cattle; so they went back and entered the Omo River area'. Raiding certainly occurred among the peoples at Wato, but the economics of survival tempered the occurrence of these confrontations. The Samburu describe it saying, 'the fighting wasn't much' and after it was over the two antagonists later become 'brothers'. The Dasenech describe their relations with the Samburu in terms of 'yesterday we would fight with them and then we would be

friends; and tomorrow we'd fight again and then be friends again'.

As indicated, to the northeast of Lake Turkana, 'the Rendille and Samburu were living and grazing [their animals] together. And the Dasenech were on the other side of them'. The Samburu then left these areas because 'it was the time of *mutai*. *Mutai* drove them here [to the south]...their cattle all died and the few cattle left were raided by the Turkana. Then they just disappeared and joined the Rendille. Since that time the Samburu have not gone back to those areas of Dasenech'.

Mutai loosely translated could be termed 'the disasters'. As used by the Samburu, *mutai* is generally a referent for the 1890's when bovine pleural-pneumonia and rinderpest devastated their herds. Often it also includes the smallpox epidemic in the few years prior to the turn of the century (see section 8. Human population).

In the past it has been suggested that these disasters occurred in the sequence of BPP, rinderpest and then smallpox. This is an oversimplification. The Samburu record smallpox in three consecutive age-groups, beginning with the one initiated c.1865. The Rendille record its appearance in those age-groups initiated in 1867 and 1895. Similar patterns for the appearance and disappearance and reappearance of various stock diseases are also suggested by the evidence. The precise patterning, however, will have to await the outcome of research currently being conducted and analysed.

The period of *mutai* did not occur in a vacuum amidst static societies. To the east the Borana and Gabbra were slowly being pushed westwards by the continued forceful expansion of Somali-speaking peoples. More closely related to the future of the Samburu and Rendille in the Wato area was the internecine fighting of the Maasai. The initial defeats suffered by the Laikipiak at the hands of the Purko-Kisongo alliance resulted in the former loosening their hold on the plains and plateau regions to the south and southeast of Lake Turkana. Previous to this time the Laikipiak had held in check the ever-expansive Turkana who were by this time firmly entrenched west of the lake.

The defeats suffered by the Laikipiak now allowed the Turkana to push eastwards and eventually to raid up the eastern shore of the lake.

The Turkana are recalled as having been intimately linked with the declining state of affairs among the Samburu who left Wato 'because of the Turkana. And because the cattle were finished we came back [south]' Generally the traditions recall the Turkana raids as having occurred after the disastrous effects of disease had taken their toll. 'Rinderpest killed most of the cows at Wata; the ones that survived, the Turkana took them and people died.' No doubt, however, the state of affairs was such that Turkana raids occurred before the rinderpest, at which time they were more troublesome than disastrous. Further south these raids limited the movements of those Samburu and Rendille who had not ventured to the northern shores of Lake Turkana. 'When the Samburu were at Wato the people in the south were atop the mountains, Nyiro [and Kulal] and some were at Marsabit. Most were at Wato. Those around here [in the south] lived atop the mountains because they were afraid of enemies.'

Life for the cattle people of the lake basin abruptly changed with the beginning of *mutai*. Traditions record that it was the cattle at Dharrar which first were 'captured by rinderpest'. This outbreak is also associated with a raid by the Turkana, equally significant because of the extreme northern point which the Turkana were now raiding. The Turkana seem to have struck the final blow: 'With the arrival of the Turkana, the Samburu were finished and they left that place. They went up to Nyiro, up to Kulal'. 'The cattle were finished at Wato in two days. Then all the people shifted to this side. Enemies were attacking and cows were dying.' The Samburu withdrew to the mountains to protect their families, living in the forests and the caves.

The devastation of the disease makes it unlikely that many cattle survived the journey back to the Nyiro, Kulal and Ndoto areas, just as it is equally unlikely that infected animals captured by the Turkana survived the journey back to the main Turkana herds (Turkana cattle west of the lake were virtually

untouched by the disease at this time). Clearly though, some cattle did survive in the mountain remoteness of Kulal, Nyiro and the Ndotos and it is these that receive the credit of the Samburu for the rebuilding of their herds which eventually occurred.

Those traditions which recount a mass migration to these mountain sanctuaries relate but a small part of the reality. Elsewhere in the north, the area was occupied by starving people who no longer had herds of animals to provide their livelihood and sustenance. At the time of *mutai* 'most of the people died because of starvation...they didn't have food...so the people went and hunted elephant and ate [them]; ate rhinoceros. Some still died of starvation, many of them died of starvation. Some escaped to Turkana; some went to the Dasenech. A few of them had small stock; they lived with small stock and lived again... The time of starvation people scattered everywhere, is it not so? Some escaped to the Turkana, some went to the Boran, some went to the Dasenech, some to the Elmolo and some were killed by the Rendille while stealing livestock. Some went to the Rendille and became *itombon* [people] who lived in the bush and stole camels. Some went to the ndorobo and people took roots from the ground... and they dug the ground eating everything...and some remained with small stock....Most people died of starvation. No matter which person it was, a warrior, a child, a woman, everyone, children, all died'. There is no evidence to indicate that when the rinderpest epizootic struck the Samburu had any traditional means of vaccinating or affording protection to their animals. Rather, their attitude was one of fatalism. The herdsmen did 'nothing because rinderpest came and left what it left and finished all it finished. Some cattle will be all right and some will not.... God will make them all right and kill what he will kill'.

It is difficult to estimate the proportion of the Samburu population that dispersed to other societies. The majority must have tried to eke out an existence by surviving off their small stock and by becoming ndorobo. 'They came to this place [southern mountains] and climbed these mountains eating fruits, hunting animals, rhinoceros, elephants, buffalo and everything. And

something called bees were plentiful on these mountains and so people could get honey easily. That was what they ate.' Other Samburu went and lived among the Elmolo fishing communities on the lake shore: another form of ndorobo group.

Shortly after the initiation of the Lterito age-group, the Samburu began to filter back to their pastoral ways. Some, however, remained like those among the hunting and gathering ndorobo groups who had no means to return to pastoralism, or had married Elmolo girls and chose not to return. The mechanism by which these hunting, gathering and fishing practitioners returned to their pastoral existence remains vague. Certainly some families retained limited numbers of small stock and even cattle. While perhaps initially not enough to support adequately an entire family, they were enough for a few individuals. With good management these would again have built up into sizeable herds thus allowing agnates and affines who were surviving among the ndorobo to return to the family fold.

Whereas a limited number of individuals and families left the Samburu and Rendille societies to seek an existence among, for example, the Boran and Turkana, a unique situation arose for those joining the Dasenech. In the return to the south and to the mountain areas where survival as a ndorobo was possible, many people were left behind; 'those who were poor were left there because they didn't have any means of following those who were strong'. 'Just because of starvation that is why they went and lived there and some Samburu that were left there are still there now.' Although the movement of population elements of the Dasenech was no different from those going elsewhere: 'some might go with their family, one might go with his wife and children, but even a warrior could go, a boy could go, a girl could go or even a woman', yet their total numbers were significant enough for the Dasenech ultimately to assimilate them into Dasenech society, not as individuals, but as micro-Samburu and micro-Rendille societies.

The Dasenech also suffered the rinderpest epizootic. However, despite their pastoral orientation and herds of cattle, sheep and

goats, they practise flood-retreat cultivation. Principally they grow millet, along the banks and in the delta of the Omo River and along the northern shores of the lake. And, despite verbal protests, they are not loathe to fish. Theirs is a unique environment in the Lake Turkana basin and the Dasenech are the only society immediately bordering the lake who are capable of linking an agricultural mode of existence with animal husbandry. It was the crucial role played by cultivation which provided the Dasenech with their own internal societal mechanism for recovery from natural disasters, like *mutai*, when their herds were struck down. 'Dasenech plant millet, millet, millet they plant. Then they buy animals. They exchange with the Turkana for animals. They exchange with the Hamar people for animals. Tobacco [is another] thing which they trade with the Turkana...Then they make their animals many.' The process of rebuilding their herds began almost immediately. The means for doing so, the products of their cultivation, were readily at hand and thus they did not suffer the starvation which the loss of herds caused among so many other pastoralists.

Since camels do not suffer the same fatal effects as cattle from rinderpest, it is useful to examine briefly the situation of the Rendille at the time the Samburu cattle herds were being decimated. There is no doubt that the Rendille were present in the areas to the northeast and east of Lake Turkana living alongside the Samburu. Some confusion, however, does arise from the fact that some of the Rendille were herding cattle. The only possible inference to be drawn, and one confirmed in the traditions, is the presence of the Ariaal (known as Masagara to the Samburu). The cattle herded by the Ariaal would have suffered the same effects as those herded by the Samburu, and their herders the same starvation.

Rendille camels, however, were also dying. The cause remains speculative, although anthrax is a serious possibility and a form of pleuro-pneumonia is just as likely. 'That is why people became poor. Rendille missed camels because of the disease, but with the Rendille, although some of the camels died, there were

still some left.' While the effect in terms of numbers of stock lost was not as disastrous to the Rendille as to the Samburu, the much slower reproduction rate of camels prevents a herdsman from greatly increasing his herds and even the loss of a few head of camels could prove equally devastating.

Thus for some of the Rendille the situation may have been as serious as that faced by some Samburu: their migration to the Dasenech clearly supports this. But for a majority of the Rendille their camel-herding existence was not threatened at this time. As the narrator of the above continued, 'Anyone who was related to the Rendille and had formerly gone to live with the Samburu, he came back from Samburu and joined his relatives....Then they all depended on the few Rendille camels that were left. They got blood from the camels until at last the camels got fat.' However, as mentioned above, not all the Rendille or Ariaal were so fortunate and their story, like that of some of their Samburu neighbours, continues among the Dasenech. The sections the Dasenech call Randal and Duro are today's successors of those nineteenth century immigrants.

From the end of the nineteenth century and into the beginning of the twentieth century numerous processes were at work. Individuals existing among their neighbours were being assimilated into those societies, while others who adopted a ndorobo existence were struggling to return to a pastoral way of life. Natural disasters, the effects of the expansion of the Ethiopian empire driving Boran pastoralists into the region between Lake Turkana and Marsabit Mountain so recently vacated, and the commencement of British East African administration, resulted in shifts in the power balance between societies, changes in the lands they occupied and grazed, and in the crystallization of previously fluid societal boundaries across which bond partnerships, trading friendships and marriage alliances had been formed.

6. Grazing restrictions and controls

6.1 The colonial period

From the earliest administrative records onwards, it is clear that the Colonial Government made itself a major factor in the individual herdsman's decision-making process (at times actually taking the decision-making function from him) as to where he took his livestock so as to maximize the opportunity to secure the best pasturage and water.

Initially these decisions by herdsmen may have been attempts at avoiding the payment of 'tribute' as in the case of the recorded observation in 1911 that not a single Rendille settlement remained in the neighbourhood of the Marsabit-Archer's Post road. As the Administration became more firmly established, however, its attitude of superiority characterized by its paternalistic outlook and belief in 'vigorous measures' to enforce the 'correct way', resulted in restrictions on the movements of herdsmen. Most often these restrictions entailed a limitation on movements within certain regions by the delimiting of Tribal Grazing Areas. At other times, however, the restriction was very specific and heavy-handed, as is shown by the 1915 confining of five Rendille settlements to the neighbourhood of Loiyangalani. This was done 'in case' camel transport was required to move a police post from the lake shore, although it was recognized that the grazing was poor and that the settlements' inhabitants 'suffered accordingly'. Principally these early restrictions were based on the separation of 'tribes' into areas in which they 'belonged' in order to facilitate their administration, their protection and their trade (read tribute or taxation). At this early date notions of grazing control were non-existent and did not make an appearance until well on in the colonial experience. When the concept of 'overstocking' did appear it was more a rationalization for seeking increased revenue than a manifestation of serious concern for the region's vegetation. It was the result of an individual's observation rather than an understanding of the minimum number of livestock a family or society required to exist in the worst of environmental-stress situations.

It seems useful to digress at this point to remind ourselves of the nature of the pastoralists' movement. The two major aims of a herdsman, the provision of his family with food and the conservation and growth of his herds, are often incompatible (the emphasis on production of a regular daily supply of food by African pastoralists, as opposed to emphasis on the herd's production of a marketable surplus among the pastoralists in the Middle East is often noted as the major difference between the two). To accommodate both human and stock populations in the best possible conditions a pattern of sub-units or camps splitting off from the main settlement is followed. Herds are separated into various units in response to the needs of the particular settlement units and the needs of the stock for pasture and water. The greatest diversity in such units occurs in the dry season.

The movements of each herding unit are individualized attempts by the herd owner to provide access to both pasturage and water, based on the particular needs of his animals and his first-hand experience of the locality. Personal choice and inclination based on knowledge, beliefs and attitudes, are the dominant influence in this decision-making process. His view of the quality and quantity of vegetation, the availability of water, the distance between pastures and water, and the prospects for the immediate future are among the major variables taken into account. Despite the broadly accepted principle which provides equal grazing rights to any society member, the herdsman's range of experience and familiarity with a limited locality generally confine him to a more or less fixed pattern within a recognized region. Often his dry season - wet season routine varies only in relatively minor detail. This is the 'inertia of convention' as characterized by Gulliver: 'if a certain territory is satisfactory, there is little reason to change it' (Gulliver, 1955).

Livestock can in theory be moved freely by a herdsman within his particular society's area. Grazing is a society right and no formal rights of possession of pasture or water exist. When some form of differentiation does exist it is usually in rights of use

and access to a particular water point based on a unit of the society which has dug or cleared the water source. This is the case with the wells in Rendille country which are sometimes said to be 'owned' by individual clans or sub-clans. Ownership is not exclusive but merely implies first rights to the water and amicable arrangements are always made with other clans in the vicinity.

It is possible that the previous distinction of two seasons, a wet one and a dry one, obscures the complexity of the actual movements occasioned by the local environment. The utilization of particular areas of the land is prevented by a variety of reasons, some environmental, some political. The seasonal variation of vegetation, a condition which is scarcely predictable, is a more or less permanent factor which the herdsman must continually confront. The presence or threat of disease, to either the human or animal population, or both, is subject to changing patterns across the land. Like disease, hostile relations with neighbouring societies are also subject to changing patterns due to a multitude of causes. A more recent condition which has prevented the utilization of certain areas is that of government-imposed restrictions. The exclusion of the Dasenech from traditional grazing in the Ilemi Triangle in 1941 is an example.

As a description of vegetation in the north would convey, browse is much more ubiquitous than grass and herbage: an environmental condition, like the seasonality of vegetation, over which the herdsman has no control. Often its poor quality makes it unpalatable for domestic stock, or inadequate distribution of water limits access to it. The effect is the generally observed principle that ephemeral pastures are utilized immediately they grow and more resilient pastures are in effect held in reserve for worse periods when all else is exhausted. This is seen in wet season - dry season patterns. The less persistent pasture stimulated by short rainy periods is consumed first and this is followed by a gradual retrenching to the limited regions of higher rainfall and more productive vegetation. Thus, the basis of a

herdsman's nomadic movement is the search for grazing.

When the first administrators arrived in northern Kenya, the encounter between them and the peoples they considered they had come to take care of was an encounter with dynamic, rather than static communities. To the southwest of the district the expansion of the Turkana continued while in the north of the district, along the frontier with Ethiopia, the continued southward movement of the various Boran language speakers was growing. The establishment of a post a Loiyangalani was intended to cut off a major route used by raiders along the lake and at the same time to protect the Rendille from Turkana incursions. The proposal for a post at North Horr was to control the area between the lake shore and the Huri Hills.

The southward movement of Boran speakers was, at the time of the initial efforts at administration, primarily a steady stream of individuals with periodic occasions of massive migration by entire sections. One such major influx occurred in 1913, precipitated by the expressed intention of the Ethiopian Government to divide among their soldiery all the Boran speakers as private labourers, allotting by rank a specific number of Boran to each soldier (a system, used at that time in many Ethiopian provinces, called *gabar*). The primary concern of the government at this time was for a settled frontier which Ethiopia would accept and respect according to European principles. To the Ethiopian proposal of arresting these Boran and encouraging their return, the government in London responded that refugees in British territory could not be sent back but must be protected against further attacks. Although the 'villains' would change, the guiding principle upon which the administration of the Gabbra and Boran peoples in British East Africa would rest for the next half century was established.

With the ever-increasing occupation by the Gabbra of the northern part of the district, primarily north of a line Maidahad - Maikona - Kalacha - North Horr, and the continued expansion of the Borana on Marsabit Mountain itself, the consequences of the 'refugee' policy were clear. The problems were

described in 1914 as threefold: since refugees for reasons of international policy were not taxed and were also intermingled with 'British subjects' to such an extent that it was impossible to distinguish between the two, none was taxed. This created the undesirable situation in which two societies of the north, the Samburu and the Rendille, were taxed and the Boran speakers were not. Of a more serious nature, but not seen as having long-term implications, was the matter of 'what area to allot the fugitives', who, it was felt, showed an 'insane fondness' for the frontier area thus inviting recapture (which became, in time, a more and more pronounced policy of the Ethiopian soldiery). Involved in allocating an area to these refugees was the recognition that Rendille was 'hardly enough for the Rendille' and that the Samburu was already 'congested'.

Suffering, the refugees from the north arrived and a place was made for them. As a result of the expansion of both human and stock population the Turkana had spread south and eastward out of a land that could plainly not support them and into an area upon which they had been applying considerable pressure in the past. The Turkana, however, were met by military force, in an effort to return the 'intruders' to where they 'belonged'. The first attempts to control and limit Turkana expansion were not the wholesale relocation of settlements (these were to come later), but rather military operations in which livestock was seized and paid as compensation to the Rendille and Samburu 'for losses sustained in the past'. The mentality which saw fit to set arbitrary boundary lines and relocate whole populations had an operational premise, most clearly stated in arguments over alienating certain Samburu grazing lands for white settlements: 'there is no doubt that if all the best areas were removed the Samburu in spite of heavy losses would continue to breed cattle wherever they find water'. The worldwide phenomenon which has seen pastoralists increasingly confined to marginal lands is not without its Kenyan examples.

By 1915 the Boran 'refugees' had been fully assimilated in that their interests were being taken over by the government.

To prevent their being raided, the Gabbra were 'ordered to keep away from the frontier, and ordered to come in the dry season to the water holes between Marsabit and North Horr...under penalty of a heavy fine'. At the beginning of the century, the traditional Gabbra-Borana pattern of herding was one of using the grass of the Huri Hills in the wet season and the well-watered pasturage in southern Ethiopia in the dry season. (It would be desirable to know the exact composition of the grazing lands to the north beyond the Huri Hills in order to know whether or not camels were ever able to live there in the numbers now held by the Gabbra or whether they represent a major change in economic mode.) Only a very few Gabbra settlements at that time ever pushed southwards towards the northern margins of the Chalbi and then only as a temporary measure; the grazing and waterholes of this region were used almost exclusively by the Rendille. Any objections they may have had toward the Boran immigrants using these areas were eliminated by the government, who under pressure to relocate the Boran involved in these massive southward migrations enforced their edicts about where people should live with police patrols.

In the south, any pressure which the Maasai might have applied on the southern flank of the Samburu and Rendille was eliminated as the Maasai themselves were forced further south by the alienation of their lands for white settlement. As a result the Samburu moved in massive numbers on to the Leroghi Plateau area where the Maasai had previously only allowed them access to the northern edge. Additional pressure on the Rendille and Samburu grazing also came on their eastern flank as the Sakuye and Boran especially, but some Gabbra as well, pushed even further south passing to the east of Marsabit and settling along the Uaso Nyiro between Isiolo and the Lorian swamp: they were soon declared to 'belong' to this region.

In 1920 - 1921 another major influx occurred as the 'waves of immigration' of Boran from Dirre were declared the major event of the year. As they arrived with stock described as 'very considerable', realization soon dawned on the government that the

constant southward movement of Gabbra and Boran had resulted in a situation in which the grazing was no longer sufficient for everyone in a dry year. Similarly, no more Borana were being allowed on Marsabit Mountain. As each new wave of immigrants and stock arrived and devoured the grazing of the frontier areas, it created a situation in which the earlier arrivals, now spread westwards from Marsabit across the northern Chalbi, became more dependent than ever on these once peripheral areas.

The overcrowding of these northern areas led to the quite serious intention of moving large numbers of the Gabbra into the region of Mt. Kulal. This plan, devised in 1922 by the Military Administration, who were even more emphatic than civilian administrators in their insistence that boundary lines between societies be observed even when arbitrarily altered to ease administrative requirements, lingered on as an operation plan for some years.

Ultimately it came to be involved with the question of Samburu 'nationality' and to which district the Samburu 'belonged'.

Inevitably, confusion over the Ariaal complicated the issue. The first time the Ariaal are mentioned is in 1918, in response to a memorandum on Samburu living among the Rendille, in which it was noted that a number of Rendille were living among the Ariaal, a situation not thought to be normal. By 1926 the Ariaal were considered one of the two divisions of the Rendille but whose people had 'become so like the Samburu as to be undistinguishable both in appearance and speech'.

The decision to move the Gabbra to Kulal was seen as one response to keeping them out of their traditional pastures in Ethiopia and away from the frontier, and providing them with dry season grazing in Kenya. In the end the plan was dropped due to a lack of funds to provide the extra police which would have been necessary to protect for use the grazing from Kulal north to the frontier. It was in fact because no such protection existed that the Samburu had themselves vacated the area for fear of raiders from Ethiopia on the advice of earlier administrators (eventually, the Samburu returned to Kulal in the late 1930's and early 1940's

but not without great difficulty since Mount Kulal was in Marsabit District and the Samburu did not 'belong' to it). The extreme northwest area of Marsabit remained during this period a restricted area which all herdsmen were prevented from entering. A place to locate the Gabbra and Borana was urgently being sought as it became apparent what was happening: 'they come like locusts and devour all before them. They eat up the game, the forest, and gently push the rightful occupant out....It is the same with game as with the forest. It is the same with Rendille and Samburu grazing'.

The problem of enough grazing, dry season availability being the crux of the problem, was further complicated by the heavy occupation of Borana on Marsabit Mountain. Where once the pastures were reserved by the Samburu and Rendille as a fall-back position for the dry season, thousands of Borana stock now grazed. In 1922 the District Commissioner struck with his Moyale counterpart a deal which the Colonial Secretary sanctioned, to send 20 Burji families, who were 'the only available supply of labour in the district', from Moyale to ply their agricultural talents on Marsabit to ease the government's imports of foodstuffs. The cultivation of Marsabit was encouraged as a matter of policy and a considerable increase in planting was noted in 1929, a situation which continued until the early 1940's when the Boran themselves began to cultivate areas first at the edge of the township and later at Sagunta. Along with the failure to lift the 1922-imposed quarantine (due to BPP) which prevented all movement of stock and trade until late 1927, well after the epizootic had died out, this led to the loss of an opportunity to institute controlled grazing practices through which livestock numbers might have been kept trimmed. Grazing control, however, remained an unheard-of policy until the next decade.

An answer to the grazing shortage of the Gabbra and a means of keeping them away from the frontier was not found until the northwest corner of Marsabit District, from as far south as Porr and the Khomode Pass on the lake up to the frontier at Dibbandiba, was made accessible to them. This corner was originally

closed for the first 25 years or so of administration in order to protect the various herdsmen from raiding parties of Ethiopians, principally hunters of elephant, rhino and buffalo: a no-man's land to be left severely alone until roads and staff would allow government to deal with it. As for the Dasenech and others who sometimes grazed in this area, 'as we don't go up there it doesn't much matter'. By the mid-1930's however, clearly the villains had become the Dasenech. The Gabbra and Rendille were still banned from the region, 'vigorously excluded' as the only economical means of preventing their collision with the Dasenech. Trespass in this area resulted in fines of 10%, 20% or 40% of the total trespassing stock depending on whether the offence was the herdsman's first, second or third.

Dasenech strength was primarily based on two foundations. On one hand, arms were continually available and modernized as the Ethiopian forces received new rifles and the outmoded types were sold off to the peoples of the south and southwest. On the other hand, their large home settlement pattern allowed the gathering of a considerable force either for offensive or defensive purposes, unmatched by the other societies in the north. (This is another area, that of settlement structure and its effects on societal interactions, herding practices, health, etc., which a human ecologist should study in detail if the region is to be fully understood.).

In 1938 following the effective occupation of southwest Ethiopia by Italian forces who, it was thought, could 'control' the Dasenech, the northwest was for the first time opened for grazing by the Gabbra. Once opened up the area was never closed again, although the military and later police were often required to protect herdsmen in the area from raiders. The Dasenech were held principally responsible as the 1949 Handing Over Report on the government role toward the Gabbra indicates: 'Our main responsibility towards them is to protect them from the Gelluba' (another name for the Dasenech). It must however be made clear that the physical appearance of the Dasenech, Hamar, Arbore and others from the southwest of Ethiopia is so similar

that identification of all these raiders as being Dasenech cannot be supported. This was especially so when the accusations were made by officials who did not realize that the 'Merille' across the border in Ethiopia and the 'Gelubba' in Kenya were one and the same people: the Dasenech. (Dasenech is the referrent used by the people themselves and is therefore used in this report. Recently the term 'Shangilla' has come into vogue for the Dasenech. Its origins are obscure but its negative connotations are clear enough: it is a highland Ethiopian term applied to low-land people who were deemed to be black with negroid features and of inferior status.)

The Rendille received little benefit from the opening of the northwest. They were not allowed north of a line Horoder - Koronli - Kargi - Kurkum - Gus - Balessa Koronte and Moite in the belief that being so wealthy they would encroach on grazing of the Gabbra, 'who are worse off'.

This was in fact the government's traditional approach. As with the Gabbra and Boran, the Rendille and Samburu were hemmed into limited locales wherein administrative policy often tried to prevent even those movements necessary to their survival. To move beyond certain limits, even when grazing and water were scarce, required the granting of permission, but even this was only given grudgingly as 'obviously it is undesirable that these people should go too far ahead as it complicates work from a Marsabit point of view and renders the necessary long safari to visit manyattas to procure transport animals and slaughter stock even longer than usual'. When in 1920 because of drought the Rendille took the traditional option of separating their stock and settlements into smaller, more manageable units, the administration responded, 'Of course this is detrimental to the collection of camels and sheep, and I have therefore ordered that all manyattas are to reassemble under their respective chiefs; this to be effected within one month'.

The grazing area to which the Rendille were confined was initially delimited in early 1919 with slight amendments made later, generally as a result of lack of grazing or water. In

broad terms the Rendille were effectively confined to the southern wells of Marsabit District but even here 'very gradually feeling the presence of Gabbra migration [southwards]'. In 1921 similar bounds were placed on the movement of the Samburu. Under the Military Administration once those limits were imposed in which it was considered 'ample accommodation for the Samburu was being provided', no further adjustments were made. In the mid-1920's the issue of whether or not the Samburu had an historical claim to the Leroghi Plateau arose in connection with the Samburu and the question of its alienation for white settlement. A policy of maintaining the status quo resulted until 1934 when the Kenya Land Commission (Carter Commission) recognized the right of the Samburu to the plateau.

While these various imposed boundaries greatly limited the extreme seasonal movements of the societies, the administrative record is full of examples of various settlements and societies being fined for returning to their 'old haunts'. Like a soft rubber ball 'squeezed in one place, whether by raids, droughts or from other causes, they bulge in another'. Although this description was originally applied to the Pokot, it is equally applicable to the Samburu, Rendille and Turkana, and the effect of imposed boundaries on them.

The other major effect of the imposition of grazing boundaries was the crystallization of what had previously been relatively fluid societal boundaries. This effectively brought to a halt the peaceful means of contact and exchange which had bred familiarity and allowed individuals to extend their networks of social relationships, through marriage alliances and bond partnerships, across societal boundaries as a means of 'insurance' against localized destabilizing crises. By confining societies to 'tribal grazing areas', and emphasizing their identity as a community separate from their neighbours, a need for increased self-reliance resulted and 'tribalism' was in fact promoted. (Beyond these brief remarks about the historical implications this is primarily a sociological topic which should concern a human ecologist. A deeper analysis of the issue can be

found in my paper, 'Disaster and Recovery: An Example from Northern Kenya' presented at the Kenya Historical Association annual meeting in 1978.)

In this early period the notion never seems to have emerged that the limitations imposed on the herdsmen's movements had a detrimental effect on both his well-being and that of his environment (ironically the only recorded acknowledgement of this occurs in the Kenya Land Commission Evidence in 1932 as a position reportedly taken by Pokot witnesses before the Commission). The government's efforts to satisfy their administrative desires had been achieved: societies were narrowly confined and movement across the frontier areas was considerably slowed. That the boundaries often caused ill feeling and even hostilities which might not otherwise have arisen was of little concern; after all, the 'uncivilized' practice had long existed and by confining societies to 'tribal grazing areas' these altercations were being eliminated.

Once the issue of alienation of Leroghi was settled, with the decision that the Samburu would not be required to vacate the plateau, notions of grazing control to protect certain areas from overuse came to the fore. Principally this was because Leroghi was such superb cattle raising country and a pronounced fear existed that the Samburu would ruin it. The entire notion of 'overgrazing' was however a relatively new concept to these northern areas (the first mention of 'overgrazing' with respect to a particular area is not recorded until 1934 when it was pointed out that the Elbarta Plains were 'heavily' overgrazed but would recover if given a chance).

The Leroghi Grazing Scheme, to be effected in 1935, divided the plateau area into seven locations, of which one or more were to be closed each year to allow their 'recovery'. The eight sections of the Samburu and a ninth called 'Wanderobo' were each allocated a quota of stock units, totalling 40,000, which they would be allowed to keep on Leroghi. The decision as to who of each section would live on Leroghi was left to the section to decide, after which the District Commissioner would issue a permit

to the individual specifying the stock he was allowed. One stock unit was calculated equal to either one adult bovine, one camel, ten calves, five small stock or two donkeys.

Delays in enforcement followed. In July 1936 the elders were gathered together at Maralal and informed that they had one month to remove all the surplus stock from Leroghi, after which time those with excess stock remaining would be punished.

In 1938 plans were made for the destocking of excess Samburu livestock and meetings were held to explain the rules and procedures. From these it would appear that the administrators in Samburu at least were beginning to come to grips with the realization that force was in itself a less than effective method of administration.

The rules for the culling of Samburu stock were:

a) Stock of the most influential individuals were to be culled first.

b) No small stock were to be culled unless the owner or family were present.

c) No small bulls, expected to breed in 3-4 years, were to be culled.

d) No members of the tribal police or Kenya police were to be used.

e) All cattle not to be culled were to have a special brand.

f) Selection of the culls was to be done by an 'expert' known to the Samburu, e.g., the District Officer or Stock Inspector.

g) All cull selection was to be done first by the owner, and more intensively by the officer if necessary.

Attempts to implement the destocking programme were however met by agitation among the Samburu. At a meeting on 1 January 1939 the government acceded to a number of the Samburu demands, including one that stated no surplus bullocks other than the very oldest were to be culled until a census was completed. When a new DC took over in March however (for reasons which are unclear) the census was abandoned. Having received one concession, however, the Samburu sought others and increased their opposition to the

entire scheme. Their new demands were voiced at a meeting on 30 March:

1) That the Samburu be allowed to graze cattle as and where they wish, not only on Samburu but also Crown land north of Rumuruti.

2) The removal of the Veterinary Department from Samburu.

3) The abolition of the census and any idea of destocking.

4) The removal of all government-appointed chiefs.

5) That the Il Keleko age-grade be allowed to dress as warriors again and carry spears.

Without waiting for a response to their demands, they spread into closed areas from which a levy force, requested on 24 May, finally evicted them. A chief called Lemondille who had been a spokesman for the Samburu was also heavily fined. As this period was one of below normal rainfall, and drought seemed imminent, no attempt was made to reinforce the grazing scheme or culling plans. In April 1940 when the grazing scheme was finally imposed, although all plans for culling were abandoned, the number of cattle estimated on Leroghi was 34,000, well below the 40,000 quota.

From the minutes of a meeting in June 1942 at Maralal, it is clear that the imposition of the scheme on Leroghi had failed, despite the preparation involved, there 'being considerable disregard' for it. At barazas it was again explained that the purpose of the scheme on Leroghi was to 'help the Samburu' to maintain the grazing there. It was now decided, and announced, that all stock to be permitted on Leroghi (people were not restricted) would be branded up to the number on each owner's pass, the balance of his stock to be removed elsewhere. Branding was scheduled to take place on Leroghi at the same time as the universal compulsory anti-BPP and rinderpest inoculations were done. 'Let all understand that this is not subject to discussion but an *order* from Government.' The alternative location for non-Leroghi stock was the surrounding low country but here another long-standing grievance of the Samburu was met, i.e.,

prohibition against bush burning which had been established in the belief that burning might cause the spread of tsetse to previously unaffected areas. The Samburu, however, said it had not prevented the spread of tsetse but had affected the grass cover. The branding scheme also met with opposition from the Samburu and the limited police available to the administration because of the war effort make it unlikely the scheme was ever carried out; the outcome is not recorded. The records of 1948 - 1949 read like a repetition of the attempts at imposing the Leroghi Scheme from 1935 to 1940.

On Leroghi were grazing some estimated 46,000 head of cattle. A rotation scheme was drawn up, to which the Samburu were opposed, closing in 1948 for example 10 square miles at Suguta Marmar, 35 square miles at Bawa and 50 square miles at Kolole. The low country, over which no control was exerted, was also felt to carry too many cattle but especially goats and sheep: 'Everywhere progressive deterioration and encroaching desert conditions induced by erosion are only too obvious'. A large part of this problem however was that to live in this low country the Samburu required more stock since the livestock grazing these areas produced less milk and by-products.

The obvious frustration which the administrators felt is clear from one proposed solution: to get rid of most or all of the cattle, feed the people on famine relief for a few years while the land recovered and re-introduce cattle in controlled numbers. Fortunately, this administrator did not have a large enough police force to attempt to impose these solutions and in the end he still had not dealt with the crux of the problem, the marketing of the increased production.

The grazing rotation scheme continued until May 1949 when all areas were opened for the rebranding of livestock. Political agitation by the Samburu against grazing scheme rules, branding of stock and the permit system, which included meeting with the KAU in Nairobi and the drafting of allegations against the District Administration, prevented its closing again. Cattle branding was begun in May but an attack on Agricultural

Department people driving unbranded cattle into the lowlands in November, coupled with concern over the presence of a newly initiated age-set, led to its abandonment.

By 1950 areas were once again being closed. In the low country reclamation was handicapped by a lack of rain and the realization that the country was too vast to enforce the policy if the population would not co-operate. Still no answer existed to the question of whether or not all the stock held by the Samburu, which was felt to be clearly too much for the land, was required by the population. In 1951 it was recorded that good rains and grazing control had now reclaimed most of the district which would support one head of cattle per 25 acres, or 260,000 head. The number of small stock held remained unknown. A ranching scheme organized in 1952 was designed 'to induce the Samburu to regard their fat steers as their means of livelihood rather than a joy to behold' by offering steady high prices. After studying the Samburu it is difficult to believe they ever regarded their oxen along with their other livestock as anything but their means of existence, and with steady high prices of course they sold. But the high prices did not last and the failure to organize the marketing of livestock properly led not only to the Samburu, but the other herdsmen as well, once again holding onto their stock.

The attempts at imposing grazing control in Marsabit District, in comparison with those on Leroghi, were little more than vague ideas. Early in 1945 the first closing of certain areas to all grazing occurred; closed so that 'the grass could seed' were those areas watered by Derati, Karsa, Kulume, Fora and Galass. Meetings were held among the Rendille 'in which the principles of grazing control were expounded and argued'. The result: the Rendille 'trespassed' and 'showed a complete disregard of tribal discipline and the order of Government, and were heavily fined for it'; so much for the effectiveness of almost 40 years of the alien 'chief' system. It does not appear that the closing of particular areas was ever linked to recognition of the grazing requirements of the livestock

holding of the Rendille, Gabbra or Borana. Rather, the decision to close seems to have been arbitrary and administrative, forbidding an area's use because an official observed a seemingly overgrazed location. The government quite clearly had the means at hand to limit where settlements resided, and this they exercised. Until 1945, however, when mounted camel patrols were formed for the purpose, no check existed on the herds of *fora* stock run by the warrior grade.

A year later it was reported that the Rendille 'resented' grazing control and were outspoken in their views of it. When one considers the limited 'Tribal Grazing Area' they had been legislated into, the loss of water points and associated grazing on the northern edge of the Chalbi, the restrictions placed on grazing along the eastern shore of the lake, the loss of dry season reserves on Marsabit and the continued pressure being exerted by Boran from the east, their attitude seems understandable. The claim therefore that the Rendille were (are) overgrazing the land is but a small portion of the reality. Not surprisingly, 'the elders are not willing to exert themselves to see that the tribes people do not trespass into closed areas'. These were after all the owners of the stock being confined, who clearly remembered a different order of existence only 40 years before.

A similar programme of closing particular areas to grazing was followed in Moyale District where the people were described as 'still very suspicious and unco-operative in this respect'. There is no indication that any co-ordination existed in terms of those areas closed in Moyale District and those closed in Marsabit District, nor was consideration given to the effects which the closing of a particular locale would have on a neighbouring district.

In 1946 the grazing on Mr. Kulal was investigated with thoughts of limiting the quantity of stock on the mountain. Preliminary steps were taken, principally with respect to the Samburu herdsmen living on the mountain, with the formation of a grazing guard force (presumably to watch grazing areas within the

forest), but it is unclear if such a measure was ever imposed.

About this time the conclusion that the country was overstocked was among the administrative baggage each new District Commissioner seemed to acquire on arriving to assume his duties. In 1947 the first such statement is recorded: 'the Rendille possess more camels than their country can carry without signs of serious deterioration'. North Horr was said to be overstocked as were areas around other permanent water supplies. This was followed in 1948: 'There is little doubt the District carries more camels than it should' while the Rendille claimed they had none when sales were mentioned. Yet at no time does it appear that research of any kind was ever done to determine how many beasts a family required for its existence, nor was a reliable census of the true numbers of animals being herded ever completed, a situation not dissimilar to that which exists today.

The situation among the Gabbra was similar to that of the Rendille, with half-hearted attempts to close various areas for a year or two at a time. In many years, however, this was complicated by the lack of rain so that it was impossible to rest any areas and the real problem was declared to be one of finding the people sufficient grazing to keep them alive.

The two areas of Kukana - El Yibo and Alia Bay - Derati in the extreme northwest of the area were the only areas where any kind of grazing control was maintained, and this was because of continued fear of raids from across the frontier in Ethiopia (see above and Dasenech: details of movements). These two areas were regarded as concessionary locations to be used only when the grazing in the North Horr region was finished. The aim was to keep one or the other closed for an entire year at a time. In addition, as soon as the rains broke all Gabbra were immediately returned to the Huri Hills - Dida Galgalla region. That this had a favourable effect on the vegetation is unquestionable. In 1957 the District Commissioner wrote, 'East of Lake Rudolf, good rains, combined with several years of grazing management and improvement of water supplies, produced a cover of *perennial* as well as *ephemeral* grasses which made much of the NFD almost unrecognizable to the present writer after an

interval of almost 15 years'.

In 1948 with the demarcation of the Marsabit Forest completed the year before, the Provincial Commissioner ruled that the Songa area and its water in the forest would henceforth be 'forever' closed to the Boran herdsmen of the mountain. Their 'traditional water' (he seemed not to realize that Marsabit was anything but a traditional Boran location, as they had not arrived there until the turn of the century!) on the forest fringe at Balessa, Gof Bongole, Ullan Ulla, Sagunta and Gembo would have to be relied upon.

The basis for instituting this policy was the realization that the Boran had caused 'a great deal of damage to the forest and materially affected the availablity of forest waters'. Reports from as early as 1937 had noted the harmful effects resulting from the grazing of each side of the forest tracks when cattle entered the forest for water. The mountain, however, was not considered overgrazed at this time, although it was remarked that too many animals were being pastured (on what was described as the mountain's 'first-class grazing'), in respect of the water available.

Attempts had been made in previous years to maintain a limit on the Boran stock that could be grazed on Marsabit Mountain, but success was negligible. The Borana continued to shift their stock back and forth from Dirre in Ethiopia to Marsabit, increasing the number on the latter in good years, and decreasing it in hard times. No real control over the numbers moving onto the mountain was ever gained.

A modification of the 1948 policy was initiated in 1950 when an outer perimeter for the mountain grazing was demarcated in order to prevent friction between the Borana and the Rendille (thus eliminating the last pretence that the Rendille could use their traditional Marsabit dry season grazing). With the rains, the Borana now moved down the mountain as far as possible without crossing this outer perimeter and remained there, in a good year until August, before climbing back up for the dry season.

To supervise further the number of stock on the mountain,

the government announced its intention to brand all the cattle entitled to use it. This was followed by the Borana announcing that they were all moving back into Ethiopia, which an estimated 10% did. The Provincial Commissioner then agreed that in 1950 only the township cattle would be branded and the remainder in 1951. On the basis of a maximum of 10 head of cattle (8 cows and 2 work oxen) and 2 head of small stock per town-plot owner, just over 600 head were branded and each owner was issued with a pass authorizing his possession of the number branded. The branding of the township cattle was coupled with the demarcation and allocation of agricultural plots: in the town (43 of 3 acres each), at Karatina (5 of 4 acres each), Ullan Ulla (13 of 4 acres each), Majengo (56 of 4 acres), Sagunta (36 of 8 acres) and plots for government staff and police (50 of half an acre each). In addition, soil conservation measures of contouring all farming areas were introduced and 14,000 yards of terracing were completed.

The Boran refusal to have their stock branded was publicly declared to be due to the refusal of the elders at Dirre, supported by the Ethiopian Governor of Borana, to allow branded cattle at Dirre. The Colonial Government countered, saying they would allow the exchange of cattle on the stock passes as long as the number listed was not exceeded. The real reason however was felt to be fear of closer control and forced selling if the numbers of stock were known. Because of the adamant refusal, the 'Marsabit Mountain (Grazing Rules) of 1952' were legislated to provide the force of law. First the 1 January date of enactment was postponed until May. With renewed difficulties in the northwest of the district with the Dasenech and the possibility of Boran resistance, the May date was again postponed until the dry season, by which time the State of Emergency had been declared and the police force in the district halved. By 1955, three years later, the 'Rules', repeatedly postponed because of drought, still awaited re-enactment while the quantity of stock had greatly increased.

In 1958 the first pipelines carrying water from the Marsabit Forest to the grasslands outside were completed and a 'spectacular' regeneration resulted. In March 1960 it was noted that with the completion of these water development schemes on Marsabit and Kulal grazing control would at least be possible in those two locations, optimism having been fostered by the seeming acceptance by the Boran of the grazing scheme in 1959. At the end of 1960, however, it was recorded that the Boran had deliberately brought an extra 10,000 head of cattle onto Marsabit Mountain.

The introduction of grazing control schemes was only one approach used by the government to cope with the observed deterioration of the north's vegetation. The other, begun in the late 1940's and carried on throughout the 1950's, was the introduction of water development schemes to increase the herdsman's access to the marginal lands within the grazing area to which each society was limited.

This was not a new idea. In 1924 it was already noted that 'the outstanding difficulty in the Province is lack of water. If more wells were opened up, all difficulties would cease as grazing is more than sufficient for all the inhabitants but large areas cannot be used at present as there is no water near them.' These original notions of opening up unused grazing areas were dictated by political motivations, i.e., holding the Boran population in Kenya away from the frontier. This position was not very different from that of the 1950's when the effect of newly constructed pans, dams and wells was to delay the grazing movement of the Gabbra and Borana from the south of their area (in 1957 this delay was in fact adequate to prevent their stock from crossing the frontier into Ethiopia).

When the actual development of water supply schemes occurred (the chronology of these developments is outlined in Section 6.8 on Water development), attention focused on grazing control: 'When areas inaccessible have water installed, proper grazing control measures will be feasible.'

As noted, in 1951, no grazing policy existed in the low country

around Marsabit since 1) the grazing and water resources were 'fitted together badly' and 2) 'the grazing and browse which is within an economic distance of permanent water does not, save in a good year, add up to much above the requirement of existing stock.'

In response to the second observation, the Provincial Commissioner banned the inoculation of animals in the province because of the danger of overstocking and because of the lack of outlets for cattle and camels. The Marsabit District Commissioner however refuted this, stating that the district was 'certainly not overstocked at present' as a result of the previous two years of drought when a large percentage of stock was lost. Because the grazing and water resources of the north were fitted together poorly, water development schemes flourished.

Pans were constructed, natural catchments enlarged, boreholes dug, and springs tapped. Although these developments allowed greater concentrations of livestock populations into these now better-watered areas than had previously been possible, the areas had been marginal to begin with and they quickly deteriorated. Whereas these marginal lands had previously provided adequate wet season grazing while dry season pastures recovered, many were now, with the provision of water, being used for part of the dry season as well. In other cases, the convenience of hand pumps at boreholes and tapped springs, which remained in operation throughout the wet season, actually hindered movement until underutilized wet season pasturage was inaccessible due to a lack of water. This in turn led to yet more water development projects in other marginal areas in the expectation that they would support additional animals for longer periods of time. In short, the vicious circle of opening up the north's marginal lands was causing greater degradation of the environment with every rotation (for details of these schemes see section 6.8 on Water development).

As expressed from Moyale in 1960, the success of holding the Boran population south of the frontier also meant they were less inclined to cross into Ethiopia in a bad year. As a

result the frontier strip of grazing was starting to show signs of pressure and overgrazing was likely to result, unless alternative water supplies could be provided in the east and south of the district.

Thus despite all the efforts at introducing control schemes in the north of Kenya, the Provincial Commissioner in 1960 was forced to conclude that grazing control in the accepted sense of the term was non-existent except perhaps on Marsabit Mountain. Containment within Tribal Grazing Areas, however, remained in force, and these were delimited as follows:

The Rendille areas: Bounded in the north by a line Moite east from the lake shore through Balessa, Koronte, Gus, Koroli and southeast to Arba Jahan. In the south it follows the Marsabit - Isiolo District boundary and Marsabit - Maralal District boundary to Sirima, then west along the Sirima lugga to the lake shore, then north to Moite.

The Gabbra - Borana area: Bounded in the south by the northern Rendille line and to the north by a line running east from Kokoi on the lake shore to Derati, thence Kukana, north to El Yibo to the Kenya - Ethiopia boundary and east along the border to Furroli, then south and south east on the Marsabit - Moyale District boundary to Arba Jahan.

The Dasenech area: From the Tulla Bor lugga at the lake shore and follows the lugga until it crosses the Kenya - Ethiopia border and west along the border back to the lake.

In terms of development, restrictions on societal movement had been instituted, veterinary medicine had been introduced, grazing control had been tried, water development had been given a high priority, but in the final analysis, unless these went hand in hand with stock control their effects were marginal at best (the government's conclusion) and destructive to the environment at worst (this report's conclusion). With the realization of the importance of stock control (the development of offtake systems and marketing are dealt with below in a separate section) the following analyses and conclusions were reported:

In 1955 from Samburu : it was assumed one person required seven head of stock for his existence. [Note: this is the only time any figure of this type appears in the record.] With a district population of 35,000 they require 245,000 head of stock. Since there are in fact 350,000 head there is a surplus stock population in the district of 100,000 plus. If a 12% natural increase is assumed over the next three years, an offtake of 40,000 head per year is required to balance human and stock populations.
This was clearly not possible through sales done then 'and impossible without more efficient marketing'.
In 1957 from the Northern Frontier Province: the estimated land carrying capacity was one stock unit per 100 acres. Using the 1957 offtake statistics

14,219 cattle	159,000 small stock
6,819 hides	656,074 skins
21,038 units	815,074 or 113,015 units

This total of 186,161 units (source not verified) which includes 2,108 camels from the Archer's Post abattoir, was rounded off to 200,000 stock units as an allowance for domestic use and spoiled skins. If this offtake was then equal to the natural increase in a run of good years (and the author doubted they were that lucky) the stock in the north must be 1,000,000 units estimated in the ratio of 3,000,000 head of small stock to 40,000 cattle and camels. However, if the offtake only represents 10% of a total 2,000,000 units, 4,000,000 small stock and 1,000,000 cattle and camels, the amount of stock is immense. The author then concluded that

the totals did not necessarily mean drastic reductions were required, since good management could improve the vegetation cover and enrich the soil.

The following sections detail the annual movements of the individual societies during the colonial period. They are provided because they contain information about annual changes in vegetation and rainfall patterns and the pastoralists' response to those changes, as well as fully illustrating the effects of the imposed restrictions discussed above.

A limited section on tsetse is included for comparison with the present-day distribution and grazing patterns. The list of water development projects should serve to amplify the migration details as well as provide a clue to when deterioration of vegetation in certain locations may have begun.

6.2 Rendille: details of movements

1910 There are seven manyattas in the neighbourhood of Laisamis with a large number of small stock watering at the Merille. The favourite grazing of the Rendille is at Koroli but lately abandoned owing to raids. Another 'great centre' of Rendille is at Kulal and the lake on the fringe of Turkana country where the Turkana continually raid the Rendille.

All of Rendille consists of only 21 villages.

1911 There is not one Rendille manyatta in the neighbourhood of the Marsabit - Uaso Nyiro tract - they complain they pay tribute but the Samburu do not. Due to raids the lake area was abandoned but with the establishment of a post at Loiyangalani some people are now returning.

1913-1914 The Borana-Sakuye of the Uaso Nyiro (raided in the past by Ogaden Somali) have raided the Rendille living near them and killed a large number, mostly women

and children, and stolen a large amount of stock.

1914-1915 The possible withdrawal of the police post at Loiyangalani resulted in the forcing of five settlements to remain near by in case transport was required. Grazing however was poor and the settlements suffered accordingly. Two of the five were previously favourable toward the government.

1915 (July) Ten manyattas moved from Laisamis to Marsabit during the rains - given permission in February/March. During April/May three manyattas moved to Dida Galgalla to the west of Marsabit but this grazing is gone and they are returning to Laisamis. Other manyattas kept to a line of waterholes east of Laisamis. Rendille grazing grounds in the dry season are in two locations: 1) graze and water at Merille Laisamis and 2) Koroli and Marsabit Crater Lake. In the wet season they are scattered from Delamere's Njoro and Maikona to the Merille and Kaisut Desert. A certain number are also on a line of waterholes southeast of Merille to Kwaa and Seriburu.

Last dry season:

Saleh	at Merille
Saleh (Gobanaiyu)	at D's N.
Saleh (Nebei)	at D's N.
Lokumai	at Merille
Lokumai (Dubscha)	at Merille
Lokumai	at Merille
Lokumai (Leserge)	at D's N.
Dibsahai (Huri)	at D's N.
Dibsahai (Tumul)	at Merille
Longeli	at Merille
Longeli	at Merille
Longeli	at D's N.
Masula	at D's N.
Ilduria	at Merille

Ilduria	at Merille
Lorogishu	at Merille
Rungumo	at D's N.
Nahagan	at D's N.
Galdeilon	at D's N.

(November) Rain only south and southwest of Marsabit therefore the Rendille moved from south and north of it to this area.

1916 Instructions to the DC - expect to find half the Rendille, i.e., Galdeilon, Nahagan and Rungumo, north of Marsabit and the bulk of the rest to the south.

At Maidahad both Rendille and Gabbra water sheep and goats in large numbers. The camels go to Koroli. Maikona is 'now used extensively' by Gabbra camels and small stock. At Dida Kalacha *fora* camels of Rendille and Gabbra are found. At Koroli are four manyattas scattered around it, i.e., Saleh (Lido), Rungumo, Dibsahai (Tumul) and Galdeilon.

Gabbra manyattas are neighbouring. Nahagan is some 5 miles north of Maidahad and near to the Gabbra Algana - *fora* camels are at Kalacha.

1917-1918 In a list of Rendille headmen by section 'Ungelli' are listed under a separate heading labelled 'Ariaal'.

1918 (September 30) A government patrol went through the Horr Valley to the lake; travelled with a number of Rendille camels going to the lake for water.

1918-1919 Prolonged drought and anthrax. The Rendille range from Laradabart, north of Loiyangalani, in the north to Kom in south.

1919 (December) Ilduria and Kokoton (source not verified) Rendille settlements are near Balessa at Kom and Kuru. The grazing areas set forth in May must be amended so that when grazing and water are scarce the Rendille are allowed south of Merille lugga and west of the Archer's Post - Merille road into Samburu country. At

present Lokumai is near Keryo and Ilduria and Lorogishu between Merille and Koja; the rest are between Marsabit, Merille and Irrer. With good rainfall the Rendille tendency is to come nearer to Marsabit.

1920 (December) Owing to drought the Rendille are greatly scattered and a great many settlements have split into two or three parts. 'Of course this is detrimental to the collection of camels and sheep, and I have therefore ordered that all manyattas are to reassemble under their respective chiefs: this is to be effected within one month.'

1920-1921 It is regretted that Rendille cannot use the Lake Turkana area for grazing their camels ('which was very beneficial to the camels') owing to fear of Dasenech and Ethiopian raiders.

1922 Rendille are especially scattered due to drought - from Maidahad in the north to Merille in the south, Horr near Kulal in the west and the Ret water in the east. In August, September and October settlements split into as many as four sections owing to the extreme shortage of grazing.
Grazing boundaries are under discussion - Gabbra to use area from north of a line Kulal to Maidahad, 'a little vague' if Rendille use Maidahad; might allow Rendille to graze toward Dukana; not allow Gabbra south of Kulal as the Rendille like access to the lake at Sirima.

1923 Heavy rains and ample watering in the whole district. Rendille distribution in year - grazed Koroli, Irrer, Kana, Touny, Koiya and Kutasso areas. Fear of Ethiopia raiders resulted in South Horr being unused although some of the best grazing in the area.

1924 Rendille cattle are with the Samburu and Samburu are with the Rendille. East of the Mathews live a small minority of Samburu with little stock who are 'very much bound up with the Rendille'.

(September) The Rendille are at present at Kanatoony but may move south shortly. Only two manyattas are at Merille and hard put to find grazing; dearth of grazing throughout district.

1925 'The Ariaal section, which generally grazes in the Merille areas, has become so alike to the Samburu as to be undistinguishable in appearance and speech.' There are 18 clans for some 23 manyattas although the number varies from time to time. Lolumain, Longeli, Ilduria, Oware, Lorogishu, Dubscha and Masula are Ariaal. The others are Dibsahai I and II, Saleh, Rungumo, Galdeilon, Saleh Nebei, Urarwein, Uyam, Odola, Nahagan, Maderba and Saleh Gobanaiyu.

(July/August) The continued increase of Gabbra will eventually lead to forcing the Rendille further south and may result in trouble between the Gabbra and Rendille.

(November) Serious raids by Ethiopians and the murder of Rendille by Ethiopian Boran are a regular occurrence.

1926 The Rendille occupy the wells in the southern part of the disctrict 'but are very gradually feeling the pressure of Gabbra migration'. Camels water chiefly at Koroli and northwest of Marsabit - Chief Kopess is complaining that only a few wells are left to water at because of the Gabbra. The presence of the Gabbra is a source of complaint by the Rendille who formerly had exclusive use of the grazing and wells in all but the very northern part in which the Gabbra were established for many years. The government is not concerned with the increased population since the district is not yet overstocked, but the 'tribes' require strict control.

1927 (December) The Rendille and Gabbra are grazing up Galana as water and grass outside is non-existent. Galana is five miles up the narrow gorge splitting Kulal in two.

The Gabbra have been allowed up to Moite and the lake area owing to drought.

1928 A large influx of Rendille from Marsabit moved with camels and small stock into Moyale District in the region

of Turbi and Lake Buti in June in search of grazing and water. They were returned by the administration with little trouble.

1929 At Karhi (Laipera) the well was deepened and concrete troughs installed; two new wells south of Kurkum dug - favourite Rendille country but the last 18 months almost no rain and neither grazing or people in the vicinity.

(April) The northwest of the district (Marsabit) is closed, cannot police it properly. Generally Gabbra are the people in the area but Rendille are at times.

1932 (August) Hill No. 1058 and the Huri Hills are theoretically part of the Rendille's country - have seen Rendille there. From Samburu to Marsabit is the Kaisut Desert and regarded as part of Rendille country.

1933 (November) The Saleh Gobana section of Rendille was seen heading toward Derati with several hundred camels. This is in the closed northwest corner. The year one of exceptional drought. The Rendille were anxious to extend their grazing right south to Kinya, but this was denied.

1934 Some Rendille sections have closer ties to the Samburu; these include the Ilduria, Lokumai, Lorogishu and Masula. They are often around Laisamis in close proximity to the Gabbra/Borana or Koiya - and never on good terms. The Masula and Saleh live at South Horr and have constant enmity with the Turkana. The Samburu and Rendille share waterholes on their boundary including Arsim.

1935 The Rendille are generally found on the Samburu border or at Marsabit Mountain around Ret. In the rains they leave the Samburu border and congregate in the area of Mt. Kulal - Gus - Kargi.

1936 A Rendille child was murdered at the settlement of Rageh Affarie who trespassed into Boran country at Kokoton in the vicinity of Kalacha. Tribal police were sent and removed the settlement. The Boran trespassed Rendille reserved wells in September at

Kurkum and in October Isiolo Boran at Siriwa south of Laisamis.

The Rendille are indeed related to the Samburu - Samburu camels are at Marsabit and Rendille cattle with the Samburu. 'They are always desiring to cross the boundary and intergraze but this is not encouraged.'

1937 The southern part of Marsabit District had insufficient rain and in October a number of Rendille had to be brought back from Samburu country south of the Merille where they had gone to find grazing. Toward the end of the year most Rendille moved toward the country near Kulal on the Samburu border.

The Rendille have equal rights to Marsabit Mountain water with the Boran. The problem is allowing the Gabbra Algana and Bolbo to the southern slopes of the mountain is that when they push off conflict with the Rendille is possible.

1938 The Rendille are not allowed north of a line drawn Horoder to Koronli - Kargi - Kurkum - Gus - Balessa - Koronte - Moite. The precaution is necessary because the Rendille 'are extremely wealthy and would otherwise encroach into the grazing of the Gabbra, who are far worse off'. There are seldom serious grazing disputes except in bad years when the Rendille try to move into Samburu country south of the Merille and the Gabbra areas to the north. Kulal is only used by a few Rendille cattle owners.

Rendille found and fined in April at El Bes within the Galass - Karsa area. In May and again in August they trespassed as far as Kauru and to Kinya in Maralal District. One *fora* herd crossed the Dida Galgalla to Turbi.

January - Rendille were between Andere and Arsim; around Laisamis and Koiya.

March - Many moved toward the lake near Loiyangalani.

April - Rendille went north from Loiyangalani to El Bes and Karsa, a 'forbidden area to them' and were sent back.

May - The Rendille from the Laisamis area moved into Samburu near Kinya and Kauru.

July - A little rain between Hogitchu and Koronli of which both the Rendille and Boran took advantage.

October - Good rain at Marsabit and so Rendille came to the edge of the mountain in large numbers.

November - Many Rendille are on the mountain and others near the Balessa Kulal.

December - The Rendille moved from Marsabit Mountain to the Hedad; others were around Mt. Kulal.

1939 The Rendille cattle people moved to Marsabit Mt. because of the uneven rainfall in the desert.

The wells at Kurkum and Kargi are now only sufficient for human needs and so the Rendille are more dependent on Koronli and Gus which they share with the Gabbra. Another favourite area - Laisamis/Merille - has no grazing and so the water there is useless. The grazing boundary set in 1938 between the Gabbra and Rendille was 'insisted upon' this year and the Rendille were fined heavily for grazing 1,400 camels in the Huri Hills. With Kurkum and Kargi drying, the Rendille watered with the Samburu on the western and southern boundary. The Borana on the eastern and Gabbra on the northern boundary of the Rendille have no water but Laisamis. Cattle people of the Rendille are asking for grazing concessions on Marsabit Mt. but things are scarcely better.

January - Rendille at the Hedad and at Irrer, Kulal and Koronli.

March - Rendille were on the lower slopes of Marsabit Mt.

April - Rendille were back to their favourite 'haunts' of Kulal, Laisamis, Kargi and the Hedad.

May - Some Rendille moved toward Gus.

June - Rendille were concentrated near Kulal on the lake.

July - Little change.

August - The Rendille moved toward known waterholes.

November - The Rendille were less fortunate with rain than the Gabbra to the north.

December - Rendille toward the Koronli wells. (Throughout the year the Boran were on or near Marsabit Mt.)

1940 Determined trespass by the Rendille into Samburu country, an indication of the drought in Marsabit District. The officer-in-charge of the NFD made it an offence for the Rendille to enter Samburu grazing.

The Rendille gave concessions in their area to the Gabbra when military activity made their grazing grounds in the Huri Hills, Derati and Dida Galgalla untenable. At the end of the year some waterholes on the northern edge of the Chalbi were prohibited due to military needs. The Borana were likewise deprived of some Marsabit Mountain water-holes.

1941 The Rendille at Merille claim they have permission to graze south of the river provided they keep their settlements north of it. The DC cannot find the definite boundary.

1943 The Rendille crossed the northern boundary to Fora and Hurran Hura twice; fined on the second occasion. In June the camel people were mostly at Koranli, east and north of Marsabit Mt. Kargi and Kurkum were mostly eaten by the locust. The cattle people were at Marsabit, Kulal and the lakeshore. In November - December the cattle people went south to Omari and Laisamis. With rain the Rendille congregated at Bihai, Kori and the south end of Lug Jaldessa.

1944 Locusts invaded the Rendille grazing areas. In June large numbers of camels grazed at Dida Galgalla and beyond Bubissa and severe penalties were imposed. In the dry season the Rendille moved to their traditional areas including Moite and Gus where there was large trespass by Turkana and Boran *fora* goats herds.

1945 The Rendille suffered a bad year. The late rains in 1944 on Marsabit, Kulal and Asie Hills gave some fresh grazing but the failure of the rains in April/May left little camel browse. Cattle were grouped on Marsabit and Kulal.

In the south the Rendille moved without government permission but with the goodwill of the Samburu into their country and were found as far south as the Leroghi slopes. Rendille followed the Milgis through the Elgerai Gap between the Mathews and Ndotos into Maralal District. In the west there was no grazing along the Ndotos or in the Horr Valley. To the east the dry weather grazing of Laisamis and Loiya waters were only enough for a few herds.

The southern move was mostly by cattle people closely akin to the Samburu (some even holders for Leroghi grazing). The northern move was the 'most determined one'. When Gus - Moite were finished the camels and small stock were moved north beyond Moite into Sibiloi and Koobi Fora areas. *Fora* camels were found at Kokoi and Dololo Wachu where they played hide and seek with police patrols - they kept their settlements south of the 'Rendille line'. 'The Rendille showed a complete disregard of tribal discipline and the order of Government, and were heavily punished for it.' After severe punishment was levelled at a baraza, the Gabbra elders agreed to the Rendille remaining in the Koobi Fora area until November.

The Rendille increased their stock population on Marsabit Mt. with herds that normally use Barchuma - Koiya area

and Irrer and Larapas. The grazing was sufficient but water was insufficient even with a forest concession at Songa Dida. The limitation on Boran cattle was maintained.

1946 The Rendille camels did not produce their usual milk in the first half of the year owing to the drought in 1945 'which influenced detrimentally the breeding of their camels'.

There was 'determined penetration' by Turkana into Rendille country along the eastern shore of the lake.

1947 The rain was good and grazing adequate throughout the district. 'Rendille possess more camels than their country can carry without serious deterioration.' Samburu complained of trespass and a number of Rendille were arrested at Maralal.

1948 Grazing control was introduced in Gabbra country but none for Rendille; only exists at Kulal which is like Marsabit - leave the mountain as soon as possible to seasonal pools below after the rains.

1949 Rendille dry season grazing is the Hedad and Kaisut. They move there after spells of rain. Otherwise they concentrate around the wells at Laisamis, Koiye and Merille lugga and north of Kulal. There is no effective grazing control among the Rendille because they are 'comparatively well off in both water and grazing'. There is still friction with the Isiolo Boran at Koiya - Barchuma area.

There is anthrax among the Gabbra and Rendille animals, 'but my own feeling is that the Rendille own far too many camels anyhow, and that a bit of disease now and then is to be encouraged in their stock provided it doesn't reach epidemic form.'

The Rendille base their stock on four areas:

1) Kaisut (scrub desert); water at Laisamis, Sirirua, Koiya, Barchuma and the Merille lugga.

2) Hedad (scrub desert); water at Koronli, Kargi, Kurkum, and Lake Turkana.

3) Lower slopes of Marsabit Mt. (lava grasslands); water at Ret and Horo Ndere.

4) Mt. Kulal and the lakeside south of Moite (bare lava and lava grasslands); water at Gus, Balessa, Ildere and the lakeside.

1950 The Rendille followed 'well established' long rain migrations from Kargi to Bubissa and Dida Galgalla, and from Laisamis to the northern Kaisut and Gombo areas. The southern Rendille hardly left Laisamis. The northern Heda Hedad at the end of the year had some rain and the lakeshore and Kargi stock concentrated there.

The Rendille trespassed in both Maralal and Isiolo districts. The Rendille and Boran squabble over Orloma and Balessa El Der was settled at a baraza in June - El Der exclusively Rendille. In December the Rendille agreed to share Gus and El Boditcha with the Gabbra.

1951 The Rendille exist in northern and southern groups. In the long rains the northern slopes of the mountain are grazed especially at Orondele, Bubissa and Hotitcha - establish manyattas. When the conditions demand they move west and re-establish their settlements at Kargi and Koroli. The *fora* stock move on west toward the lakeshore - the last refuge.

The southern group move in the long rains up to the southern slopes of the mountain. As the vegetation decreases they move south through the Kaisut to Laisamis and establish their settlements. *Fora* stock then move west along Irrer - Ilaut line east of Oldonyo Mara and thence to the lake.

1952 A severe drought in Rendille. By October grass and water were so short at Laisamis - Kaisut they were permitted to the Logologo borehole. In the north it was the same and they were allowed the Moite to Fora areas. In November there was rain and back to the Marsabit area but only light and Logologo was used again but the output could not cope with the stock to

be watered. In December heavy rains fell on the lower Marsabit slopes and Kaisut.

1953 Severe drought throughout the area. By June the Rendille cattle had to be accommodated on Marsabit Mountain given a Borana concession to use Bongole (where rains fell in May) until the rains broke in mid-October.

1954 Again severe drought throughout the year. Rendille were given a triangle Koiya - Sebei - Barakarunyu through an Isiolo/Marsabit boundary alteration - 'a Godsend'. In the north the Rendille concentrated in the Khomode - Porr - Gus area.

1955 The Rendille area suffered severe drought compared with the rest of the Marsabit District. The Rendille in the southern area have had little or no rain the past five years. A concession for grazing was given them in Maralal District from Merille to Kinna to Koiya. The northern Rendille were concentrated in the Mt. Kulal - Gus area. Both groups remained thus until December when sufficient rain allowed them to move to their normal areas.

1956 A very easy year - surface water remained for long periods which allowed the use of normally inaccessible areas, resting the overgrazed dry season areas overused in the past years.

1957 In April at South Horr there was an affray with Samburu warriors over water.

1958 The Rendille were fortunate with the exceptional rains again. They were in dry season grazing only two months and back to 'wet' grazing when the short rains broke. The short rains, although very poor, should be adequate until January when they will need to move to permanent water again.

1959 In 'wet' grazing until June and then to 'dry' grazing. Four pans were completed in the Kaisut but no rain fell.

1960 A general shortage of water and grazing caused roaming far and wide; and quite illegally, as far north as Alia

Bay (brush with the Gabbra in September). Reasonable rains and plenty of grass began the year but after the failure of the small rains the people concentrated on Marsabit's southern slopes.

Rendille grazing areas: 1) Kaisut Desert: much of the soil is alluvial owing to the highlands that flank it. It bears a plentiful grass cover after good rains. Permanent water at: Logologo (borehole), Laisamis, Sirirua, Koiya, Muddo Koni, Barchuma, Merille lugga, Komatoni, Irrer, Ilaut, Ngurunit. Rendille access to Songa Gambella on Marsabit is limited to 2,000 head.

2) Hedad area: Similar to the Kaisut but the grass cover is not nearly so plentiful. The area is sparsely watered. Permanent water at: Kargi, Koroli, Ildere and Balessa Kulal and Badassapagasi.

3) Lower slopes of Marsabit Mt. on the south and southwest. Main water points are Logologo, Ret and Songa Gambella. Limited to 3,000 head at Logologo and 2,000 head at Songa Gambella.

4) Kulal Mountain - south: upper reaches reserved for cattle.

5) Kulal Mountain - north: upper reaches reserved for cattle.

6) Lakeshore at Moite to Serina: usually *fora* stock only.

6.3 Gabbra: details of movements

1910 A Chief of Gabbra, Chiromo, lived at Gamud east of Moyale and was taxed by Ethiopians.

Chief of the Galla west of Moyale, Gallarassa, says most of his people live at Muggado but consider themselves British subjects. Salt deposits and permanent water at Muggado - good for cattle. Gallarassa lives at Waye on the Marsabit - Moyale road. There are camel people at Turbi and on Huri Range (Waye is 11 miles

beyond Marsabit; permanent water there and five or six villages.)

Quite a number of Gabbra are said to be at Lorian and move back and forth by a route east of Marsabit.

1913 Large numbers of Gabbra fled from Ethiopian territory and 'took refuge on our side' at Kalacha, Maikona and elsewhere; reason for flight was a new Ethiopian regulation assigning Boran tribes among soldiers. Shortly after, there was a raid on Gabbra at Maikona who had been living in British territory for some years. Gabbra crossed at Huri and Boran Waye - it seems that more than half the Gabbra who formerly lived in Ethiopia crossed the border; they were followed and attacked by Ethiopian soldiery. The Secretary of State replied to a proposal to have the Ethiopians arrested and encourage the Boran to return, that refugees in British territory should not be sent back but should be protected against further attack.

1914 That part of the district north of a line Maidahad - Maikona - Kalacha - North Horr is inhabited by Gabbra, almost all being refugees from Ethiopia.

1914-1915 Gabbra are not numerous in Moyale District. Gall Rase is head man. Raid by Ethiopians on Gabbra due to 'total disregard of the arrangement about the boundary line and also to the presence of recent run-away Boran near the Frontier line'.

1915 (June) Gabbra slowly moving south with a view to proceeding to Wajir but very adverse to leaving Gurreh country which suits camels, and trying to reach an agreement with Gurreh to stay.

(November) Gabbra recently at Sololo and have not as yet moved form Turbi. The few Gabbra at Maikona waterholes have moved south to Hora Dido.

(October) On account of Ethiopian raids which are threatening, the Gabbra 'have been ordered to keep away from the frontier, and ordered to come in the dry season

to the waterholes between Marsabit and North Horr'. They can graze on the slopes of the Huri Hills but may not use water of El Adi, Pokana, Furroli, El Dimtu and Gololi. Assume they will probably try to return to Muggado in Ethiopia to obtain salt for the camels. Galla Rase, chief of Galbo, is at present in Moyale District; when the short rains break he and his people will be moved to Marsabit. The Gabbra may come as far west as Ambalo during the rains 'but must be ordered to return afterwards to the Marsabit - North Horr waterholes under penalty of a heavy fine.' Chiefs Daddu of Algana and Shiroma Ali of Gara 'go to the frontier and mix with Abyssinian subjects, a thing they have repeatedly been ordered not to do'.

1915-1916 In May 1915 the Gabbra were attacked by the Dasenech and Ethiopians at Korangogu and Dukana. The Gabbra who are suffering are for the most part residents of Ethiopia, and only crossed into British Territory in the last six months before the raid.

'The Gabbra are filling up the vacancy to the north and there are several villages on Marsabit.' (Vacancy caused by ordered evacuation of Samburu and Rendille in northwest of the district by the government.)

1916 (May) The Gabbra are to be taxed this year at 1.5% of their sheep and goats - 'but so many range round Huri and to the northwest' it is doubtful if the government will have much contact.

(August) At Maidahad there are large numbers of Rendille and Gabbra small stock watering regularly; camels are going to Koroli. Maikona is now used extensively by Gabbra for camels and small stock. Karowe is used by the Gabbra for *fora* camels, and Rendille *fora* camels. Kurowa, 40 minutes from Kalacha, has not been used lately by Gabbra.

The Gabbra are chiefly scattered northeast of Maikona. Headman Daddu is near Maidahad; later moved between

Burcha Burrcha and Maikona. There are only one Algara and two Gara villages near Maikona. The majority of Gara are in the Huri Hills where rock pools still hold water and there is green grazing. Gulbo are reported to be on the Ethiopian frontier near Magado. Algara and Gara *fora* camels are near Karowe and Kalacha.

'At present however some of the best country in the whole of Marsabit District has, to all intents and purposes, to be abandoned to Abyssinian free-booters.'

1916-1917 Gabbra are showing an increased tendency towards the Uaso Nyiro in the south but are being checked. Gabbra were raided near Maikona.

1918-1919 Gabbra range from Marsabit to the Huri Hills and then across to Magado in Ethiopian territory and down to Turbi. Galla Rase, a Gabbra headman, moved to Marsabit in January 1919 with his people.

Police travelled with the Gabbra until December 1918; they were withdrawn because of Gabbra inability to supply either transport, water or meat to the police protecting them.

1919 (July) Gabbra definitely instructed that their range is north of Marsabit but one Gabbra called Bonsa (source not verified) is typical of many; he migrated to the Uaso Nyiro with the Borana - he had been told to stay at Marsabit but he went anyway.

(December) Gabbra are scattered widely; some recently moved further afield to North Horr and El Had. A permanent patrol of one officer and eleven rank-and-file police are with Gabbra in the north, ranging between the Huri's and North Horr as protection against the Tigre (Ethiopians).

(September and October) Waterholes of Maidahad, Koroli, Maikona Gamra, Karawa and Kalacha are all used by the Gabbra, especially in the dry season. From North Horr a guide is required to El Had; two Gabbra were found but only one had been to El Had from North Horr before.

All this vast, good grazing country had been vacated for some years, together with the waterholes, due to incursions by raiders.

(December) The Gabbra on the Uaso Nyiro moved up to Marsabit District, and the Gabbra as a whole are 'now fairly homogenous'.

1920 The authorities were told that some Gabbra camels and cattle came from Ethiopia to Kalacha - some 20 manyattas reported having crossed the border.

(December) The Gabbra are now concentrated near Kalacha. There are large numbers of Gabbra and Borana there who have recently fled from Ethiopia. There is a patrol of two NCO's and 18 constables at Kalacha.

1920 (November) There has been another large movement of Boran and Gabbra from Ethiopia to the vicinity of Kalacha. 'This movement exceeds all previous immigrations, the numbers being estimated as equal to if not in excess of our original Gabbra.' The majority are Gabbra with a few Boran who claim to be Gabbra.

1921 (February) The Gabbra and Borana refugees prefer good grazing, freedom from tax and unlimited big game in Kenya, whereas in Ethiopia they are taxed and the game has long been exterminated. With the Samburu now moved north of the Uaso Nyiro, immigration and overcrowding should be discouraged. The Samburu have a prior claim to Marsabit.

(June) A Gabbra application to reside on Kulal will be considered later. The Samburu are no longer allowed south of the Uaso Nyiro and it is thought they might wish to return to Marsabit and Kulal - or so the Gabbra and Borana at a Marsabit baraza were told.

(December) Algara and Gara are at Koroli waterhole and Golbo are towards Turbi. There is a large small stock manyatta reported at Korr on the Merille; this is allowed with the trouble on the frontier but should have returned with the rains.

1922 (February) If the Gabbra return to Ethiopia the British will have no part in checking their movements; the Ethiopians have been told that Britain 'will not force the people to return' but if they do so of their own accord and are not subject to persuasion then Britian is willing.'

(April) Algara and Gara sections moved to near the frontier and are now watering at Eillobor and Eilladimtu. The Golbo are still grazing at Lak Buti.

(June) Camel grazing poor south of the Huri Hills so the Gabbra are grazing at Dakka Kagalla on the frontier west of Furroli as far as Garba Kwial. Now there is water from the rain pools in our territory but with the coming dry weather the people will water at wells across the frontier, principally at Magado.

The Gabbra were told of a proposal to settle all of them from Maidahad to North Horr in the wet season, and for the cattle people to leave Marsabit and graze Kulal, thus making the Gabbra north of a line Kulal to Maidahad. It is vague as to whether the Rendille use Maidahad. Hofteh are recent Ethiopian refugees who are to be absorbed into Gara, Golbo and Algana Gabbra.

1922 (August) A Gabbra manyatta strayed to Garba Tula; a patrol was sent to bring it back, but even though it had left the district without permission, the people were given permission to stay there until the rains start.

The general migration of Borana and Gabbra to British territory did not change in the past year; 400 - 500 people and 4,000-5,000 head of cattle came across the frontier. If this migration continues unchecked (there is still no official policy on it), the 'natives' will either 1) have to go back to Ethiopia; 2) attempt to penetrate beyond the Uaso Nyiro into Kikuyu Province; or 3) starve for lack of water and grazing. It is suggested therefore that the government stop the

migration of Borana with stock but let in those without stock if they have been ill-treated and are not criminals, i.e., they are genuine refugees.

1923 (February) Gabbra cattle on Marsabit now number not less than 10,000 head, and this is a low estimate. The Gabbra are divided into four sections: Algana, Golbo, Gara, and Hofteh; each of these are virtually sub-divided into cattle, camel and small-stock people. The cattle people of all the Gabbra are on Marsabit Mountain. All the camel people could be anywhere between Furroli and North Horr, depending on where there is rain. The small-stock people mostly live in the Huri Hills and the remainder on the foothills of Marsabit Mountain.

(June) It was never the intention of the officer-in-charge, Northern Frontier District, to settle the whole of the Gabbra on Mt. Kulal, but rather in the Kulal - North Horr - Kalacha district 'which was to include all the country north of the district mentioned, as far as the frontier.' It is suitable for Gabbra cattle as long as protection is provided and the rains do not fail, as they did in 1921-1922.

(April) Galla Rase is delaying over moving to Kulal; he wants the goat people to be between Marsabit and Archer's Post and the cattle people at Marsabit, and he wants a report on Kulal's suitability. He says that all his stock will die at Kulal and then he and his people will die. He was told that the mountain was surveyed for its suitability some years ago and there was nothing more to be said on the matter; 'if he did not move voluntarily, the soldiers would drive him along'.

One important event of the year was 'the tremendous influx of Gabbra from Abyssinia'. The move of the Gabbra cattle people was begun, some cattle having reached North Horr. During the year the Gabbra people spread over a very extended area. The camel people and a large part of the goat people are in the Huri Hills and on the

Furroli plains. The cattle people on Marsabit Mountain remain and there are more goat people near Kutasso, while some have infiltrated to the Uaso Nyiro. This 'tendency to infiltrate out of their districts in every direction must be dealt with'.

1924 (January) The Gabbra cattle people absolutely refuse to move to Kulal/North Horr area, their excuse being that the area is unsuitable for cattle and the stock will die. Two manyattas agreed and then changed their minds.

(April) Maikona, Kalacha, and North Horr have no rain and grazing on Dida Galgalla is very scanty; 'this state of affairs may popularize the Kulal area where hitherto the Gabbra have refused to go'. Headman Dedu Korecha asked for and received permission to move to the water-holes northwest of Kulal.

(July) When the Gabbra were ordered to move to Kulal over a year ago there were fewer Gabbra at Marsabit than there are now; it is probable that Kulal will not be able to support all the Gabbra cattle.

(September) Exhausted grazing and poor rains have compelled large numbers of manyattas in the northern area to move to the North Horr - Wano area; it is hoped this will become popular with the Gabbra who in the first instance refused to go there.

(October) Eight manyattas were reported as having moved to Laisamis without permission. A patrol returned them to Marsabit. On a second occasion the manyattas were told that the offenders would be imprisoned.

The tendency of the Gabbra to move south (i.e., to the Uaso Nyiro) is still strong. The DC supports a move to return those already there; it gives the Gabbra a footing there by their very presence.

1925 (July and August) From intelligence reports it was discovered that 13 milangos of cattle and one of small stock went to the North Horr police post neighbourhood; the owners were fined. Undoubtedly others arrived and

became mixed with 'other Gabbra on this side' but there is no definite information. 'This continued immigration will eventually lead to trouble as the present area is only just enough to support the *rhias* at present in occupation. Their continued increase will eventually lead to their forcing the Rendille further south and may result in a certain trouble between the two tribes.' The Boran 'are the more present immigrants and consist mainly of the Gabbra tribe'. Hofteh Boran have joined the Gabbra as blood relatives; 'all are recent immigrants from Abyssinia and inhabit the Horr - Huri area'. The government cannot stop the movement southwards until those who reached the Uaso Nyiro some years ago are returned; as yet no active steps have been taken to do so. To add to the Marsabit congestion, 12 manyattas of Moyale Boran came to Marsabit from the frontier for protection, but there is no room on the mountain and they should go back with the next rains.

1927 (May) The Gabbra tend to run when raided by the Dasenech but they used guns to raid unsuspecting Rendille. Wholesale and immediate disarmament is not convenient at present; registration tried. (In July 1928 the carrying of arms on British territory was forbidden; the Ethiopian government was going to do the same thing but it has not happened, and as a result, armed Ethiopian Boran are becoming more bold.)

(May) 'This migration abates not at all and is as relentless as the oncoming tide....Marsabit [District] is undoubtedly overstocked and still people filter in.' The Gabbra 'come like locusts and devour all before them. They eat up the game and gently push the rightful occupants out....It is the same with game as with the forest. It is the same with Rendille and Samburu grazing'.

(June) There are three Gabbra manyattas in Garba Tula district; they water stock at Goljon, Malka Tumtu and

El Tokoicha. A request was made by the Marsabit DC to have them moved back but Garba Tula has no staff.
(December) The Gabbra are said to be at the eastern base of Kulal; they moved northeast, it is thought to Korodera where there is grazing. Others are with Rendille up Galana (up the gorge which splits Kulal in half). The top of Kulal is unknown to the Rendille and Gabbra; only one man has been found and he has been to the edges of the lower slopes.
(December) Owing to drought, it is necessary to let the Gabbra sheep and camels graze up to Lake Rudolf in the Moite area; at present they are on or near the border between the Huri's and Turbi. They need guards to protect them from raids along the Lake shore.
(December) The rains failed except at Marsabit Mountain; the worst areas are north, northwest and west of Kalacha - Maikona - North Horr. There are considerable numbers of Gabbra cattle on the frontier, probably at least half of the total, and the headmen are preventing them going across the border to Magado. Their suggestion was for the cattle to go to Magado and the camels to Hobbok - the request was refused emphatically. The cattle are to stay near Turbi and a request was made to Moyale to let them water at Uran; the camels are to go to Moite on Lake Rudolf. If they went to Ethiopia they would have every intention of returning when the grass was good. 'I am not worrying about the cattle so much but transport problems would be difficult with the camels so inaccessible.'

1928 The Algara camel people are too far and scattered to be kept in touch with.
The Gabbra in Moyale District are very small in number, the majority having moved to Marsabit or Ethiopia (a population estimate in 1928 was 50).

1929 The boundary known as the 'Stigand Line' (Marsabit west to the lake via Koronli, Kalacha and North Horr, and

east of a line Marsabit to the Ethiopian border) is patrolled by police. Further north and west is a no-man's land. The far northwest is left 'severely alone and must remain so' until there are roads and staff. The patrol runs east of a line Furroli to the Ethiopian border (due north of the Huri Hills), thence west to El Had, slightly southwest to the lake shore. The 'tribes' are not allowed to graze here and if they do so it is at their own risk. Generally the Gabbra are in the area but also the Rendille at times. The Dasenech are often in the northwest of the district 'but as we don't go up there it doesn't matter much.'

Some Gara and Hofteh Boran went back to Ethiopia this year. The problem is that practically all the Gabbra have blood or religious ties to Ethiopia and the British authorities say they have no hold over them.

1930 The Gabbra are sufficiently well established although 'considerable numbers' of Galla have crossed the frontier back to Ethiopia.

The Gabbra in Moyale District are a small tribe and they always live around Derkali, keeping together.

1933 The Gabbra and Hofteh are coming and going across the frontier east of Dukana towards Furroli. 'Originally these tribes came from Abyssinia and there is no doubt they feel as much at home on one side of the frontier as on the other'. The Stigand Line runs roughly from Moite on the lake to North Horr; the local people are also kept east of Lugga Balel from North Horr to Dukana on the Ethiopian border. The Gabbra are tending to scatter away from their old haunts at Derkali.

1934 A feature of the border is 'the continued influx of Gabbra and Boran into British territory'. All the Gabbra who were in Ethiopia last year have now returned and brought others with them. This was accelerated by excellent rains all over the districts in April and May. The Gara are grazing on land both sides of the frontier

near Furroli and El Dimtu. They recently applied for permission to water at Hurran Hura and Wano, somewhat west of the Gabbra forbidden line but still 50 miles from the lake and 100 miles from the Dasenech.

1935 The Gabbra and Boran remain in a fluid state with their kin over the border. When they enter Kenya they are immediately taxed and put on a register.

1936 The Gabbra Gara and Algana in the north of Marsabit District always use grazing ('excellent') in Ethiopia found at Magado and Gorai wells. An Italian promise of no tax and presents to notables resulted in the Huri Hills being practically devoid of 'tribesmen'; previously they had been kept in Kenya by the maladministration of the Amhara. This is now an opportunity to use this area again: a rich well-watered country versus barren land south of the frontier. The numbers reported as having crossed and settled at Gorai wells and Magado by August were all the Gara (probably 26 manyattas), and a number of Hofteh and Algana. By the end of the year, some were contemplating their return.

Of the Gabbra Golbo, the majority are on the east side of the Chalbi. Boran from Isiolo were trying to settle on Marsabit but were turned off and returned to Isiolo.

1937 The Gabbra Gara are still in a fluid state but the government has not yet insisted on their staying one side or the other of the frontier. At the south end of the district the Algana and Golbo are on the border with Isiolo District and as there is no rigid boundary they dodge tax payments by going back and forth. Now all of them want to return to the southern slopes of Marsabit Mountain. It is nice to have them all together but it leads to a shortage of grazing and water, and then trouble when the Gabbra and Hofteh push off the mountain. The Rendille have equal rights with the Boran to water on the mountain.

Patrols from Furroli tried to prevent 30 Gara Gabbra

villages from returning to Ethiopia but only headman's village (Sharama Ali) and one or two others were held back (they will return to the Huri Hills).
In the short rains the Gabbra who usually go to the Huri Hills stayed at Gus and Orloma.

1938 (February) With the Italians controlling the Dasenech, the Gabbra were allowed as far as Derati and Koobi Fora, which had been forbidden up until now. There is 'fairly constant movement' of Boran and Gabbra to and fro across the border and they do so 'without interference for in practice it is impossible to stop it .
Gara and a few other Gabbra village sections went to Ethiopia as they have done yearly to suit their needs.
At the beginning of the year the northwest corner was opened; this allowed penetration to El Sardu, Derati and Koobi Fora, 'and of this they took full advantage'.
In addition, 'it was found necessary also to make a definite line between the Gabbra and the Rendille.'

30 Gabbra villages used grazing and water at Dukana, El Yibo and El Sardu but ultimately they went into the Hobbok area of Ethiopia.
(January) There are Gabbra south of the Huri Hills, using wells between Kalacha and Koronli.
(February) Many Gara Gabbra villages from the north end of the Huris moved south to use the wells.
(April) Gabbra villages moved westwards from the Huris to Lugga Balel and around Kilkile.
(May) Lugga Balel flooded and many Gabbra from Dukana and North Horr went to use it. 16 villages (mostly Golbo) moved eastwards to Turbi and Hoga. The failure of the rains is being felt and some Gabbra from Ellabor went into Ethiopia.
(July) Of the Gabbra using El Sardu, many moved to Alia Bay, Koobi Fora and Derati.
(August) There are some 20 villages in the Dakana area. There has been little movement of Gabbra and Rendille

with some rain between Hogitchu and Koronli.
(September) Some Gabbra from between Turbi and Hoga went to Ethiopia via Sololo. Other Gabbra, mostly Algana, went north toward Kokoi when Koobi Fora became inadequate.
(October) Gabbra of the Dukana area went to Ethiopia.
(November) The remaining Gabbra left the Dukana area for Ethiopia. Dukana is dry and bare although some rain fell to the north. There are still some Gabbra at Kulume. Many bomas of *fora* stock from Koobi Fora (c. 20 villages) are at Arroressa on the eastern side of the Huri Hills.
(December) The Gabbra are concentrated in the Huri Hills where there is a certain amount of rain. A few are east towards Turbi. There are none near the lake shore. The Gara Gabbra must now be regarded as Ethiopian subjects; it is clear that their intention is to be Italian subjects.

1939 (January) The Gabbra are in the Huri Hills but are moving towards wells in the Chalbi between Kalacha and Koronli.
(February) The Gabbra are partly on the Chalbi and partly at Dukana.
(March) The Gabbra are at Hurran Hura, Derati and El Bes; some went to Ethiopia.
(April) The Gabbra are now scattered in search of water; most have gone back to the Huri Hills while others are on Lugga Balel.
(May) Part of the Gabbra are on Dida Galgalla, others are on the northern slopes of the Huris.
(June) The Gabbra are migrating toward the Chalbi once more. Little change in July.
(August) A number of Gabbra are at North Horr and Maikona.
(September) The Gabbra are at Hurran Hura and Alia Bay.
(November) Rain has again scattered the 'tribesmen'. The

Gabbra are toward Burgado and Baie.

(December) The Gabbra are in pursuit of rain water in Karsa and Derati areas.

The Gabbra in Moyale District have been at Guvar throughout the year; they also used water at Derkali and Banissa.

1940 In May most of the Gara Gabbra came into Kenya; eventually they were allowed to stay. The Gabbra are suffering the most from the war; their 'habitual' grazing grounds are untenable - the Huri Hills, Dida Galgalla.

1941 (June) The remaining Gara Gabbra from Ethiopia entered the Huri Hills and on choice preferred to pay a fine and back taxes for their years in Ethiopia rather than go back to Ethiopia.

Raids occurred in April on Gabbra at Kulume, Barchuma, Balessa and within 15 miles of Kalacha. Troops then occupied Kalacha, Huri Hills and Furroli since raids from the northwest threatened communications. (By the end of January all enemy troops had been cleared with the exception of those in the northwest no-man's land.)

Police patrols were carried out in the North Horr area. The Gabbra fled south and east. Ileret was occupied in September; Gabbra and Rendille provided 100 levies (50 each) to reinforce the police at Ileret. In November the enemy were driven out of Dukana.

1942 A baraza was held at Kalacha with the Gara Gabbra who are all now back in Kenya. They were told that their remaining fine need not be paid in view of the losses they suffered at the hands of the Italians. The military abandoned Logologo and Ramata Rodi boreholes but sealed them. They still hold Ullan Ulla, Balessa, Bongole and Laisamis water points.

1943 A new tactic has been adopted due to increased raids from the northwest: keep the tribesmen with stock within the perimeter of the police posts; the Gabbra are in Karsa Police Post.

(January) The Gabbra were allowed to Dukana-Koiya area;

it is very bare but no grazing concessions are possible in Isiolo or Samburu districts.

(June) Dida Galgalla, Huris and east of Marsabit are almost devoid of water. Gabbra are at Longondo Hi and El Yibo; Dukana has been made bare.

(July) Dida Galgalla and Huri water has given out. Some Gabbra camel people were allowed to Umbalo and some cattle crossed the border to Hobbok and Magado. Some small stock remained at Karsa.

(September) There are Gabbra stock at Karsa and east to Wano and Hurran Hura; but there is some anthrax so they could not go to El Bes as intended.

(December) There was rain in the Huris so the Gabbra moved there.

1944 (January) In about two months the Gabbra are to hold a Jilla ceremony at El Medbana and El Gadso; they have moved to the vicinity (in Ethiopia) with their cattle and villages, but have left behind goats and other herds. At attempt was made in September to move the Koiya Gabbra back from Isiolo to Marsabit district; about half remained in Isiolo. Those north of Barchuma Guda - Koiya road were counted by a hut counter, as they included 30 manyattas.

(January) Gabbra went to the Huri Hills with the rains but for a short time only, and by March they were grazing at El Yibo.

(April) Rains fell and the Gabbra returned south and east.

(June) There was a large trespass by the Rendille to Dida Galgalla and beyond Bubissa - several penalties were imposed.

(July) The Gabbra from the Huri area raided the Dasenech, and the Algana and Gara were aware of this (the Golbo living in the Dida Galgalla and Bubissa area were not); the Algana and Gara were fined 500 camels each. Fearing reprisals, the Gabbra kept well south and east of

'their customary grazing areas'. Dukana was not used again, Balessa being the furthest they ventured and El Bes and Gelass became the western limit.
(August) The Rendille were at Gus and Moite and there was a large trespass by Gabbra and Boran *fora* goats (and Turkana also).

1945 At the end of 1944 there was heavy rainfall in the district; the Gabbra used the Huris and Dida Galgalla; their dispositions are still dictated by fear of a Dasenech raid. For month after month in 1945 there was no rain and safe grazing was abandoned as seasonal water was exhausted. No appreciable rain fell at North Horr or on the Huris, and stock is grouped around Derati waters and Dololo Wachu Valley. At the beginning of November they moved north to Kokoi, Boluk, Uruptirsa and to El Yibo - Dukana; the whole area has been untouched except for odd *fora* herds for years and grazing is ample. The moves north opened up most of the useful country in the district. The move north coincided with the completion of a motor road from Dukana via El Yibo to Boluk.
'Throughout the year the policy followed was to move gradually the Gabbra-Boran northwards.' Although some few manyattas returned from the Gorai area into El Yibo grazing, very large numbers of stock that moved out in the past two years have not come back.

1946 All the Moyale Gabbra are in Ethiopia.

1947 Moyale Gabbra groups are still in Ethiopia.

1948 The long rains failed in Marsabit District; many Gabbra began the year by moving over the border to Ethiopia in the Magado area, having previously used North Horr and Chalbi wells. El Yibo post was closed in April because of no men to staff it, and the Gabbra overgrazed the Dukana area. All Gabbra stock from the Huris and Dida Galgalla were sent to the lake shore in the dry weather. They are concentrated in the Koobi Fora - Derati area with two permanent Kenya police patrols in the area.

In the short rains the lake stock went back to Dida Galgalla.

Grazing control was introduced and whole areas are to be closed for one or two rains; Dukana area south to Funnangos, west to Bollol, north to El Sardu and east to Balessa are to be rested after the long rains this year. Lake grazing from Karsa to Koobi Fora was opened.

1949 Over half the Gabbra live over the frontier in the Magado area of Ethiopia. Those remaining Gabbra and Borana with small stock are at four places in Kenya:

1) Dida Galgalla: lava plains, grass-covered at the end of the rains. Seasonal water at Warbusa and Bubissa Lugga. Furroli, Turbi and Maikona have very little water.

2) Chalbi and area northeast: northwest is lake scrub interspersed with sandy scrub country. Water at North Horr and surrounding wells - Kalacha, Hurran Hura, El Bes and Wyaber.

3) Funangos - Dukana - El Yibo area: lava scrub interspersed with sandy scrub country. Water at Dukana, El Yibo, El Sardu, with seasonal water at Lak Bulal.

4) Lakeside from Galass to Derati: lakeside grass plains interspersed with lava hills and scrub. Water at Galass, Karsa, Derati and on the lake from Moite to Derati.

The government regards two areas of Dukana - El Yibo and Alia Bay - Derati as concessionary only, to be used when the North Horr grazing is finished. One or the other should be closed for a whole year if possible.

As soon as the rains break, all Gabbra must go to the Huri - Dida Galgalla zones. Golbo section is always short at the end of the year and push into Moyale District for water and grazing at Lak Warbusa.

Must demarcate the Rendille line to stop bickering over Balessa Ildere area.

1950 Due to the water shortage the Gabbra used little of the best grazing in the Huris. Well before the end of 'Hagai'

stock were allowed to El Yibo - Derati with police protection. At the end of the year the plan was to allow them up to the Boluk - Uruptirsa line despite the hazard of raiding. Also at the end of the year the incidence of trespass into Samburu and Isiolo districts became a problem. There were squabbles with the Rendille over grazing and water at Orloma and Balessa El Der. A June baraza was held and the wells at El Der were given exclusively to the Rendille. At a December baraza, the Rendille agreed to the Gabbra use of El Boditcha and Gus grazing. This generous gesture restored good relations between the Gabbra and Rendille.

1951 By April the Gabbra were in their traditional wet grazing areas of Dida Galgalla and the Huris, after three months drought. By the short rains there were *fora* stock only at Nyaber, El Bes; those in the Hurran Hura and Waro areas went back to the Huris with the short rains.

1952 The Gabbra began the year in the Huri Hills and Kalacha area. There was a Dasenech raid at El Tochibo and the Gabbra were ordered to remain in the Huri area; they were held until March when they were suffering as grazing gave out. By June they were concentrated near North Horr - El Bes - Nyaber - Hurran Hura - Waro areas and stayed there until July.

There was no rain so the Gabbra split into two sections- one went Galass - Karsa - Jarigili, and the other to Dukana - El Yibo.

In October there was rain at Jibissa and El Sardu so the people from Dukana and El Yibo went there.

The Gabbra at Karsa requested to stay there and use the lake shore rather than move to Boluk - Uruptirsa to wait for rain.

In November there was a raid at Karsa; small stock went to North Horr and on the Huris as showers fell. The cattle remained and concentrated in the police camp at

night, grazing in the Burra-Hasuma area during the day. By December no rain had fallen so they moved to Boluk - Uruptirsa. The El Yibo police were withdrawn and sent to Boluk.

A few Gabbra manyattas were found with Boran east of Turbi and were evicted.

1953 The Gabbra stayed at Boluk, Uruptirsa and El Yibo even though the October - December rains fell in 1952. With the April rains they went off to the Huris.

By June the Gabbra were concentrated in the North Horr - Kalacha area. The March - June rains failed and by August a move to the lake shore was considered but fear of the Dasenech was great. Rain fell October - December and by November the cattle had moved to Dukana and Marsabit Mountain.

1954 The Gabbra began the year concentrated at El Yibo, Dukana, Karsa and Alia Bay. The long rains fell and they moved to the Huris and Dida Galgalla. The short rains failed and the Gabbra were at North Horr. By the end of the year they were in preparation for moving to the Karsa - Alia Bay area. They have been under continual police escort all year.

1955 The Gabbra had a difficult year; most spent it in the northern part of the district. By June they had spread over every available waterhole in the district, always under police escort.

1956 The short rains completely failed and forced the Gabbra to the lake shore where grass was poor.

1957 Borana/Gabbra grazing boundary promulgated this year in Moyale District. Gabbra are now excluded from Rahwana and Umbalo area as they always use it as a grazing concession. (In 1955 it took three months to remove them.) Bonds must be placed on people going to the Uaso Nyiro to ensure their return.

Drought October (1956) to April with stock losses, but Gabbra used forward grazing since the KAR held exercises

here from January to March.

1958 Good grazing and plenty of surface water; wet season grazing used until July. Then surface water dried up quickly and the Gabbra went to North Horr. The short rains failed so they moved further west to Hurran Hura, Wano, Nyaber and El Bes until the close of the year. The majority of the tribe were in Ethiopia for Julla, and are expected to return in the first quarter of 1959.

1959 Gabbra remained in wet weather grazing until June, when they moved to the North Horr area. By September they were at Hurran Hura, Wano, Muddo Sugunta and Balessa areas until the end of the year.

1960 The Gabbra are indigenous to both Kenya and Ethiopia; the largest group is the Algana who with the Gare inhabit the North Horr area. The Galbo are concentrated at Maikona and Dida Galgalla area. The tribal police have been increased and so 'for the first time in history the Gabbra have been able to use the area without being concentrated into small areas'. The idea is to completely close the area Koobi Fora to Dukana and open up the whole of the area south.

The four Gabbra grazing areas are:

1) Dida Galgalla area: vast grasslands but lack water. Two boreholes scheduled at Burgarbo in the north and Bubissa on base of Marsabit Mountain.

2) Maikona - Huri Hills - Balessa - Hurran Hura: vast lava based area. Water all down the east side of the Chalbi, and wells at Maikona, Ganuro, Kalacha, Mulabot, Woroma, North Horr, El Bes, Nyaber, Hurran Hura and Madolo Segunte. The area is all well-watered, but there is insufficient grass to stand up to long grazing.

3) Funangos - Dukana - El Yibo area: similar to Dida Galgalla area; exceptional grazing, little water. There is water at Dukana, El Had and El Yibo but supplies are limited.

4) Lake shore, including Derati and Galass: similar to

Kaisut but sparsely grassed. Permanent water at Gelass, Derati, Karsa and the lake. Only used in severe drought.

1960 Gabbra are constantly short of grazing and water all year. The grazing areas have no water and the lake shore has no grazing; therefore grazing has been opened in the north and within a few miles of the Ethiopian frontier, the furthest for many years.

1961 For the first time in many years the Gabbra are up to Sabarei and Boluk in the dry weather; this enlarges the Gabbra grazing by c. 1,000 acres.

6.4 Borana: details of movements

1910 Somali, Adjuran and Borana live practically together, chiefly between Moyale and Wajir along a line of El Wak, Wajir to Lorian. There are also quite a number of Boran at Lorian and on the Uaso Nyiro River. (October) The Ethiopians began seizing those Borana who had left Ethiopian territory but were still watering their stock at frontier wells.

1913 (March) (See Gabbra section.)

1913-1914 Borana and Sakuye on Uaso Nyiro raided the Rendille, killing large numbers - mostly women and children - and carrying away large numbers of stock. For the past few years the Boran and Sakuye have themselves been looted by the Ogaden Somalis and Abyssinians, etc. The Rendille had also killed a few Boran and Sakuye.

1914-1915 The Fitiwari Waldi of Ethiopia went to Sololo with an armed escort and seized seven men, twelve kraals of cattle and three kraals of sheep.

1916-1917 Grazing at the foot of Moyale was abandoned for the most part out of fear of the Ethiopians. 'Thus there is a tendency for East and North and West to move towards the centre of the district....It is only the fact of an exceptional rainfall that has prevented this from being felt.'

1917 (24 October) Boran hunters have been at Asie - they no doubt travelled down by the rain pools through the Huri Hills (Afgab and Garba Re) and thence Kalacha and Asie; Afgab is only five hours from Kalacha and Garba Re six hours beyond. This has also been used by the Ethiopians.

1918 (July) Until this date no one had ever grazed Galama Gof, Tana and Bisan Abdi. It was only known to a few 'Galla' and Somali ivory hunters. The first Sakuye to water their small stock on Bisan Abdi did so at about this time. The Boran and Sakuye are not yet found at Igombe Crater. The Aulihan are at Lorian and are allowed as far south as Muddo Gachi although they are trying to come up to Galama Gof. A few Borana are restricted to the Uaso and migrate from the Wajir to Arba Jahan areas.

1918-1919 There are small numbers of Boran working their way up from the Uaso Nyiro to Marsabit during this year. They are living on the southeast slope of the mountain. A small tribute has been levied on the Boran living on the mountain.

Just prior to December 1918 the Boran from Ethiopia began to cross over the frontier to try to escape persecution by Tigre brigands. In the absence of the District Commissioner 'they flocked over in very large numbers'. By 1919 many have now returned.

The Sakuye headmen are mostly at Ajao.

1919 (December) Borana are one hour east of the government boma on Marsabit, and they will return with the rains. Like others, on their arrival they experienced considerable loss of stock to a disease believed to be tick-borne. Now all the Marsabit stock are quite recovered.

1920 (4 April) Large numbers of Boran have again fled across the border for protection from further raiding by the Tigre, and 'these were at once moved South so as to keep the Frontier clear of natives'.

1919-1920 Initial steps have been taken for a joint Anglo-Ethiopian effort against the Tigre; 'as a preparatory measure

large numbers of Boran were removed out of harm's way to the Uaso and to Marsabit. A large number of refugees from Abyssinia were amongst those so dealt with'. These were immigrants from Dirre.

1920 (30 November) There are some Borana with Gabbra at Kalacha but the majority are Gabbra. The Borana at present in the district were ordered by the government to move in the last rains but were eventually allowed to remain until the coming rains. The rules governing the move are: the British Boran are to move either to Moyale or Uaso and the Abyssinian Boran to Uaso or Abyssinia.

1920-1921 'The Waves of immigration of Dirri Boran' was the chief event of the year: they fled due to alleged oppression by the Abyssinian soldiery. There is no estimate of numbers but 'stock is very considerable and includes cattle, camels, sheep and goats and a few bomas of horses'. They soon finished grazing around the northern waterholes and many manyattas found their way onto Marsabit Mountain. They have now been ordered to evacuate and make their way back to North Horr and the Huris.

The flow of immigration into British territory continues. 'Many Dire Boran, Gabbra and other refugees have found their way across the border form time to time, and many have become merged into different parts of the district.' The number of Sakuye in the area is 'growing less' and many are following sheep from the Moyale district to Uaso and 'apparently elect to stay there'. The Boran headman areas are Buna, Badano to Tuletti, Umbalo Ramo, and Salo. The Sakuye headman areas are Kune Dida from Leseiy to Ajoa area.

1920-1921 Reports from Garba Tula say that most Boran are now near Marsabit owing to lack of rain. 'There are too few natives living near the station and in the neighbourhood of Balessa and it is intended to remedy this as soon

as grazing permits.'

1921 (7 June) Immigration of the Dirre Boran is such that now in a dry year the grazing is not sufficient for all. The immigrants are not allowed on the slopes of Marsabit and are given ten days to move, being told to go to the Huri Hills and in the vicinity of Warma and Asie. However, seven Gabbra manyattas are given permission to reside on Marsabit.

1921-1922 (31 December 1921 - 31 January 1922) The Hofteh are allowed as far as Gof Bongoli, as this is not used by the Rendille as far as anyone can ascertain. The Boran very much want to remain on Marsabit but they are told they must be ready to move and return to Moyale with the break of the rains.

1922 (30 April) Owing to the failure of the rains it is impossible for the Boran and Hofteh to move from the mountain.

(14 June) There is a baraza at Bimtu with the Gabbra: the Hofteh are recent Ethiopian refugees and a plan is made to absorb them into either the Gara, Gilbo or Algana Gabbra.

(26 June) Manyattas of Boran who recently moved from Marsabit Mountain should be settled in the frontier area west of Moyale; they will be able to water stock at Dukenli, Gololi and Uran over the Ethiopian border during dry weather. If they return to Marsabit they will be severely fined.

(30 June) The Boran have left Marsabit District for Moyale.

The Boran have been pushed out of Wajir by the Dejodia and Somalis. The solution reached at a baraza on 28 July is that the Boran retain the wells they have always 'owned' and the Dejodia may water there out of Boran kindness. The Boran were asked that the Gabbra there with them may be allowed to use the wells and this was agreed for the moment, with the proviso that if there is

any more outcry for grazing they will be moved to Marsabit District. The Boran from Marsabit have now settled in Sololo District west of Moyale.

1925 12 manyattas of the Moyale Boran have been moved to Marsabit as a temporary sanctuary from the border for their protection, but there is really no room at Marsabit and they should go back with the next rains. The British Boran are watering in Ethiopia at Gadaduma and Godema wells - the Ethiopians have asked for co-operation. On 27 June a government official issued a proclamation on his own initiative, to the effect that any refugee Boran who had moved to British territory since 1912 would be arrested on his return to Ethiopia and his stock confiscated. This has reopened the boundary question again and all Boran who crossed since 1912 have been sent to Marsabit as a temporary measure.

1926 Hofteh Boran are migrating from Ethiopia to 'an alarming extent' with the aid of the Gabbra headman Galla Rase.

1927 (5 November) In the dry season the Boran are located at Banani, Merti, Suricho and Arrodima with small stock at Kura(north and south), Komu and Selbarwa.
The Sakuye are living near Garba Tula and on the Uaso Nyiro below Merti. There have also been small stock at Kuru and Kom area. Numbers of camel people are roaming north of the Uaso over a large stretch of country.
During wet weather both Boran and Sakuye scatter far and wide; this is also the case at present but it is being caused by conditions of drought.

1928 Grazing is practically non-existent in Moyale District and in August the area was practically empty, the Boran being in Ethiopia and the Adjuran and Sakuye at Wajir.
One of the Holali wells gave out and the Borana went to Ethiopia. The Adjuran are the biggest camel owners in the district and Boran the largest cattle owners, whose small stock are mostly kept in Garba Tula District.

The Hofteh have done all that has been asked of them: they have paid tax, provided labour for roads and sent some youths into the police force.
The Sakuye have been under headman Hoka Ruba in Wajir all year. The Sakuye camel people are as yet uncounted and are all north of the Uaso Nyiro.

1929 In Moyale District the government paramount chief is the young headman Jeldess Jarso who came from Ethiopia. Those under headman Gulgulla Mudale are British Boran 'more consistently' in the Uran area west of Moyale. All Boran are mainly cattle owners though many have small stock which they keep on the banks of the Uaso Nyiro. (22 May) The problem of seizure of stock from the Boran will remain until the border with Ethiopia has been demarcated. Provision by the British of adequate water on their side of the border would help.

1931 The Sakuye are as scattered and disorganized as ever; many have moved to Isiolo District. In June the Boran asked permission to move to the Uaso Nyiro: the Provincial Commissioner could not agree but said he might consider moving some to Marsabit. Nothing further happened about this and there was no marked desire to move there, though lately some stock movement has been made to Debel, Ajao and Buna.

1932 As a result of a feud between the Boran/Sakuye with the Degodia, 1,500 men, women and children entered Isiolo District. Somali pressure on Boran territory is increasing and many herds of Somali cattle are to be found on Boran pastures.

1933 The Boran are clinging to the frontier escarpment because they cannot get water elsewhere - they are now in a small corner of their old territory, driven there by Moslem tribes. The Ethiopians try promises and cajole people to get them back: some go to ensure water for cattle, while others drift to Marsabit or Uaso.

'The Boran, who thus cause so much worry and trouble, friction and expense, pay taxes amounting only to about £100 annually, and so it would be to our advantage if they were all to go into Ethiopian territory.' The Sakuye are mostly on the Uaso, and only six villages or so remain at Ajao.

1934 (31 May) A number of Boran and Gabbra who generally live around Sabalnawa, Kurkum and south of Koiya have moved to the southern edge of the Kaisut about 25 miles south of Gudas. There is no objection as grazing is plentiful and east and south of Koiya is understood to be dry. Samburu, like the Rendille, are often around Laisamis in close proximity of Gabbra and Boran of Koiya, but they are never on good terms.

Attempts have been made to return Boran across Dida Galgalla to Silolo to hand them over to the Ethiopian authorities: this has been met with passive resistance and the Boran refused to drive their stock despite fines and imprisonment. Those who were handed over were back in Marsabit a month or two later. This gradual infiltration is impossible to stop. 'It was decided therefore to give no encouragement to it and to take as much tax from the newcomers as possible'; the movement still continued throughout the year and they arrived not only at Marsabit but also at North Horr and the Huris where it was difficult to check them. Of the Sakuye six villages are left and encouraged to stay in Ajao, Galla Lugga and Debel areas to serve as a buffer between the Borana and Adjuran/Degodia. There have been individual complaints by Boran of molestation on the frontier by Ethiopians of Mega, Ethiopian Moyale and Gadaduma 'too numerous to mention'. Wherever British tribesmen and subjects from Ethiopia came into contact stock thefts occurred.

'There is no doubt that the Boran migration from Moyale into the Uaso area continues at an alarming rate.' No

attempt has been made by the Boran here to stop this migration, and they even encourage it, 'but they are now learning that their grass will not carry many more herds of cattle.' The Boran population again increased this year.

1935 The Boran and Gabbra remain in a fluid state with their kin over the border. Anyone crossing the frontier is compelled to pay tax here and is immediately registered. In each case they plead atrocities by Ethiopian tax collectors. This is certainly one cause of continued frontier infiltration. Recently three manyattas crossed after the murder of a Boran elder, but all had been here before so they were not really new immigrants.
In Isiolo District the outer water held well and there was no move to the Uaso Nyiro until the end of July. By September most Boran and Sakuye were at Merti - Saricho, Habaswein and Garba Tula areas; the Sakuye went to Kinna - Bisan Abdi area in October due to poor grazing. There was a general movement from the Uaso in November as a result of good rains. Now most people are on the Kinna and about Arba Jahan, Selbarawa and other points out from the river.

1936 The Boran have trespassed Rendille-reserved wells - in September at Kurkum wells, and October the Isiolo Boran were at Siriwas south of Laisamis.
Hofteh Boran caught on Marsabit Mountain have been returning to the frontier; the Hofteh are divided into numerous tribes, e.g., Arussi, Karanju, Digalu, etc., and none show any inclination to return to Ethiopia as did the Gara Gabbra.
Isiolo Boran who were trying to settle on Marsabit Mountain have been turned off and returned to Isiolo. The last six months have been very dry and most Uaso Boran have gone to Koiya with their stock.

1937 (15 February) There are still Boran immigrants coming from Ethiopia - 'Any refugee tribesman must either be

sent back or passed along to North Horr, they must not be allowed to remain in the Dukana area.'

Boran country south of Tertulli is practically unoccupied.

1938 (28 February) The Boran on Marsabit Mountain do not cross the frontier to use grazing and water, instead they seek additional pasture in the forest. Frequently they do not send *fora* stock away in the rains and so often they themselves are responsible for shortages of grazing and water in the dry season.

(October) By August the Boran cattle were in bad shape, due to the drought and water shortage all over the mountain. They have requested to use the forest. In April and May 11 herds of cattle went across the border and more in July and August. There are an estimated 24 *fora* herds left, 15 belonging to 1934 immigrants.

The Boran who came over the frontier four years ago have gone back to Ethiopia due to a grazing shortage - they have suffered heavy losses. About 30 villages have departed over the year. When they first came attempts were made to send them back as in a bad year the district cannot support them, so their departure is not undesirable.

In Isiolo District a baraza was held and a line drawn between the Boran and the Samburu - Koiya to Sebbe, thence to Furan Kurkum, thence to a point midway between Kom Galla and Kom Lola, then to Chandler's Falls. Kurkum is reserved for the Samburu and the waters of Kom Galla and Kom Lola are for both.

The Boran and the Sakuye were pushed for grazing - no decent rains until December in the Kinna area. Practically all stock was concentrated in the Garba Tula - Kinna - Bisan Abdi area. The *fora* stock from Merti and Arba Jahan penetrated to Gudas, east of Marsabit Mountain.

1939 Both the long and the short rains failed on the Uaso Nyiro. By the end of the year the Boran had completely abandoned their normal pastures. One section of cattle people were at each of the following: Titui in Moyale

District, Halbaswein in Wajir District and on Bissan Ganacha along the eastern boundary at Meru Reserve. The Boran were on Marsabit Mountain the entire year.

1940 War was declared on Italy and all the people of Wajir were moved to Isiolo District when the military ruled in July they had to leave Wajir wells. 30 villages of Boran and Sakuye came down from Moyale when the area north of Buna was occupied by the Italians. The Sakuye camel people were thus deprived of Arba Jahan and Dololo Dertu - fortunately there was no difficulty in finding grazing.

The military deprived the Boran of the use of Sokorte Guda, Balessa Bongole and Ullan Ulla.

1941 The Boran suffered loss of wells for military use, had to continually produce slaughter stock on short notice and towards the end of the year their women suffered 'a certain amount of molestation by the troops'.

The Boran on Debel are on the Uaso, having fled there in a campaign; most returned in 1942. Marehon raided Dirre generally and massacred Boran. In 1942 the Marehon were removed from Liban.

1942 Some Sakuye are still on the Uaso Nyiro.

1943 In Moyale, at the western wells there is heavy extortion on the Boran by the Ethiopian in charge.

In August 1940 Sololo was evacuated by Borana who suffered when the British left Moyale. They trekked across Dida Galgalla in the dry season. In 1941 Chief Galgalla's Sololo people were still in Marsabit. In May and June 1943 the Sololo Boran in the district were requesting to move to the Uaso or to remain others went south via Arba Jahan to the Uaso without permission. An attempt was made to force them to return but there were still some 400 on Marsabit at the end of the year.

Some Boran went to Koiya in November and December.

1944 The Boran population was swollen by their Dirre friends and relatives at Marsabit but as they were often in demand

as locust scouts and road labourers 'no objection was made to their presence'. In April a good part of Chief Galgallo Mudale's people went back to Sololo - he died in May.

The Sakuye have been between Debel and Titu for most of the year. Their camels went out to Ogorchi.

1945 The Boran had most of their stock in Ethiopia with failure of the long rains, until November. *Fora* cattle went to Titu. The Uaso Boran of Huka Roba were up in June: they were fined and sent to Ethiopia but allowed back in November on condition that they stayed in Moyale District. The Sakuye from Uaso sent *fora* up in July and to Ethiopia against orders: most went back to Uaso via Umbalo and Arba Jahan.

Many Boran from the Dirre area have begun shambas in Segunti areas. The Gabbra and Boran have grazed stock from Tulu Borr on the lake shore to Furroli along the border. The limitation on Gabbra-Boran stock on Marsabit Mountain has been retained, while the Rendille increased theirs. By mid-year the grazing was complicated by Gabbra-Boran from Isiolo District where Uaso Nyiro grazing had been exhausted. The November rains relieved the situation. There was movement at the end of 1944 off the mountain back to Jaldessa and Biai plains. In May - August large numbers of stock left the mountain and went to Magado via Turbi - water was dumped along the road from Marsabit to Turbi for the people. There were other northern movements from Marsabit to Derati and yet others to Hobbok and Gorai.

1946 Titu lugga ran in the long rains and pools filled again during the short rains. Boran were present there for most of the year but the bulk of their stock was in Ethiopia.

Effective measures were introduced by the District Commissioners of Moyale and Isiolo 'to prevent indiscriminate movement of Boran and Sakuye stock and

villages between the two districts without permission'. The Sakuye have not achieved the hoped-for degree of tribal cohesion. Some cling to the Ethiopian frontier, some prefer Ajao and others the Titu to Umbalo areas as long as the lugga water lasts. Permission was given to the Boran and Sakuye to share the water at Debel and Holali.

1947 The Boran were attacked at Web by the Jamjantu.

(January) There was good rain in Ethiopia and all essential Boran stock went there. The Boran of Sololo and Uran areas had good rain, and the Uran lugga flowed past Turbi.

(February - April) Most stock was still in Ethiopia.

(May) Good rains at Moyale and in Borana (Ethiopia); no appreciable stock movements.

(June) Sololo Boran and *fora* stock also at good grazing east of Sololo in the Lok Butigel area.

(July) There was unexpected rain and all stock kept away from the wells.

(August - September) Most stock were in Ethiopia again.

(Mid-October) Stock returned when there was 6" of rain around Moyale.

The Sakuye were concentrated around Debel at the beginning of the year. After the long rains they went to Komorr and at the end of June went back to Debel for the Jilla ceremony but their leader died and the ceremony was not a success. After the short rains in October they again scattered throughout the district.

1948 The Provincial Commissioner ruled that the Boran on Marsabit Mountain must never again be allowed use of forest water in Singara. They must use 'traditional' water from Balessa, Gof Bongole, Ullan Ulla, Sagunte and Gombo. On grazing control, the Boran must leave the mountain as soon as possible for the seasonal pools below.

The Sakuye were around Debel and Ajao.

In Moyale District the Holali wells were unusually low and the Boran were compelled to use El Gudu and Tuka in Ethiopia. In the third week in March rain allowed their return to Holali. In April they were scattered over the district and the trek back to the frontier water began in July. They were dependent on that area until October and November when exceptionally heavy rain fell; they fanned out southwards where the lugga water should last until January.

1949 All Boran went off Marsabit Mountain when the rains broke in the desert and filled the seasonal pools in the luggas.

Sagunta Boran	-	about 60 milangos to Lak Jaldessa area
Karowe Boran	-	about 60 milangos to Karare - Kaisut - Milgis
Ullan Ulla Boran	-	about 10 milangos to Hogitchu - Sangarta lugga.

(Elsewhere ten milangos noted to be equal to 750 head)
The Boran usually mix well with the Rendille when grazing and water are plentiful. The Boran are not allowed back onto the mountain until the seasonal water is dry.

1950 In June the intention to brand all the Marsabit cattle was announced. The Boran, although they knew all about this, first expressed surprise and then their intention to move to Ethiopia, and about 10% did so. The Provincial Commissioner agreed to brand township cattle in 1950 (591 were branded) and the rest in 1951.
The Karare Boran again moved to Koiya area in September and then returned to Marsabit, whereupon they were fined. It is possible that at the end of the year there was some Marsabit stock still in Isiolo.
In general it can be said that the Boran do not see any reason why they cannot bring unlimited stock from Dirre onto Marsabit Mountain via the forest. Therefore the outer limit of cattle grazing on the mountain has to be defined by law and it is assumed that branding will

further assist government control.

In Moyale District the grazing outlasted the water and the majority of stock moved to Ethiopia. After the April - May rains the Boran were extensively on Titu lugga and Hantut. At the end of the year there was a tremendous impulse to go to the Uaso Nyiro.

1951 From the end of March to December there was more grass and water in Moyale District than in living memory - the wells were unused from the end of March. Almost all the Boran stock were in wet season grazing down to Titu lugga.

The Sakuye were stopped coming north of the Karabande Hill line to prevent their encroaching on Boran escarpment grazing.

More than half the Boran on Marsabit Mountain with stock moved back to Ethiopia while the intention to brand their stock remained. By August 60% had left and the branding was postponed. Remaining stock numbered 2500-3000 head of cattle actually on the mountain.

(5 June 1951) In the past it has been the practice of the Boran to shift their cattle units between Dirre and Marsabit Mountain, increasing the numbers on the mountain in a good year and decreasing them when the dry season is bad. The government has never had control over the numbers coming onto the mountain: branding was an attempt to control them. The government will allow these exchanges as long as they do not exceed the numbers allowed on the passes. The township cattle have all been branded. The numbers allowed on the pass are no more than ten cattle (eight cows and two work oxen) and two small stock.

1952 The Marsabit Mountain Grazing Control Rules of 1952 which should have come into effect on 1 January were delayed until May because of trouble with the Dasenech (police were sent to the northwest) and the Boran refusal

to acknowledge the rules and their threat to leave the colony. The rules were again delayed with the State of Emergency and half the police force were sent down-country. Boran were on the upper mountain slopes due to the rain failure, and in September the permanent waterholes were on the verge of drying up; fortunately it rained on 16 September.

In Moyale District the Boran faced difficulty with water, not grazing; during the rains they were using Titu and Hantut grazing but were still using the escarpment Ethiopian wells in the dry season.

1953 The Boran grazing in the southern part of Moyale District is the best in ten years, and they are right in the far south. Boran and Sakuye from the Uaso Nyiro were permitted water and grass at Bodada.

1955 The Boran were on Marsabit Mountain for the whole year due to the poor rains. The mountain grazing control was still postponed although the stock was 'greatly increased' over the last three years.

The Sakuye wells at Debel do not suffice in a dry year. There was slightly better rain in Ethiopia and small movement in that direction.

1956 The Marsabit Gabbra have moved into Boran areas.

There is constant pressure from the Boran of Ethiopia 'to visit the countless sick mothers and fathers on the Uaso Nyiro'. Relations between the Boran and Gabbra and 'too good' and they are too ready to accommodate stock with or without permission.

The Sakuye are using the lava flow from Fonyanyatta to Toi and Fuldiko for the greater part of the year.

Infiltration is becoming a big problem with a better water supply and pressure to move to the Uaso Nyiro due to the Ethiopian liberal interpretation of the 1907 Treaty.

The Boran made a quid pro quo gain on the Samburu at Yanica area but a boundary has not yet been cut.

1957 A Boran/Samburu boundary was marked out this year.
All Boran stock remained in the Moyale District throughout the year. They spent three months on Titu lugga with the long rains. The *fora* stock are still in wet weather grazing at the end of the year.
The Sakuye are at a well- preserved grazing area west of Debel at a place called Kamor; they have large numbers of stock.
Bonds were instituted to send to people at Uaso Nyiro.
On Marsabit Mountain the Boran were on the upper slopes until November, as there was no rain below to send them down.
The Moyale Boran/Gabbra Grazing Order was published.
There were Boran stock in the district for the whole year.

1958 The Boran had a disappointing year in Moyale District and many of the tribe went to Ethiopia for months on end; others went to the Uaso.

1959 Debel was dry for the second year in succession and was almost abandoned. The Sakuye went to Lumme near Moyale while others went to the Ethiopian wells at Gadaduma.
There were excellent rains in January to June and the Boran came off the upper slopes of Marsabit Mountain.
The Grazing Control Rules on Marsabit were instituted last year and seem to be generally accepted. The short rains failed.
Moyale District had a 'conspicuously bountiful year'.
The luggas flowed and there was the phenomenon of the Badoda lakes filling - a square mile or so of water near the confluence of the Afgadud and Titu which drew the Isiolo Boran and the Sakuye until the grazing was exhausted. They were permitted up to Titu from May onwards; the Boran are moving to and from the Uaso on surety.

1960 The long rains were well distributed and the Boran stayed south longer than usual, thus the northern water and grazing remained well into September. Boran *fora* stock went to Choichuff in Ethiopia when they moved north too soon. Grazing control was limited to preventing this northerly move too soon.
The Sakuye were gone for the first nine months of the year; in the last three months of the year there was poor rainfall and many went to the Uaso Nyiro. Despite last year's seeming acceptance of the grazing scheme on Marsabit Mountain, an additional 10,000 head of cattle were deliberately brought onto the mountain this year.

6.5 Turkana: details of movements

1914 (November - December 1914 to January 1915) First Turkana Expedition. 'The result of this expedition did little than to momentarily relieve the strain of Turkana raiding' especially on the Rendille. Rendille moran were used in a small way.

1915 (March - April) Second Turkana Expedition; between the two expeditions the Rendille received compensation for the various raids and murders that the Turkana committed against them. The Rendille therefore have been given the Turkana camels but these have died in considerable numbers - no specific ailment, but believe the country to be just 'unsuitable'.

1915-1916 Operations against Turkana allowed considerable compensation to be paid to the Rendille and Samburu for past losses.

1918 (13 October) Turkana in large numbers in NFD near Laisamis, in Horr Valley, at Naisecho and probably Elbarta. They claim to have been driven east by the drought and lack of grazing and wish to remain under the NFD administration and live with the Rendille. They

were told this is impossible and that they must return to their own country. The DC travelled from South Horr to the lake and saw no traces of any occupation up to Loiyangalani.

1918-1919 Turkana in large numbers at Elbarta; no attempt made to turn them out owing to impossibility of stationing officers there full time: they were merely warned that their residency was temporary. Headmen twice reach Meru seeking administration.

1919 Turkana are now in the South Horr Valley after July migration. They said that stock at Elbarta was virtually wiped out by starvation.

(24 November) Turkana are now down on the Uaso Nyiro two days west of Archer's Post. The order to move all the Samburu north of the river cancelled while Turkana are there.

1920 (21 April) Samburu given a 'boundary' south of Uaso Nyiro until Turkana move to own country.

1921 An attempt is made to explain to Turkana elders the reason for their removal from the area, 'namely the intention of the Government that the Turkana tribe shall be administered as a whole and the necessity - of providing grazing grounds for the Samburu who are being sent back from the Nyeri District to the country north of the Uaso Nyiro'.

(21 June) Turkana collected en masse at Lesergoi and induced to cross Suguta River; the Turkana appear to have been under the impression that they were encouraged in this area and are surprised at the eviction. They are to be removed to below the escarpment which forms the eastern side of the Suguta from Marte to Lake Rudolf and in the future they are not allowed to climb it. So now they are back to the Suguta, their original residence.

(1 November) The Samburu prefer the Leroghi escarpment

and the south end of the district near Laikipia and 'refuse to occupy the new area that has been cleared for them'. Thus it is considered that the Turkana should be allowed back (Nebili and Nisir sections) 'and the area around Elbarta and Siyar- Horr - Ndoto reserved for them'. At the moment the area is unoccupied and 'capable of carrying an immense stock of cattle' while Turkana stock are dying wholesale in the Suguta - allow the Turkana the above area and 'they will be a source of revenue to the Government and give openings to traders and act as a buffer to Abyssinian raiders against whom the Samburu are powerless'. At the rate cattle are dying in the Suguta there will be 'a distinct loss to the country in future revenue'.

1922 The Turkana that were moved behaved in an exemplary manner despite Samburu moran murdering women, children and old men on the move, and afterwards were 'compelled' to live in the Suguta Valley as there was a shortage of grazing in their own country - cattle died by the hundreds. In spite of this there were no raids or retaliation. The Suguta is so bad that recommendations have been made for the Turkana to return to occupy the northwest corner of Elbarta plain, and this has been granted.

'1921' Summary to date: Reasons for the 1921 move from Elbarta:

1) sent away in 1912 because of continuous quarrelling with the Samburu.

2) returned in 1917 without permission (government and World War I allowed); raided Samburu and eventually reached Uaso Nyiro.

3) administration of Turkana not satisfactory while divided between two districts. The Elbarta area remained untenanted, as the Samburu fearing Abyssinian and Turkana raids were afraid to return. Less than 4 months after the move, an official wrote that there were 10,000 men with women and children before him at

Barsaloi, having 'wasted away to mere skeletons', stock died, no food and there to throw themselves on the mercy of the government. His successor investigated and established loss of stock at 45%. The remaining stock and all the humans were on the verge of starvation. He took it upon himself to allow two sections back to Elbarta, and this was approved after the event by the Colonial Secretary as a temporary measure. It transpired that although the Turkana had only left the Kerio grazing 4 years before (1917), by 1921 the grazing was occupied by others and the King's African Rifles had made no arrangements for alternative grazing. It was concluded advantageous for the Turkana to be on Elbarta.

1922 (26 April) The Turkana were told that they could occupy Elbarta on condition that they did not go to graze or water at Naisecho and Mathew's Range, Nyiro and Kulal and not as far north as Sirima where water was reserved for government use. They were permitted to water at Gilgil River but could graze at no point further than two hours south of that river. They were told to act as a buffer for raids to protect the Samburu and Rendille, Elmolo and Ndorobo. (In 1931 this was noted as an amazing stipulation for 'undesirable aliens'.) They were to be taxed and registered, were forbidden to hunt the game, and if they broke the regulations they would have to go back to Turkana; no other Turkana were to be allowed into the area so as not to overgraze and crowd. (This was a government agreement made on 7 June 1922.)

Summary

During World War I the authorities' attention was elsewhere and so the Samburu were attacked in the north by the Abyssinians, the Turkana in the west, and the Somali Galla moved east next to the Samburu; by the end of the war they were forced over a considerable portion of Laikipia. There was a Turkana influx to grazing north of the Uaso Nyiro, and the Gabbra moved to Marsabit

Mountain. The decision was made to move the Turkana back to their original country and to move the Samburu north.

1924 In recent years Turkana herds had been wiped out and moran were searching for work throughout the district - 'The Turkana is by nature a man who does not mind work if he is well fed.' The fixed Turkana boundaries from 1922 are: southern - Gilgil River; eastern - Line Baragoi to Kowop Hill; western - foot of Nyiro to Laisamis; and northern - Laisamis River to Lake Rudolf. Included is also a two-hour circle around Baragoi including a small hill called Ngorocki and a place south known by the Samburu as Mbogo Tano.

One small section whose headman was very old felt that they might combine with another section on his death. However, it has been 'since demonstrated' that such union 'always' produces disputes and it is therefore desirable to keep separate sections intact.

1925 There are Turkana with cattle northwest of Baragoi; their relations with the Samburu are 'quiet, friendly but not cordial' and these particular Turkana appear 'practically separate from the main Turkana tribe' but for one small section.

1927 (19 August) At an Elbarta Turkana baraza held at Baragoi the government agreed that the 'Turkana form a useful element in this country and that there is no objection to their remaining where they are, provided they do not push further south' and that they evince a readiness to work.

1929 (22 April) The Turkana are generally trying to push into the district between Mt. Kulal and Lake Rudolf; if seen they are to be sent back.

1930 The Turkana's usual tendency to spread north, south, east and west has been made especially unpopular in Marsabit District. 'They, however, formed a useful labour unit for road work, etc.'

1931 (28 March) By this date Turkana are all over the Leroghi Plateau as far east as the foothills of the Ndotos and are also using an area as far as 4 hours' march south of here. They are also making temporary use of the Swiyan and Barsaloi rivers in the dry season - it seems the Samburu have no objection.

The Turkana are on the lake shore as far as Loiyangalani and up the slopes of Kulal; this is despite the District Commissioner's warning of last December. In March settlements were rounded up by patrols and the headmen fined heavily. A baraza in the Horr Valley attended by the DC's of Isiolo and Marsabit made agreements that the Turkana could use the Horr Valley as a track route from Sirima to Elbarta plains and gave the Rendille the right to water camels at Naisecho. Since then the Turkana have moved their stock further north to the Moite area.

The Provincial Commissioner has agreed to their remaining until grazing in their own country has improved - if they return now they will face complete starvation.

1932 There are Turkana at Elbarta and portions near Barsaloi and Seya. Rain and grazing are both scanty in these areas and they moved west to the lower parts of the Suguta for a time.

(9 November) Prior to 1916-1918 the Turkana owned large herds of cattle; these were nearly all captured in military operations by the government and Ethiopian tribes left them little except goats and sheep. 'Since then the cattle have increased slightly but not in anything like the same proportions as the increase of camels, donkeys and goats.' A.M. Champion, the PC for Turkana, sees the movement as a natural progression: the Samburu were given great stock herds brought with them from the northwest, and only government intervention stopped them.

1933 (11 March) Elbarta is outside Turkana boundaries but in the last 20 years they have sought it owing to conditions

in Turkanaland itself.

1934 The Turkana - 'These people are, in this district, like rats. One cannot get rid of them.' They are living in the bush below hills (perhaps because of more camels, goats, etc., as in above), round Isiolo town and the Kipsing area. They are taken out of the district under escort, but then with a request for road crews 'a hundred or more will appear from nowhere and incidentally do an excellent piece of work.'
The Turkana still insist that the Horr Valley is theirs despite being told otherwise; there is constant enmity with the Masula and Saleh sections there.
When Samburu District was created (possibly this year), the Turkana were as far east as Seya River, and they are now back to Elbarta. Constant police patrols are required to prevent perpetual trespass east into Samburu country. Also stockless paupers attack the Samburu, acquire stock and start their own manyattas.
(30 October) The Governor made a speech at Maralal; the Turkana said Elbarta was insufficient and they hoped the government would find them more grazing - the Governor told them Elbarta was quite sufficient.

1936 The Turkana problem is entirely economic: they cannot live in their own country so they infiltrate to Samburu, Laikipia and Isiolo - the move 'is steady and increasing'. They move up and down the country southwest of the lake at will. Elbarta empties and Kerio fills, depending on which side the police patrols are operating.

1937 Considerable numbers of Turkana have moved to Rendille of Laisamis and Koiya, and the Rendille are pleased to get labour.

1938 The Turkana are grazing at Elbarta; there is little reason for them to trespass as the area grazing is excellent. There are a number of semi-permanent manyattas in which all but one or two are with camels and a few goats around the Suguta.

(October) There are now 30 manyattas of Turkana between Sekima and Loiyangalani. The elders were punished and the rest sent back to Baragoi. Twentyfive Turkana villages returned to the Suguta and Malgach on the eastern lakeshore.

The Turkana are not wanted among the Rendille for obvious administrative reasons: there are already enough idle young Rendille men, and they do not need any Turkana.

1943 There has been countless trespass of Samburu and Turkana onto Kulal.

1944 In August, the dry season grazing areas included Gus and Moite - still further trespass by the Turkana. The Turkana trespassed west of Kulal and north to Moite; a police patrol in November rounded them up and sent them back south to Sirima.

1946 There has been 'determined penetration' from the Suguta and Elbarta along the eastern shore of the lake into Rendille country. This has continued despite infliction of heavy punishment.

1948 The Turkana are penetrating around south of the lake and also coming up from Isiolo. There is still evidence of them by Loiyangalani; the best remedy seems to be to seize Turkana stock and sell it to keep them out. The reasons for doing this are:

1) The District is already overstocked and none of the tribal areas can take another alien population.

2) The Turkana perform menial tasks that the locals are too lazy to do themselves.

3) The Marsabit Turkana are now almost 'detribalized'.

4) The Turkana wiped out game in their own country and it is not intended that they should do so here.

1955 The Turkana who had infiltrated Marsabit District have been returned to Elbarta.

1957 The Turkana of Isiolo District have arrived over the past 25 years. Their population now is c. 3,500 with

13,000 small stock and 2,000 cattle.

1958 (December) Attempts to remove the Turkana from Isiolo District in 1951 and 1957 were postponed each time because of foot and mouth disease.
The Turkana were moved on the third attempt, in July 1958. 2,000 Turkana, with 400 head of cattle, 12,000 small stock and 1,000 donkeys were removed to Kangetet in southern Turkana; 115 men employed by the government in Isiolo remained there with their wives and children (in total 464 persons): their livestock however was removed.

1960 The Turkana population is now under 273 men and the total population is estimated to be 2,000.
There are several illegally established Turkana manyattas between Porr and Moite on the lakeshore. Patrols of tribal police sent out to remove them were not totally successful by the end of the year.

6.6 Dasenech: details of movements

1910 At Gullif, near the northern end of Lake Rudolf, there is 'dry, flat, bushy country inhabited by Rerhiats (Dasenech) with many cattle and sheep' round a big swamp which is covered by the lake in the rainy season, and cultivated in the dry season.

1926 (31 May) There was a raid on the Gabbra at Moite on 30 September 1925 in which 29 Gabbra were killed, five wounded and 4,000 to 5,000 camels taken: this raid was carried out by 40 Ethiopians and 300 Dasenech.
The raiders were caught up at Bami by the King's African Rifles on 10 December and were severely defeated - 14 killed, 20 wounded and three rifles, 117 camels, 2,387 small stock and two donkeys were captured. Three members of the patrol were wounded.

1936 According to Air Force Intelligence, there are no Dasenech south of Banya Lugga, so Kenya tribes were

allowed into previously prohibited areas.

1937 (15 February) 'Actually the Gellubba [Dasenech] are not disturbed if they do not proceed further south than Banya Lugga.'

Italian troops in Dasenech country feed on stock looted from the Dasenech. The latter cannot be pacified and from time to time they harry the troops.

1938 (28 February) Now that the Italians occupy Dasenech, the Gabbra are allowed as far as Derati and Koobi Fora, where until now they have been prevented from going. Of Lokuaria's people a few remain in Kenyan territory but seem to have only 'a few hundred' goats. Later in the same year some came south to Kokoi asking to live in British Territory.

(30 March) Italian post 15 miles north of Kokoi abandoned; comparatively few Dasenech with depleted stock have been seen.

(25 May) The old post has been abandoned and a new one set up 100 - 200 yds south of Banya Lugga and one mile east of the lake, some 10½ miles north of the old post. There are now 8 small manyattas of Dasenech three miles north of Banya Lugga. Very few Dasenech or animals seen in the area of the Italian post.

1944 Banya occupied from 4 to 9 February. The Dasenech were told 'that they could use their customary grazing as far south as Kokoi, but the question of the policy to be adopted towards them was left in abeyance'.

Lokuaria in 1942 described Lomorumwui as his 'eyes, mouth and ears'. At this time Lokuaria's son, Loposimuoli, and Korichir are both in Addis Ababa: their spokesman is Loperchinoi, a relative of Lokuaria.

1946 Dasenech in Kenya grazed their stock near the Gabbra. The Gabbra and Boran grazed stock from Tulla Bor on the lake shore to Furroli along the border.

1947 Dasenech raided the Gabbra (Algara section) at Uruptirsa and killed 17.

1948 The Dasenech are at war with the Dongiro, west of the Omo, but have kept the peace to the east. A good effect resulted from the killing of 4 Dasenech with a raiding party by the Kenya Police in May near Banya.

After the Dasènech 1947 raid on Uruptirsa, Korichir moved permanently to British territory. Lepechemo remained in British territory with a small group of villages and reasserted their desire to remain British.

The policy towards these 'British Gellebba' by the Provincial Commissioner is:

1) They are not to be regarded as British subjects.
2) No taxes are to be taken.
3) Their presence is only to be tolerated in Kenya.
4) They are to have a southern boundary of the Tulla Bor lugga.

Although often 'a great nuisance they serve a useful purpose as a means of contact with the Gellubba (Dasenech) tribe who might otherwise become a dangerous myth'.

The estimated Dasenech population was 1,450 fighting men with 1,200 rifles.

1951 (2 October) A routine police patrol was fired on by one armed Dasenech near Lobuagole. The European Assistant Inspector with 16 police inspected the site and were ambushed by 100 armed Dasenech of the Ado area. The police withdrew with four wounded constables.

A large number of Ethiopian Dasenech are concentrated north of Banya in preparation for a raid on the Hamar.

(December) Kenya Dasenech stood by their decision not to join this raid and provided information of others.

1952 The Dasenech made a raid on a Rendille village - they left 75 dead and all but five were women and children.

Later a pitched battle took place when a Kenyan police patrol was attacked by 200 - 300 armed Dasenech; there was a seven-hour engagement and the police were able to

withdraw to Banya post. On a second occasion one King's African Rifles soldier and 26 Dasenech were killed, and half a dozen seriously wounded. Another Dasenech raid took place on a Gabbra village; the attackers formed two rings, inside spearmen and outside those who evaded the spears were shot when running out of the village.

1953 The Dasenech in Kenya number 250 at Banya, and the majority are stock owners. They are administered under the Special District (Administrative) Ordinance. They are all of the Inkoria section, under Chief Lepechemo.

1955 The Dasenech by Banya Police Post have increased in numbers from 250 to 350, and the majority own stock. As a result of the Ethiopian Dasenech raids on the Gabbra, 50 Kenya police from Sabarei went to Banya and near the old Italian holding at the site of a large Ethiopian Dasenech settlement were attacked by 150 - 200 armed Dasenech. The result was a 24 - hour hour battle in which three Dasenech were killed and a number wounded.

Applications to fish the eastern lake shore were refused because the Dasenech were raiding 'not infrequently' by canoe as far away as the Elmolo Islands.

In 1956 several hundred Dasenech were circumcised.

Summary

In 1942 the Dasenech were administered by a British Officer at Kalam since the defeat of the Ethiopians; he was supported by Kenya Police and the Turkana Irregular Battalion. The Ethiopian Government then took over and the King's African Rifles withdrew. The defence of the Turkana was now based on five forts manned by Kenya Police and Turkana Extra Tribal Police recruited from the Irregulars. Their strength was 200 police and 180 Extra Tribal Police.

The Turkana kept 10 - 20 miles back from these forts and the area between was denied to all tribesmen by night

patrols. This was successful in preventing stock raiding, and there was not a single murder.

In 1941 the Dasenech were armed with 1,000 rifles and 3 Breda guns.

In 1947 the Extra Tribal Police were disbanded and the Kenya Police increased to 300 with more automatic weapons. But this 'no-man's land' was being infringed upon in several ways:

1) The Turkana were grazing forward to rest their own denuded ranges, but these were not completely evacuated and surplus stock not marketed, resulting instead in increases so that both front and back areas were devastated.

2) Concessions were given to the Dasenech in order to give Kenya a hold over them, but no hold would exist if they withdrew from the concession area.

3) Shackleton's 1932 view adopted that sooner or later the Turkana and Dasenech must develop friendly intercourse and settle disputes by barazas, but this was premature when the Dasenech were scarcely administered and heavily armed.

The Dasenech under Leperchinoi numbered 400, most owning livestock; a few fish. The grazing limit had been defined but otherwise unadministered and untaxed. The Dasenech refused to produce meat for rations.

1958 The Dasenech were informed that in June they would have to pay tax, 16/- per annum like the Turkana, and also they would have to supply stock to the police at Ileret and Sabarei. The majority paid by the end of the year.

The Ethiopians made a new attempt to administer the Dasenech; they formed a combined province embracing both sides of the Omo River in the 'Gelleb and Hamar Bacco'. The man in charge had orders to 'control' the people but not to disarm them.

1959 The Dasenech are now living near Ileret Police Post and number about 400; they continue to pay taxes and to

supply meat.

1960 (7 March) The Dasenech have been paying tax at a fixed rate of 16/- per head since 1958; they obtain the money by selling stock to the police.
They are known to go by canoe as far south as Alia Bay to poach game and hippo.
The Dasenech are still by Ileret. 'They paid tax of a reduced rate and were in general a continued minor embarrassment. They gave no real trouble, however, and no good excuse can yet be found for returning them to Ethiopia.'

1961 (27 June) Again on the Dasenech - 'It is now doubtful if we can ever get rid of these people but they must be strictly confined to the area allotted to the north of Ileret and encouraged to return to Ethiopia.'

6.7 Tsetse

1908 Country at foot of Leroghi well watered but infested by tsetse.

1914-1915 Moyale - trypanosomiasis among camels and cattle noticeable to a greater extent in the highlands. Towards the end of the year there were severe losses.

1922 Flies on Uaso Nyiro and foot of Leroghi which in rains spread over nearly entire area. North = Swiyan River, south = Uaso Nyiro, east = Mathews Range, and west = Leroghi escarpment.

1928 Kinna and Kuru areas are fly belts and therefore not used for cattle except during drought; they are excellent sheep areas however. (Isiolo District)

1928-1931 Flies in Horr Valley between Nyiro and Ol Doinyo Mara, lower reaches of Swiyan, Barsaloi and Saya River. Eastern and western foothills of Mathews Range and along foot of Leroghi and at intervals along Uaso Nyiro.

1930 Incidence of flies at Ret and Karare on the mountain (Marsabit) serious but kept in check by grass fires.

1933 Veterinary Officer reports that not all flies in any given area carry trypanosomiasis; it seems that animals affected do not die in many instances but suffer recovery, relapse, recovery, relapse, ad infinitum. Stock Inspector in Isiolo District has no idea if flies are spreading; the natives say it is all the same as in their fathers' time and they make no reports of it starting in new areas.
In Samburu District the fly areas are: banks of the Uaso Nyiro; thick bush near Obiroi; thick bush near Barsaloi; parts of the Horr Valley; parts of Seya (near Lolmuti); Laitognen; parts of Neng and Mugit (west side of Mathews); parts of Mathews at bottom of hills (both sides); Irrer District, Kauro and waterholes east of there; Arsim near Ndotos; Odermuru, and bush halfway between Barsaloi and Seya.

1934 Trypanosomiasis, particularly in fly areas around Karare and Ret, is not infrequent.

1936 Numerous cases of trypanosomiasis during year and Somali cattle in Kipsigi and Isiolo areas have died.

1938 Country near Marsabit Mountain forest on all sides except north is infested by tsetse.

1939 Trypanosomiasis in Samburu due to grazing shortage and people forced into fly areas.

1942 Samburu say tsetse is spreading in the low country and the prohibition on bush burning remains. This is regarded as a standing grievance by them. It is feared that if they burn the grass, the flies may spread to previously unaffected areas.

1947 In Moyale District, there is Ghendi fly among the Sololo Boran.

1948 West of Leroghi there are flies. Although a potential badlands, it has thick grass.

1950 In Samburu District, tsetse prevents use of an area called Tinga, west of Leroghi and in the Amaya area.

6.8 Water development

1929 At Kargi the existing well was deepened and enlarged; a built-up seven-square-foot mouth, concrete troughts, sloping plinth and good water now.
At Kurkum two new wells sunk and built up as at Kargi; one a success, one lessened its output of water.

1930 A water-boring unit began work in the El Wak area.

1934 The water-boring abandoned in Moyale District and the equipment transferred to Wajir. Two holes sunk at Takubba failed to produce water.

1937 The natural pool at Sololo was deepened.

1938 On Marsabit Mountain the Ret wells (formerly only goats allowed to use it) and Delamere's well reserved for government and township proper.

1942 The military abandoned the boreholes they sunk at Ramata Rodi and Logologo and sealed them. Still occupy Ullan Ulla, Balessa Bongole, and Laisamis water points.

1945 Well top with a small trough was constructed at Laisamis.

1946-1947 Construction of pans in the Moyale area begun as well as digging wells and constructing dams; included: Hara Kalu, Hara Walle, Baloble, Kunjibi, Hara Bor, and Dumbala Funchama.

1948 The Sakuye dug out the wells at Dabel and Ajao and the Borana the wells at Sololo; 44 wells in Moyale District filled in November to restore a dangerously low water table.
Two new dams in the Huris, close together west of the road and below the present Jaffa no. 2 dam completed. Point is to increase the supply of water to hold 2,000 head of Gabbra cattle in the dry season.
Approval received for the construction of two dams on Marsabit and one on Kulal.
A hand pump was installed at Ullan Ulla well but the Boran still use leather buckets; stone troughs were installed but the Boran still use mud ones.

1949 A three-year water development scheme was begun in the NFD intended:

1) to maintain strategic pans;

2) to construct new pans sited to support temporary supplies and allow utilization before returning to rivers and to allow utilization of grazing not used to optimum.

1950 At Kulal a three-year water development scheme begun along with a soil and water conservation scheme.

A large pan was dug in the northern Hedad and a pan dug at the foot of the Huris.

The Kargi well was repaired and deepened.

1951 Schemes on Marsabit and Kulal completed - have alleviated the drain on permanent water supplies and drawn stock away resulting in more even grazing. Both the Boran and Rendille have volunteered in construction and maintenance of water development schemes.

At Fallam a large tank of 900,000 gallons constructed.

At El Gus a pan of 200,000 gallons constructed.

The Dixey Scheme is basically one to improve water supplies by sinking boreholes. Only three to be sunk in Marsabit District, provisionally Logologo (originally sunk by the army in the war), central Kaisut (Hailesaruwa) and northeast Hedad (Kurkuloi); the last two depend on survey underway. In late December work on Logologo began but the scheme is not 'in the middle' because it appears it will cost 'so much more than was originally expected'.

One effect of the scheme will be a decision as to which Rendille will be allowed to use the boreholes.

The outcome of the pilot scheme undertaken to determine if boring in the NFD and Samburu is likely to be successful is 'unsatisfactory'. The Water Resource Authority has recommended that in all but exceptional cases water development of the province be restricted to exploitation of surface and rock catchments, dams, pans, tanks, etc.

1952 Detailed development: Logologo borehole - Dixey Water Scheme: power-plant fitted with a 600-gallon-per-hour capacity; 9,600-gallon storage tank, drinking trough and operator's quarters. Operational.

Fallam - another pan 120' x 20' x 6' constructed in the same area as that of 1951. No rain therefore success unknown.

Karari - in the lugga an earth dam built 135' x 315' x 8' with a 2,000,000-gallon holding capacity. Held what water fell in December.

Sabarei - the police waterhole was cleared and cleaned. Well mouth built up 9' to above ground level.

Boluk - one well in the group cleaned, cleared, mouth built up and capped.

Derati - one well in the group cleared, cleaned, mouth built up and capped.

Karsa Dera - one rock pool below weir built in 1951 cleared, cemented and trough constructed. Held little water.

Gambo - east side of Marsabit Mountain three old wells dug out and renovated.

Waroganja - 4 miles southwest of the Milgis River crossing in the Kaisut; a well sunk and capped by stone. Satisfactory for human consumption.

1953-1954 Dixey Scheme begun in Moyale District. Excellent pans established at El Las (2,000,000 gallons), two pans at Ajao (3,000,000 and 1,500,000 gallons), Kuboli (4,000,000 gallons), and Aleri (4,000,000 gallons) - the latter two in the vicinity of Korondilli.

1955 Dixey pans, all in Borana, established: Kuboli, Koranjido, Badana, Funanyatta, Hara Kundi, Kubitari, Debio, and Sololo. Poor rain and only one at Sololo filled.

1956 Most new pans dug are along the axis of and a little south of the escarpment. Consider Moyale rainfall statistics representative of rainfall and escarpment rain in excess

of 12 inches will fill pans and provide water at present stocking levels until August or late September in a good year. Of 16 pans dug two incomplete (those at Bambaguarar and Chafe) and of the other 14, two did not fill (those at Odo and Aleri).

The problem now is one of infiltration of Borana and stock from Ethiopia to use a better water supply.

1957 A pipeline for South Kulal was prospected.

Dixey-constructed pans in Moyale completed:

Sololo	4,000,000 gallons	Excellent	used by Borana
Chafe	7,000,000 gallons	Good	" " Borana
Kubitari	5,000,000 gallons	Good	" " Borana
Dubbisyu	2,000,000 gallons	Useless	" " Borana
Funanyatta	6,000,000 gallons	Good	Borana & Sakuye
Badana	4,500,000 gallons	Poor	Sakuye
Koranjido	6,000,000 gallons	Poor	

Administration constructed pans:

Dumbala Funchama	3,000,000 gallons	Excellent
Remata	2,000,000 gallons	Good
Hara Bor	2,500,000 gallons	Good

1958 Moyale District pans at El Las, Hara Badana, Koranjido and Garse Aki all enlarged. Pump engines were installed at Buna and Sololo.

The first pipeline in Kulal is half completed. Still planned the piping of tapering streams on Kulal.

The pipelines at Songa Gambella (1800 gallons per hour) and Balessa (from 1000 gallons per hour to 1600 gallons per hour) completed.

1959 Four pans in the Kaisut completed but no rains to fill them. Jaldessa, Gudas, Gudas Dika, Sirreardi and Darioro pans completed but only Sirreardi and Gudas pans filled (average 6,000,000 gallons each when filled).

Hailesaruwa abandoned as subject to flooding and soil too porous; Bubissa site also unsuitable.

Mt. Kulal springs tapped and construction of five catchment dams at springs: Lelekan, Lesabai, Irriator top, Irriator

lower and Olchoro Rongai. Only Irriator continues to flow in the dry season. A 37,000-gallon storage tank and two troughs completed; expect output to exceed 1,000 to 1,500 gallons per hour.

The borehole at Logologo, completed in 1952, suffered major breakdowns numerous times.

1960 In Marsabit District the only benefit of the Dixey Scheme is one borehole at Logologo - reserved for Rendille, and of 3,000 permanent cattle, only 1,000 allowed to water per day.

Boreholes drilled at Hailesaruwa and Jaldessa and Bubissa (at base of Marsabit Mountain; test water struck at 694 ft.); all produce in large quantities.

To be equipped in early 1961. Another waterhole for Gabbra at Burgarbo scheduled.

Two 6,000,000-gallon pans scheduled for Fallam.

Work is in progress on a North Kulal Pipeline to bring water out of the forest.

7. Climatology: a historical perspective

The Lake Turkana basin is part of the Eastern Rift Valley. The lake itself is almost entirely within Kenya; its northern tip lies along the intersections of the Ethiopian, Kenya and Sudanese frontiers. Extending from $9^{\circ}22'$ N. latitude to $0^{\circ}3'$ N. latitude, the basin comprises 146,000 square kilometers, a relatively small area for a lake of almost 7,500 square kilometers. Nearly half of the catchment area contributes little or nothing to the lake in its present climate. Approximately 300 kilometers in length, the lake is 60 kilometers at its widest. The principal affluent of Lake Turkana is the Omo River which rises 2,000 meters up in the Ethiopian highlands to the north. The only other river systems, those of the Turkwell and Kerio, drain the Uganda escarpment in the southwest. Their potential contribution is, however, limited to seepage as their initially high discharge is lost en route to the lake in the Turkana plains. The lake's other smaller

tributaries pass through an arid environment which seldom allows their sporadic runoff to reach the lake. Consequently, the duration and intensity of the rainy season in highland Ethiopia controls in large part the level of Lake Turkana (for additional information see Butzer, 1971 and Worthington, 1932).

The Lake Turkana area dates from the Upper Pliocene, a time of major faulting and folding. At that time the Nile system and the Lake Turkana - Omo River system were probably linked. Even today the fauna of Lake Turkana resembles that of the Nile system more than that of other East African lakes. The Sagan River at that time connected Lake Stefanie or Chew Bahir with Lakes Abaya and Chamo in southern Ethiopia and had a runoff into Lake Turkana at Ileret. Lake Turkana, which then included what is now the Suguta Valley, was much larger in extent and held considerably more water. The volcanic barrier which arose cut off the Suguta extension of the lake from the major river sources. Unable to make up the evaporation loss the extension dried up, forming today what is often termed the hottest place in East Africa.

No proof exists either way to indicate any relationship between the drying up of the Suguta extension and the rise of Lake Turkana to the +80 meter level at which it stood 8,000 years BP. The present dimensions of Lake Turkana date to circa 7,500 BP, although as late as 3,000 BP the lake still stood 70 to 80 meters above today's beachline.

The range of seasonal and long-term fluctuations of Lake Turkana are a particularly unique feature, and, being subject to the same basic climatic controls, probably extended at one time to Lake Stefanie and possibly even 'Lake' Chalbi. The trends of lakes Turkana and Stefanie are not isolated but comparable to lake level changes known at Lake Victoria, Lake Chad, the lakes of the East African Rift, and the Nile River (for additional details see Grove, 1974). In the first millennium AD Lake Turkana stood 25 - 30 meters higher than today. From AD 1000 to AD 1500 the lake fluctuated between its present level and +10 meters. The level varied between +8 and +15 meters from the mid-sixteenth century to the mid-seventeenth century and this was followed by another

low period through the 1840's. The lake then rapidly rose to a +15 meter peak in the 1870's. Three decades of wet years ended in 1899 and over the next 5 years the lake dropped 7 meters and by 1908 had receded 12.5 meters. In the last 75 years the level of fluctuation has been over a range of 20 meters; as stated by Butzer 'an amplitude exceeding that of any other world lake of natural origin'. Seasonal fluctuations in the present decade have averaged 95 centimeters. The highest level is reached between October and December and the lowest level between May and July.

The rains of the region have been characterized as transitional 'between the classic equinoctial rains of the Uganda escarpment and southern Turkana on one hand, and the zenithal rains of the Ethiopian plateau on the other'. The seasonal changes which occur around the northern end of Lake Turkana and to which the agricultural and animal husbandry practices of the Dasenech people who live in the area are attuned are in a broad sense also representative of the eastern half of the lake. The big rains, or *ir gudohka* to the Dasenech, occur between March and May, with an April peak heralding a time of green pasture, blooming vegetation and pools of water in the back country away from the lake. By July a season the Dasenech call *morgoch* takes over. Some greenery remains but generally those pastures not yet eaten begin to dry and turn brown. The following months are called *shante*, indicating that everywhere is dry and yellow. From October to December the small rains are expected but they cannot be relied on. Terming this season *morgoch* shows that their effect is minimal. From November until the onset of the big rains is once again *shante*. Further south on the Leroghi Plateau, where many Samburu live today, the rains produce a single rainy period from April to August with two peaks in April and July and a dry season of September to March.

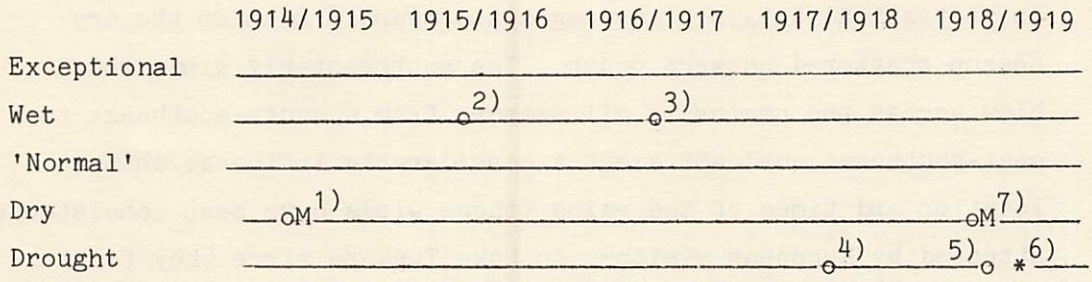
The region north of Alia Bay receives 300 - 360 mm of rain per annum (Butzer, 1971). For the country to the south and inland, rainfall estimates are less than 200 mm per annum. Figures for rainfall in this area, however, are misleading and especially so when compiled from climatically congenial government outposts atop

mountain outcrops in the area. The normal pattern, of storms which are scattered and erratic both in timing and location, is hidden in statistical totals of averages and means. Even in the dry season scattered showers occur. The southeasterly winds which blow across the region in all seasons from a south-southeast to east-southeast quadrant exert a considerable influence on the location and times of the rains (these winds have been consistently attested by European visitors to Lake Turkana since they first arrived in 1888). The low plains and barren hills as foci for hot air are inimical to rainfall conditions, while the upper altitudes of the mountains like Kulal and Marsabit with their thicker vegetation cover are intermittent foci of cooler, damp air.

Rainfall varies significantly both over a single year and over successive years. The second rainfall of October - November often fails entirely and inland several years sometimes pass with virtually no rain. The quantity and the nature of the rainfall are the two critical factors determining the effectiveness of the precipitation. For example, an equal quantity of precipitation falling in short periods of heavy rain followed by long periods of drought, or in a concentrated period of moderate rain over a couple of months, will produce dramatically different results in vegetation cover. Given the wide variation in the Turkana Lake basin, the 'wet season' is more usefully viewed and more precisely defined as a period when precipitation is sufficient to stimulate new and dormant vegetation, while the 'dry season' should be seen as the period when rain is insufficient to maintain the vegetation cover or is absent altogether (after Gulliver, 1955).

The following charts are an interpretation of past climatic conditions, based upon the recorded comments of witnesses. The explanatory footnotes provide the reader with the major indicators used. Given the possibly spurious conclusions regarding the region's climate which are suggested by the rainfall statistics from past gauge locations, this interpretation is offered as a parallel study for use by climatologists in any future analysis.

7.1 Rainfall profile



o = Marsabit (followed by an 'M' = Moyale)

* = Isiolo (Garba Tula, Archer's Post)

\+ = Samburu District

1) Moyale - scantiness of rainfall causing severe drought during last months of the year. March 1914 rainfall very poor. October 1914 only two days of rain but large rainfall March 1915.

2) May 1915 to March 1919 - exceptionally heavy rains throughout the district. The elders state this is the heaviest rain in 15 years.

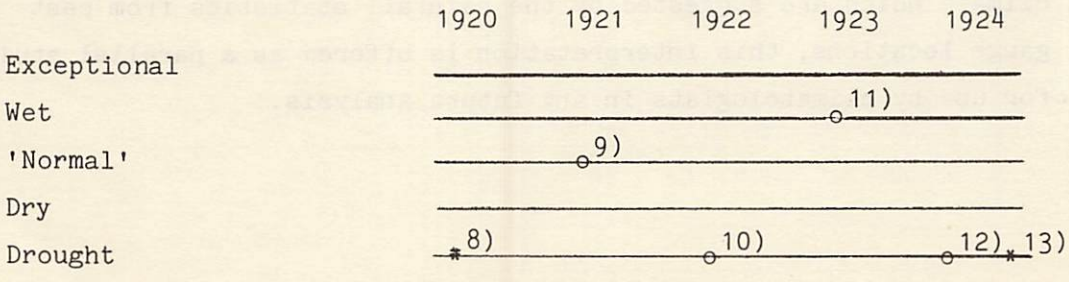
3) 'Exceptional rainfall'.

4) 'Drought' - a 'hard year' on the Rendille with considerable loss of stock. The Gabbra were not as seriously hit by drought.

5) 'Prolonged drought'; short rains 1917; long rains 1918; short rains 1918 all failed. Stock in very bad condition; hard to find a sheep worth killing.

6) 'Cattle dying' by the hundreds of starvation. Lorian dried out and was not recognizable as a swamp. Hippo died in large numbers. Throughout the NFD both long and short rains 'wretched'.

7) Moyale - May 1918 rains failed and so did the short rains. Grazing and water shortage all over the district in January and February. The rains broke in March 1919. The stock did well despite the drought.



8) Owing to drought grazing is poor except near the Uaso Nyiro and Arba Jahan. 30 September 1920 - stock is in 'pitiful condition' owing to prolonged drought.

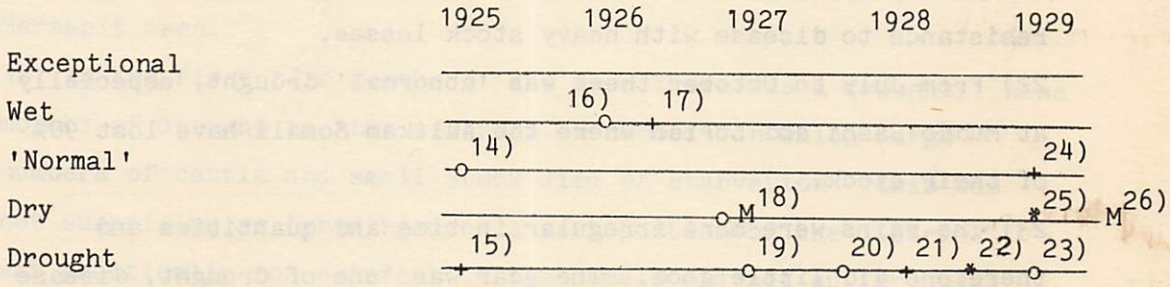
9) Splendid rains 20 October 1920 until the first week of January 1921. Archer's Post reported rains 'normal'.

10) Prolonged drought - south of the Huri's drought is severe - the Rendille have suffered the most, but animal losses are fewer since there is no disease. 31 July Marsabit - 'grazing getting scarce'; 30 September - 'grazing extremely bad'; 31 October - grazing good on Marsabit Mountain, but no rain on Kulal or the route to Kulal. Stock loss from drought greatest at Archer's Post, Garba Tula and Balessa.

11) Heavy rains provided ample watering for the whole district - the inhabitants are most prosperous - the Gabbra and Rendille camel people have not had such a good year in a long time.

12) 30 June 1924 - the whole area is dry and there is no water in the waterholes - 10.58" compared with 30.87" for the same period in 1923. At the year's end in the North Horr region there is a total failure for the rains and no grazing in the area. Until 14 December there is no rain in the northwest of the district including the Huri's - some rain has fallen since, but grazing is still poor. The district has suffered greatly from the lack of rains - there has been considerable stock loss, especially of small stock. In the Moyale area there is a water shortage in the permanent wells - the long rains failed except at Moyale itself. Water at Sololo on the Moyale - Marsabit road had dried up.

13) The long rains failed, short rains were poor. Grazing very poor.



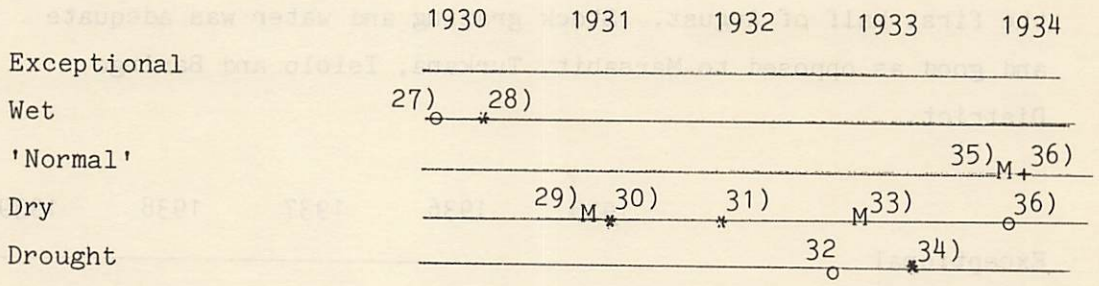
14) January 1925 - grazing good everywhere - rainfall recorded as the highest in 5 years.
15) Rains 'very, very poor' - amongst the worst on record - grazing all over the district is bad. In August the last streams near Mount Nyiro, 'which, during the lifetime of the present elders were never known to run dry, ceased to exist.' Localized rains in early November. Barsaloi itself was dry.
16) Rainfall heavy and grazing for stock plentiful.
17) Rains 'heavy and exceptional, a great contrast to the previous year'. The rains fell in July and August intermittently and in August to November there were rainy intervals.
18) Moyale - the year was exceptionally dry, with comparative failure of the long and short rains. The difficulties of water and grazing were more accentuated than usual. There was a yearly total of 18.79" compared with the 4 years' previous average of 31.84".
19) The rains have failed except on Marsabit Mountain. The areas north, northwest and west of Kalacha, Maikona and North Horr are 'deserts of dust'. The rains over much of the district are a partial or total failure. Water is scarce, grazing poor and starvation of stock imminent.
20) Generally a year of drought and stock losses have been 'enormous'. The total water supply of the country is low, especially on Marsabit Mountain and the edges of the Koroli desert. In Moyale the year has been one of the driest. The long rains failed completely and the short rains were under average. Grazing is practically non-existent. The district is practically empty as the Boran went to Ethiopia and the Adjuran to Wajir.
21) 'Exceptionally' and 'abnormally' dry year. There is reduced resistance to disease with heavy stock losses.
22) From July to October there was 'abnormal' drought, especially at Muddo Gashi and Lorian where the Aulikam Somali have lost 90% of their stock.
23) The rains were more irregular in time and quantities and therefore did little good. The year was 'one of drought, disease

and locust'. Rains were 'practically non-existent' in September, irregular in November and fairly heavy in December.

24) The Samburu enjoyed good rains this year and grass is plentiful.

25) 'Very severe drought' in contrast to the Samburu to the west for the first 8 months with rain during the last 4 months.

26) Moyale - rainfalls 'erratic in their incidence'. There were none until August and then a heavy downpour. Assume that when there are none in Moyale, there are none in the district.



27) Heavy rains in the beginning of the year were phenomenal and in general water and grazing were plentiful. Moyale District had good rains from March to April, and October, November and December.

28) The long rains commenced at the beginning of March and continued until 10 May. There were heavy rains throughout the district.

29) Moyale District: drier than in a number of years and rains at the end of the year failed entirely.

30) Long rains a comparative failure and short ones little better.

31) Isiolo reported grazing slightly below average 'except some favoured locations'. No details were recorded for 1932 in the Marsabit area.

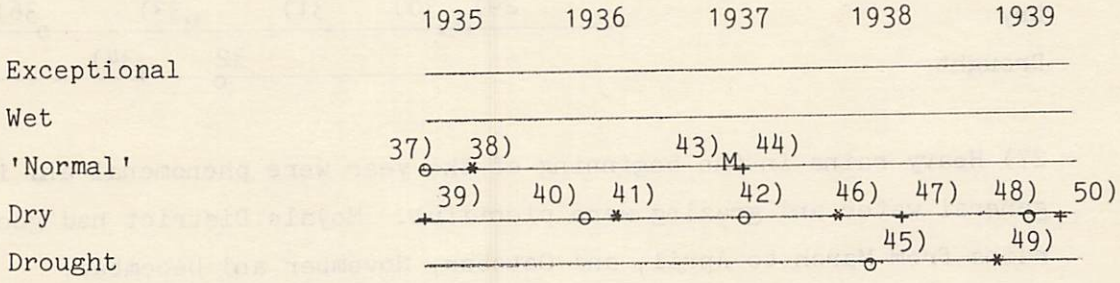
32) In the first nine months of the year there was a drought; nine months of drought is 'the severest on record' in which large numbers of cattle and small stock died of starvation - this was not surprising as 'grazing over a vast portion of the district was practically non-existent'. The camels did not suffer quite as much. The short rains were good.

33) Moyale District: on the whole the rain in the district was less than average for other years.

34) The long rains failed and drought conditions existed until November. The Uaso Nyiro dried up as early as April and as far up as Manika (Kittermaster's Camp). For the first time on record the Samburu abandoned Mt. Nyiro and the Ndotos as there was no grass or water. It was drier than in 1928. The year's total rainfall of 25.66" exceeded the 22.97" of 1932 but all of it fell on Isiolo town.

35) Moyale District: widespread rain in May and June. For several months the wells on the frontier were not required.

36) Adequate rain; the April rains were fair, and good in July and the first half of August. Stock grazing and water was adequate and good as opposed to Marsabit, Turkana, Isiolo and Baringo District.



37) Exceptional rains throughout the district in April and May, November and December, although both rains late and grazing short in September and October. Less rain fell than in 1934 but more evenly distributed. In Moyale District the rains were sufficient and it was a good year for cattle.

38) Return to more normal conditions; the short rains were generally good except for Merti itself and about Kokot; long rains generally light.

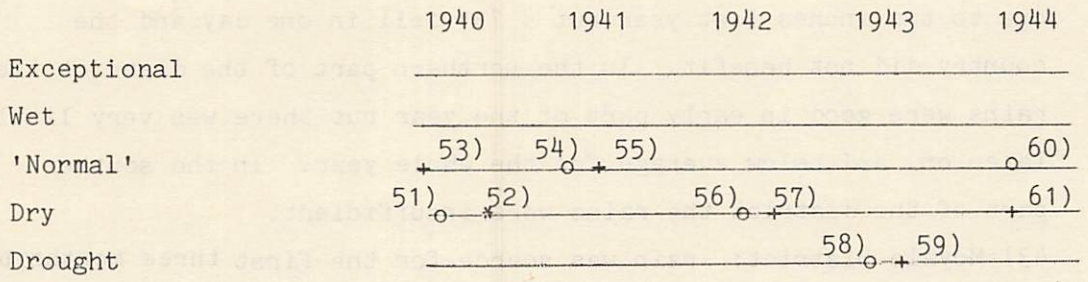
39) Rains distinctly better this year; in all parts of the district they were patchy and out of season. Last year's drought made all Samburu dry and heavy rains failed to fill the pans.

40) Rains good in April and May; disappointing in November and December except on Marsabit Mountain - only adequate in area of Kulal. Little fell in the Huri's - rains not adequate for the population needs.

41) Good rains in the beginning of the year but the last 6 months were very dry. Rains failed in Wajir; there is drought there for the second year.
42) Rains in the Marsabit Mountain area were above average but the long rains were disappointing: 5.60" fell in March compared with one to two inches last year but 4.73" fell in one day and the country did not benefit. In the northern part of the district the rains were good in early part of the year but there was very little later on, and below average for the whole year. In the southern part of the district the rains were insufficient.
43) Moyale District: rain was scarce for the first three months but the rain was good for the rest of the year and grazing was good.
44) Rains everywhere were good and a prosperous time was enjoyed.
45) The long rains failed and stock losses suffered by all the people were heavy. The short rains were adequate only in the Marsabit Mountain area; Crater Lake and Gof Bongole dried up and the water level was down in the waterholes. December rains extended to the Kaisut and Hedad with some showers on the Huri's. Moyale District: long rains failed and the short rains were only partial; water and grass shortage resulted.
46) No good rains in most of the district until December. The rains failed in both April and November with the exception of Isiolo - Archer's Post - Garba Tula - Kinna areas and Kipsing.
47) Rainfall throughout the year was unusually irregular and localized.
48) A 'bad year' on the whole for stock owners. The rains were 'scanty' all over the district, irregular and uneven in distribution. Over one-third of the total rainfall fell in ten days in April, the result being a drying up early in the district and by September most available grass and water had been used up. Moyale District: it rained in April but the short rains virtually failed.
49) Both the long and short rains failed on the Uaso Nyiro; it was a time of 'unprecedented drought and hardship'. Failure of the 1938 long rains and both in 1939 resulted in 'approaching dessication' of the grazing areas. Isiolo town had 5" of rain in November

but there was none in most of the district.

50) At the end of the year the whole district faced the prospect of one of the worst droughts on record. Heavy showers in July did little good.



51) Although the total rainfall was above average, the poor short rains over a large area were insufficient to produce grazing usually expected at the end of the year.

52) Rains fell in March and April and grass was plentiful, as was water. The small rains in November and December failed north of the Uaso Nyiro although they were good in the Tana and Saricho country Isiolo town's rainfall was the lowest in some years.

53) Although the lowest rainfall ever recorded fell in the southern part of the district, conditions were not abnormal.

54) Excellent long rains, and the short rains were also unusually good, resulting in water and grazing in sufficient quantities for the whole year.

55) April rains were plentiful and there was good grazing everywhere; the Leroghi Plateau made a remarkable recovery from previous years.

56) In March very heavy rain fell in the northwest and the Chalbi areas were all mud. From April to the end of the year no rain fell at North Horr, Laisamis or Dida Galgalla. The short rains failed or were badly distributed elsewhere. Marsabit itself had average rainfall. Moyale District: total failure of the short rains meant the cattle people especially would have difficulty. The year's rainfall at Moyale was the second worst on record since 1916, when records began.

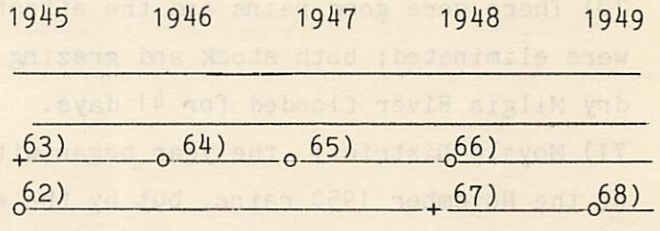
57) Up until August the rains were well distributed and satisfactory. The small rains failed.

58) Poorly distributed rains, with a great shortage of grazing. Moyale: average rainfall was the lowest on record. Stock mortality among young animals was heavy. There was malnutrition among the human population and famine relief was provided.

59) There was drought in the first 4½ to 5 months as the long rains failed. Rain on Leroghi and the low country was much below average and conditions were aggravated due to the locust invasion. There was a food shortage among the Samburu.

60) Good rains during the year and good grazing was enjoyed. Moyale District: generally good rainfall, well distributed and well spread out; recovery from 1943.

61) Although more normal rainfall, the area is not back to normal yet.



62) Most of the district had no beneficial rainfall in April and May: the locust ate what little appeared. Moyale District: there was a failure of rains until November.

63) Rendille entered Samburu grazing and Turkana moved eastwards from Elbarta.

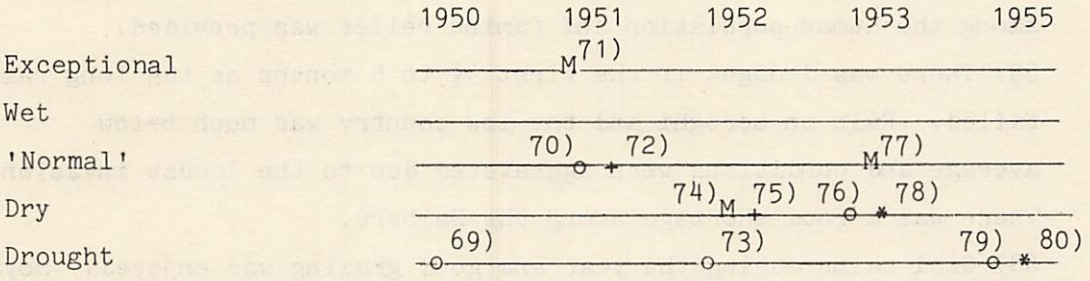
64) Rainfall was generally sufficient but not widespread throughout the district; it was sufficient to keep stock in moderately good condition.

65) The rains were good and grazing adequate in most of the district. Moyale District had normal rainfall.

66) Kulal, Marsabit and Huri's all had normal rainfall over the year. The remainder of the district had very poor long rains but the situation was relieved by the best small rains for some years; over the year the livestock condition was satisfactory.

67) Leroghi had good rains in August, September and October, but the low country suffered patchy rains and therefore drought.

68) At the end of the year the situation was one of distress and mortality of stock began to increase due to the dry conditions.



69) The long rains fell below average and the short rains failed completely. The distress of 1949 became very serious at the end of 1950. Mortality rate of stock, as in 1949, began to increase due to the drought.

70) There were good rains and the effects of the 1949/1950 drought were eliminated; both stock and grazing recovered. The normally dry Milgis River flooded for 41 days.

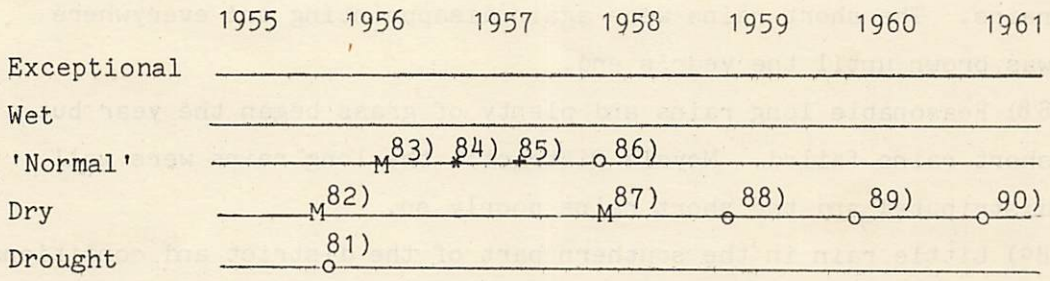
71) Moyale District: the year began with drought after the failure of the November 1950 rains, but by the end of 1951 an all-time high rainfall was recorded due to prolonged long and short rains of unusual intensity. Not within living memory had there been so much grazing, and the wells had not been used since March.

72) The drought was still at its worst in January and February. Maralal's rain was spread evenly through the year and in Wamba exceptional rains fell (all but 2.93" of the 60.75" total and at Baragoi all but 3.84" of a 22.40" total) in March, April, May and November-December.

73) Both long and short rains were in effect failures. Apart from Marsabit Mountain (where permanent water was on the verge of drying up until rain on 16 September), water was immediately absorbed before the next shower and the normal wet-weather pans and waterholes held no water. The drought was severest on the Rendille.

74) Moyale District: water was the difficulty, not grazing; the long rains concentrated in April and short rains delayed until mid-November.

75) Rainfall was disappointing and the water supply was low; grazing stood up to demands.
76) Although Marsabit town itself recorded its highest rainfall since 1941, the long and small rains failed in most of the district.
77) Moyale District: the long rains were badly distributed and the short rains ended early; some wells showed signs of drying up although water and grazing were the best in 10 years in the southern part of the district.
78) The rains failed in Isiolo District. Severe drought throughout Rendille areas in the southern part of the district as both the long and short rains failed; there has been little or no rain now for five years. The short rains also failed in the northern area and the Gabbra suffered drought all year. Moyale District: one of the driest years in memory. The long rains were poor everywhere and the short rains were good only in the Sololo - Hoga area.
79) A 'considerable number' of stock lost as November rains failed. Grazing and water were short.



80) Persistent drought in most areas of the district. In the southern part the surface water remained for long periods, but this opened normally inaccessible areas to the Rendille. Unseasonal rains and good grazing began the year in the northern areas but the short rains failed completely. The Uaso Nyiro flowed throughout the year.
81) Moyale District: good long rains fell which filled the pans, but the short rains failed.
82) Moyale District: long rains were good although they started late, resulting in a less severe dry season. The short rains were not heavy but were widespread. Grazing was excellent throughout

the year. The Debel area had poor rains however and poor grazing.
83) The Uaso Nyiro flowed all year but the rainfall average for 1931-1950 rainfall of 20" seems to indicate a change of climate for Isiolo.
84) Rains in the low country were excellent and well distributed; the rains on the Leroghi Plateau however were poor.
85) The northern part of the district enjoyed good grazing and plentiful surface water, although the short rains failed. The southern part of the district had exceptional long rains although the short rains were poor.
86) Moyale District: a disappointing year for the rains, which were sporadic, untimely and inadequate. Grazing in the first half of the year was 'fairly good' but 'partial failure' of both long and short rains led to arid conditions by the end of the year and an 'unhopeful' outlook.
87) Unseasonal rains: the short rains failed and there was little or no rain from July; grazing and water died out quickly. Moyale District: after a very dry, dry season there were excellent long rains. The short rains were again disappointing and everywhere was brown until the year's end.
88) Reasonable long rains and plenty of grass began the year but short rains failed. Moyale District: the long rains were well distributed and the short rains poorly so.
89) Little rain in the southern part of the district and conditions will get worse, 'and the rest of the district is in a perilous state'. (June 1961).

8. Human population

The first definitive census in Kenya was not taken until 1962. Prior to that time estimates of varying reliability were made by government officials and early travellers. Passing through a variety of locales in a relatively short period, these early travellers simply did not observe a large enough proportion of a particular society to make a valid estimate. Because the arbitrary estimates for their journals or sporting books are also

at such variance with each other, they are not included below.

One feature that always caught the attention of these early observers was the incidence of smallpox. Its effect on the populations of the region was probably greater than that of any other disease. Von Hohnel, the first observer of the region of Lake Stefanie, recorded smallpox among the Arbore people in the region with whom he said the Dasenech had therefore broken off all communication. This however could not have had the desired results, for when H.H. Austin visited the northern end of Lake Turkana in September 1898 he found the Dasenech starving and suffering from smallpox (it was the association of the disease with famine which was so often responsible for the spread of smallpox).

It is unlikely that the pastoral populations of the lake region had a high enough population density for smallpox to be maintained endemically. However, the evidence clearly suggests that epidemics frequently swept through the area. The Samburu, for example, record their suffering smallpox during each of three consecutive age-groups (each age-group being of 14 years' duration), beginning with the one initiated c.1865. The Rendille (whose age-groups are also of 14 years' duration) record its appearance in those age-groups initiated in 1867 and 1895. Especially devastating to the Rendille was the epidemic which struck the Irbangudo age-group just before the turn of the century. This particular outbreak must be viewed as more than a mere regulator of population; rather it totally altered the population structure of the Rendille.

Arkell-Hardwick in 1900 recorded women and children taking camels to water and there being too few even of them in some settlements to drive all the animals on the same day. The Rendille themselves remember this devastation as a time when all the warriors died and they had to seek the protection of the Samburu from raids. Medically the age-group of the warrior grade was the most vulnerable to epidemic disease, and what this degree of loss meant in terms of its effect on the future population structure of the Rendille would be of great interest. This requires the work

of a demographer.

The information in the following summaries, by society, has been collated from the various sources in the archival record. In some cases the figures cited are based upon what might be viewed as more accurate means of assessment, e.g., smallpox vaccinations, rather than mere 'guestimates'. When the method by which the estimates were made is known this is stated under the heading 'comment'; unfortunately this information is absent in most cases.

Human demography remains virtually unstudied in Kenya's north and is a topic which a human ecologist could very advantageously study in detail. With respect to population structure, no past data have been located to suggest a median or mean age, crude death rates or proportions of infant mortality, let alone fertility rates. The summaries of data from the archives are presented in the following pages on the assumption that such a detailed study will be undertaken.

The range of medical care introduced in this region during the colonial period was limited and usually instituted in conjunction with specific outbreaks of disease. In 1917, for example, the first widespread vaccinations for smallpox were done among the Samburu. Similarly in 1933 when an outbreak of smallpox was rumoured in Ethiopia some 1,000 people in and around Moyale were vaccinated. During 1934 when over 10,000 were vaccinated it was thought that 70% to 80% of Moyale District's entire population had been reached; the Administrative Police carried out vaccinations while on safari.

One disease that undoubtedly took a heavy toll of the pastoral population was influenza, which in 1937 was noted as 'becoming more common'. Although it was seldom responsible by itself for death, the weakened victim frequently succumbed to malaria or pneumonia, which were ultimately responsible for death.

Some medical attention was also available in the major government administrative centres, but this was not one of their specific tasks and they eagerly sought to entrust it to the care of missions. The disappointment of the official at Marsabit when

the Bible Churchman's Mission Society opened there without a doctor was only too clear. The only other source of medical attention seems to have been the distribution of sample drugs by government officers while on safari.

With independence and the lifting of the restrictions which had previously been imposed on northern Kenya as a 'closed' district, medical services through missions and government programmes were expanded. Although still limited, access to medical facilities and programmes intended to eradicate certain infectious diseases must have had a significant influence on the changing age structure of the population, considerably altering fertility and mortality rates, the past regulators of population.

Today migration as a regulator of demographic development also needs to be examined as it is likely that more out-migration from the area is occurring, e.g., adolescents with some schooling and warriors into service as house askaris. Also deserving of study is the effect of money possibly sent home by those employed to their herdsmen families.

8.1 Rendille population data

Year	Population counts	Comments
1909	1,687	Males only.
1910	-	A small society of only 21 villages.
1915	4,000	
1917	7,500	An estimated figure 'sympathetically' increased comparatively to correspond with the new Samburu total, derived from small-pox vaccinations done. Elsewhere recorded at 1,000 males.
1918	8-10,000	
1919	5,414	Based on a census estimate by section: 966 men, 1,371 women and 3,077 children. Influenza very bad in the region.

Year	Population counts	Comments
1920	5,474	Claimed to be based on 'a detailed census' by houses: 733 men, 1,371 women, 3,077 (or 60%) children.
1925	5-6,000	
1926	6,000	
1927	3,343	1927-1932 estimates based on a section-by-section count: 1,257 men, 832 women, 1,254 children (elsewhere the number is recorded as 7,320).
1928	4,635	1,285 men, 948 women, 1,402 children. (Elsewhere recorded as 4,109, also claimed to be based on a total count.)
1929	3,693	1,343 men, 948 women, 1,402 children. No census this year but a few adjustments made, principally in the males of Lengeli accounting for the slight increase. (Elsewhere 3,750.)
1930	4,963	1,313 men, 1,205 women, 2,418 children. (Elsewhere 4,964.)
1931	3,626	1,285 men, 651 women, 1,630 children.
1932	3,706	1,387 men, 689 women, 1,630 children. (Elsewhere 3,594.)
1933	4,125	
1934	5,318	A figure based upon smallpox vaccinations done, with 1,200 more Rendille being vaccinated than on the previous census. To the total, 5% was added for those who had either had smallpox, were not vaccinated or were newcomers. (Elsewhere 5,380.)
1935	6,164	An increase of 800 individuals resulting from 'a full and intense count this year'. (Elsewhere 6,172.)
1937	6,585	Influenza seems 'to be becoming more common' causing considerable suffering. Often combined with malaria or pneumonia, causing more deaths than anything else.

Year	Population counts	Comments
1938	6,613	
1939	6,713	
1940	6,911	
--		
1942	7,395	
1943	7,883	
1944	7,883	
--		
1946	8,074	No actual count since 1943; this is an estimate with appropriate increases.
1947	8,074	
--		
1949	8,000	
1951	3,500	There is no explanation for this but perhaps it is a male tax figure.
1952	9,500	
1953	9,500	
1954	10,504	
1955	10,504	
1956	15,534	(Elsewhere 15,320.)
1957	15,320	
1958	15,474	
1959	15,628	
1960	15,739	

8.2 Rendille census statistics

	1919				1927				1928				1930				1931				1932			
SECTION	M	W	C	T	M	W	C	T	M	W	C	T	M	W	C	T	M	W	C	T	M	W	C	T
Dibsahai-Tumul	88	117	329	534	58	35	58	151	58	35	56	149	-	-	-	-	-	-	-	-	-	-	-	-
Dibsahai-Burgarbo	48	81	245	374	82	80	102	264	81	81	101	263	206	152	398	756	214	112	381	707	203	103	289	622
Rungumo	60	90	202	352	104	52	46	202	128	57	101	286	95	95	175	365	86	40	86	212	115	37	108	260
Galdeilon	58	90	120	268	55	35	53	143	60	41	58	159	45	53	86	184	48	33	53	134	56	33	80	169
Dubscha	34	51	106	191	45	24	37	106	65	39	60	164	60	47	100	207	55	32	63	150	58	25	48	131
Saleh Lido	72	92	197	361	199	122	213	534	106	137	226	469	53	68	121	242	91	56	88	235	91	56	88	203
Saleh Nebei	46	44	118	208	46	28	24	98	85	36	32	153	56	40	88	184	46	29	43	118	54	29	73	156
Saleh Gobanaiyu	41	60	151	256	-	-	-	-	-	-	-	-	122	111	178	411	84	50	97	231	132	64	173	369
Uyam	21	22	55	98	35	25	33	93	41	27	33	101	38	25	61	124	40	23	53	116	40	20	51	111
Urarwein	26	35	62	123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nahagan	50	62	111	223	76	52	63	191	87	68	81	236	86	92	185	363	82	60	97	239	86	46	83	215
Matarbah	33	27	60	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Odela	17	21	24	62	17	10	17	44	21	13	22	56	12	13	33	58	20	12	23	55	21	10	20	51
Oware	68	86	212	366	95	53	106	254	92	54	105	251	53	57	117	227	69	34	65	168	78	35	80	193
Masula	38	37	53	128	44	41	52	137	54	49	60	163	51	47	80	178	51	34	47	132	53	30	56	139
Longeli	86	125	276	487	90	52	68	210	91	65	80	236	152	137	286	575	96	62	94	252	109	53	108	270
Lokumai	39	155	341	565	152	104	200	456	156	124	207	487	119	111	208	438	116	72	138	326	118	73	153	344
Ilduria	85	115	246	446	107	78	126	311	107	81	125	313	84	85	154	323	96	68	113	277	92	50	118	260
Lorogishu	56	61	165	282	52	41	57	150	53	41	55	149	81	82	148	311	91	62	121	274	72	39	102	213

M = men

W = women

C = children

T = total

Section	1933	1934	1935	1936	1937	-	1939
Dibsahai	607	898	953	956	986		973
Rungumo	255	513	493	497	532		548
Galdeilon	167	197	274	276	303		326
Dubscha	121	201	297	290	316		325
Saleh Lido	196	223	270	271	291		301
Saleh Nebei	152	212	247	246	268		297
Saleh Gobanaiyu	362	363	604	615	650		647
Uyam	109	155	206	229	249		252
Urarwin	-	-	-	-	-		-
Nahagan	201	432	493	495	515		542
Matarbah	-	-	-	-	-		-
Odela	47	108	97	98	119		131
Oware	190	290	319	318	338		349
Masula	132	197	276	270	290		277
Longeli	254	385	537	536	556		573
Lokumai	326	393	507	505	528		548
Ilduria	255	310	352	348	369		351
Lorogishu	207	307	247	250	275		291

8.3 Boran population data

Year	Society	NFD	Moyale	Marsabit	Isiolo	Comments
1915	Gabbra &					
	Borana	4,000				
--	Sakuye	2,000				
1917	Gabbra	7,000				
	Borana	5,000				
	Sakuye	6,000+				+must include Adjuran Somali which later lists separated.
--						
1919	Gabbra &					
	Borana				3,000	
1921	Gabbra		500			
--	Borana		5,000			
--	Sakuye		400			
1925	Gabbra		2,009	15,100		
	Borana		8,154			
	Sakuye		404			
1926	Gabbra	2,400		(10,000)+		+in the NFD total confusion over Borana and Gabbra designations must exist.
	Borana	21,050				
	Sakuye	400				
1927	Gabbra			19,200		
1928	Gabbra &					
	Borana			11,784[a]		[a] 'based on past counts'
	Gabbra		50[c]	5,489[b]		[b] a Gabbra-only total - see the attached details 'Gabbra census statistics
	Borana	2,000[c]		1,875(Hofteh)		
		300[c]				[c] estimates based on the count of settlements; previous estimates high.

Year	Society	NFD	Moyale	Marsabit	Isiolo	Comments
1929	Gabbra &					
	Borana			7,695+		+a figure based on a
	Gabbra		154	6,059		Gabbra census showing
	Borana		2,039	1,651 (H)		the previous estimate
	Sakuye		502			of 1,100 to be too high.
1930	Gabbra		302	3,989		Some children and
	Borana		1,025	1,413 (H)		warriors with
	Sakuye		400			herds not included.
1931	Gabbra		300	3,141		
	Borana		1,000	966 (H)		
	Sakuye		300			
1932	Gabbra			4,611		
	Borana			1,051 (H)		
	Boran -					
	Sakuye				1,937	
1933	Gabbra		401			
	Borana		1,010			
	Boran -					
	Sakuye				1,918	
	Sakuye		102			
1934	Gabbra &					
	Borana			7,826[a]		[a]based on smallpox
						vaccinations.
	Gabbra		402[b]			[b]claimed 10,704 small-
						pox vaccinations given;
	Borana		1,116[b]			only 1,672 represented
	Sakuye		154[b]			in these figures.
	Boran -					
	Sakuye				8,478[a]	
1935	Gabbra &					
	Borana			8,786		
	Gabbra		452			
	Borana		1,227			
	Sakuye		163			

Year	Society	NFD	Moyale	Marsabit	Isiolo	Comments
1936	Gabbra & Borana			9,015		
1937	Gabbra & Borana			9,072		
	Gabbra		505			
	Borana		2,346		13,174+	+based on a detailed count by headman.
1938	Gabbra & Borana			8,756		
	Gabbra		505			
	Borana		1,464			
	Sakuye		404			
	Boran - Sakuye				13,461	
1939	Gabbra & Boran			7,988		
	Gabbra		407			
	Borana		1,060			
	Sakuye		404			
	Boran - Sakuye				14,142	
1940	Gabbra & Borana			9,513		
1942	Gabbra			5,637+		+based on a new population census.
	Borana			1,764		
1943	Gabbra			4,805		
	Borana			2,108		
1946	Gabbra & Borana			5,997		
1949	Gabbra		23	4,000+		+the year's Handing Over Report listed 5,000 Gabbra and 2,000 Borana
	Borana		5,073	1,500		
	Sakuye		612			

Year	Society	NFD	Moyale	Marsabit	Isiolo	Comments
1951	Gabbra		45[b]	6,000[a]		[a]total Gabbra in
	Borana		3,505[b]	1,500[c]		British territory not
	Sakuye		877[b]			more than 6,000.
						[b]taken from the tax
						record - suspect an
						underestimate.
						[c]Boran on Marsabit
						Mountain do not
						exceed 1,500.
1952	Gabbra &					
	Borana			6,500		
	Gabbra		45			
	Borana		3,539			
	Sakuye		888			
1953	Gabbra &					
	Borana			6,500		
	Gabbra		33			
	Borana		3,759[+]			[+]'Tax relates little to
	Sakuye		913			actual heads of homes.'
	Boran &					
	Sakuye				13,000	
1954	Gabbra &					
	Borana			9,408		
	Gabbra		160			
	Borana		5,800			
	Sakuye		913			
	Boran &					
	Sakuye				11,072	
1955	Gabbra &					
	Borana			',408		
	Gabbra		36			
	Borana		2,334			
	Sakuye		1,763			
	Boran &					
	Sakuye				11,072	

Year	Society	NFD	Moyale	Marsabit	Isiolo	Comments
1956	Gabbra		36	12,648		
	Borana		2,334	1,763	7,184	
	Sakuye		1,763		3,888	
1957	Gabbra		33[a]	11,806		[a]elsewhere - 160
	Borana		3,299[b]	3,672	12,000	[b]elsewhere - 58,000
	Sakuye		1,206[c]		3,000	[c]elsewhere - 1,913
1958	Gabbra		160[+]	11,924		[+]Moyale District
	Borana		-	3,709	12,000	population oscillates
	Sakuye		1,913		3,000	between 9,300 and 18,000
						depending on grazing
						and water.
1959	Gabbra		- [+]	12,044		[+]the population of
	Borana		-	3,739	12,200	Moyale District fell to
	Sakuye		-		3,150	7,000 in March, but
						probably 13,000-14,000
						in November with grazing.
1960	Gabbra		-	12,123		
	Borana		5,257	2,893		
	Sakuye		2,002			
	Boran -					
	Sakuye				19,000	

8.4 Gabbra census statistics

Year		Men	Women	Children	Total
1928	Algana	816 (25.1%)	700 (21.6%)	1,732 (53.3%)	3,248
	Golbo	330 (26.0%)	280 (22.0%)	660 (52.0%)	1,270
	Gara	275 (26.5%)	200 (20.6%)	514 (53.0%)	971
	'Hofteh'	500 (26.7%)	375 (20.0%)	1,000 (53.3%)	1,875
1929	Algana	1,118 (33.7%)	733 (22.1%)	1,468 (44.2%)	3,319
	Golbo	492 (33.0%)	333 (22.4%)	665 (44.6%)	1,490
	Gara	341 (27.3%)	334 (26.7%)	575 (46.0%)	1,250
	'Hofteh'	503 (30.5%)	410 (24.8%)	738 (44.7%)	1,651
1930	Algana	685 (31.9%)	513 (23.9%)	948 (44.2%)	2,146
	Golbo	342 (27.8%)	311 (25.3%)	576 (46.9%)	1,229
	Gara	169 (27.5%)	154 (25.1%)	291 (47.4%)	614
	'Hofteh'	349 (24.7%)	418 (29.6%)	646 (45.7%)	1,413
1931	Algana	687 (35.8%)	450 (23.5%)	780 (40.7%)	1,917
	Golbo	253 (36.4%)	165 (23.3%)	280 (40.3%)	695
	Gara	179 (33.8%)	113 (21.4%)	237 (44.8%)	529
	'Hofteh'	305 (31.6%)	268 (27.7%)	393 (40.7%)	966
1932	Algana	1,019 (39.0%)	566 (21.7%)	1,027 (39.3%)	2,612
	Golbo	450 (39.0%)	278 (24.1%)	427 (36.9%)	1,155
	Gara	305 (36.1%)	175 (20.7%)	364 (43.1%)	844
	'Hofteh'	348 (33.1%)	260 (24.7%)	443 (42.1%)	1,051

By sections:

Year	Algana	Golbo	Gara
1928	3,248 (59.2%)	1,270 (23.1%)	971 (17.7%)
1929	3,319 (54.8%)	1,490 (24.6%)	1,250 (20.6%)
1930	2,146 (53.8%)	1,229 (30.8%)	614 (15.4%)
1931	1,917 (61.0%)	695 (22.1%)	529 (16.8%)
1932	2,612 (56.6%)	1,155 (25.1%)	844 (18.3%)
1928-1932	(56.9%)	(25.1%)	(18.1%)

8.5 Boran census statistics (Isiolo District)

		1937			1938			1939		
Section	Headman	Men	Women	Children	Men	Women	Children	Men	Women	Children
Sabo-Borana	Fai Halake	641	1,000	1,072	1,431	987	1,943	1,471	1,143	1,912
Sabo-Borana	Abdub Mulu	340	319	800	831	612	978	833	739	1,184
Sabo-Borana	Galma Dida	100	118	516	230	120	180	240	133	202
Gabbra	Buna Jaldesa	233	271	196	233	121	240	250	140	249
Gona-Borana	Kotute Haka	969	566	883	211	141	215	213	145	234
Watta	Racha Jarso	100	112	174	100	112	251	105	122	285
Sakuye	Huka Reba	836	909	1,408	858	821	1,349	863	819	1,343
Sakuye	Guyo Jahotani	264	303	333	272	255	337	276	215	337
Sakuye	Fugicha Dida	240	200	271	209	172	292	227	172	292
Sabo-Borana	Fai Halake	23.5%	37%	39.5%	33%	23%	44%	33%	25%	42%
Sabo-Borana	Abdub Mulu	23%	22%	55%	34%	25%	40%	30%	27%	43%
Sabo-Borana	Galma Dida	14%	16%	70%	43%	23%	34%	42%	23%	35%
Gabbra	Buna Jaldesa	33%	39%	28%	39%	20%	40%	39%	22%	39%
Gona-Borana	Kotute Haka	40%	23%	37%	37%	25%	38%	36%	24.5%	39.5%
Watta	Racha Jarso	26%	29%	45%	22%	24%	54%	20.5%	24%	55.5%
Sakuye	Huka Reba	26%	29%	45%	27%	26%	47%	29%	27%	44%
Sakuye	Guyo Jahtani	29%	34%	37%	31%	30%	39%	33%	26%	41%
Sakuye	Fugicha Dida	34%	28%	38%	31%	26%	43%	33%	25%	42%
		27.7%	28.5%	43.8%	33.1%	24.7%	42.2%	31.6%	25.6%	42.7%

8.6 Samburu population data

Year	Population in figures	Comments
1915 -- 1917	5,000 10,000	'a rough estimate.' estimate was based on smallpox vaccinations given, the population obviously having been underestimated in the past.
1919	8,000-10,000	3% died of influenza during the year.
-- 1921	10,000	
1922	10,000	this is the number of Samburu inhabiting Samburu District, the bulk living in 80 settlements. The Masula make up about half the total population, while the smallest section, the Nyaberai, live in only two small settlements. All other sections are about equal in size.
-- 1925	(1,261 stock owners)	
1926	8,500	
-- 1928		285 Samburu in Marsabit District.
1929		289 Samburu in Marsabit District.
-- 1931	8,956	no accurate population for the district has yet been compiled. This figure is computed by actual tax collected (from the Samburu 2,239 head) adding 20% for those evading or over-age. Allow that this is then 30% of the total Samburu population, and of the remaining 70% assume 45% are women (2,977) and 55% children (3,292) since in the main the societies are healthy and increasing. From this method, however, it is concluded that the totals for the Boran and Sakuye were 30% off the real mark - 'admittedly pure guess'.
1932	9,286	

Year	Population in figures	Comments
1933	9,645	
1934	12,000	estimate based on 3,000 taxpayers.
1935		while on safari a probable three-
		quarters of the Samburu manyattas
--		(a total of 230) were visited.
--		
1938	18,816	

8.7 Samburu census statistics

Census of Samburu in Marsabit District:

Year	Men	Women	Children	Total
1927	115 (35%)	78 (24%)	129 (40%)	322
1928	104 (36%)	70 (25%)	111 (39%)	285
1929		No census		
1930	105 (30%)	80 (22%)	172 (48%)	357
1931	83 (28%)	68 (23%)	143 (49%)	294
1932	189 (25%)	167 (22%)	400 (53%)	756

1928 census of Samburu stock and people on the Leroghi Plateau:

Stock owners	1,027	(15.62%)
Moran	763	(11.61%)
Women	1,681	(25.57%)
Boys	1,563	(23.78%)
Girls	1,540	(23.43%)
Total	6,574	

Cattle	62,314	per owner: 60.68	per person: 9.5
Small stock	49,126	per owner: 47.83	per person: 7.5
Donkeys	3,318	per owner: 3.23	per person: 0.5
Camels	189	per owner: 0.18	per person: 0.03

8.8 Education and missions

1931 Mission (Bible Churchman's Mission Society) began at Marsabit. No doctor as had been hoped but a chemist to arrive soon. Missionary is A. B. Burton.

1933 The Mission has made no headway with the Boran or Rendille; the majority are Burji.

There are no missions in Isiolo District although two missionaries from Marsabit established a temporary camp at Wamba in March. This was closed in September when the Samburu moved off in search of grazing due to the drought.

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1938 The only district school is at Marsabit run by the Mission. At the end of the year 32 boys and girls in the register and 21 at the Boma school. Last year five passed the 'Diocesan Elementary Examination' and one is in training now as a teacher.

1939 The Mission-run school has 40% Boran and the rest Burji and Somali. The Mission obtained a lorry and made an evangelical safari among the Rendille but the activity was curtailed by the circumstances created by the war with Italy.

1940 The Mission was abandoned by Europeans 12 July and the military occupied the buildings.

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1945 The Mission remained unsupervised and a single teacher offered only substandard education.

1946 A small boarding school for 11 Rendille children was set up with a Maasai teacher. Reading, writing and Swahili is taught at a school for tribal police.

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1948 The Mission has 56 students in Standards I to IV; taught in Borana and English. The Rendille Local Native Council School established in 1946 now has 12 pupils in Standards II and III.

1950 The Mission School has about 45 students in Standards I to IV. The Rendille LNC is boarding approximately 30 Rendille children.

1951 The Rendille LNC voted itself out of existence at the Provincial Commissioner's recommendation. They only ran the Rendille LNC school for 20 (mostly councillors' offspring) and the government has agreed to take the school over. The school's £400 operating costs exceed the entire current revenue.

9. Offtake and marketing in historical perspective

Crucial to a full understanding of the data being collected on stock populations, herd structure, natural increases, and general animal health by the various IPAL experts are quantified data on the number and type of beasts being taken off the land annually. The historian's perspective on this is generally limited by the infrequent inclusion of quantified material in the written record and its absence in the oral record. When such material is available it is seldom of the type that will allow comparative analysis. This is not to dismiss the problem as impossible, but only to point out the difficulties.

In the past offtake occurred as a result of disease, home consumption, ritual slaughter, taxation and trade (broadly used to include marketing). The effects of disease are dealt with in a separate section. The meat consumption habits of the pastoralists require detailed study by a human ecologist. Some evidence does exist in the statistics regarding the export of hides and skins, but this information is far from complete. The difference between dry season and wet season consumption will also need to be noted and analysed. For example, among the Dasenech the men control the primary food source, livestock, during 'the months of hunger' when the rule which forbids the drinking of milk for two days after consuming roast meat is strictly enforced. And since most ritual slaughter, in which meat is almost always roasted and men are the major participants, occurs in the dry season, this has the effect of reserving the limited amount of milk available during this period for the women and children. As indicated above, often

intricately linked with meat consumption is ritual slaughter which will similarly require the detailed attention of a human ecologist. The effects of *sorio*, age-set ceremonies, and numerous other ritual practices need to be quantified.

Although the people within the IPAL study area do not possess a ritual similar to the Dasenech *dimi*, that ritual reflects one way in which pastoralists, confined to a very limited range of pasture, cope with their herds' natural increase.

The *dimi* ritual is an annual occurrence in which one anthropologist calculated the slaughter of beasts to be 2.5% of the society's entire holdings (Almagor, 1978). In the height of the dry season and for a period of six weeks, the men participating gather with their families in a settlement established especially for the ritual. During this six weeks each participant slaughters on an average nine to ten head of cattle, two of which are heifers, and approximately 30 head of small stock, of which four are ewes. Each section conducts its own *dimi*. Two have been observed. The one observed on the west bank of the Omo River in 1969 had 132 participants and the one on the east bank of the Omo, observed in 1977, involved approximately 40 men. If together these represent an average number of participants for each year (and the suggestion is that the number in 1969 was small) the participating men would slaughter some 1,700 head of cattle and over 5,000 small stock annually. The last three days of the dimi, in which a majority of the stock is slaughtered and eaten, can only be described as a meat orgy. The fact that the Samburu, Rendille, Gabbra, and Turkana do not have a massive ritual slaughter of this type suggests that, unlike the Dasenech, they were never limited in the pre-colonial period to a rigidly confined region which required this level of offtake.

The two areas of offtake where the historian can offer some insights are those of taxation and trade. In these areas policies are recorded, regulations stated, and development concerns noted.

In May 1909 the decision was made to 'effectively occupy' the Northern Frontier District of British East Africa. As described by G. F. Archer (1913), who became the first administrator at

Marsabit immediately following this decision, the reasons for the occupation were twofold:

> Firstly, raids into British territory by lawless bands of Abyssinians had been of frequent occurrence, and tribes living within our sphere had claimed our protection. Secondly, it was hoped that there was some commercial benefit to the Protectorate to be derived by the opening up of trade routes with the southern provinces of Abyssinia, which were reported to be rich in hides, gums, indigenous rubber, coffee and livestock.

Taking over the Boma Trading Company's buildings on the Crater Lake as their station, the government instituted a policy of working through local chiefs (who do not exist in egalitarian societies such as occupy all of northern Kenya), to strengthen and protect those people friendly towards the government, of watching the Ethiopians to prevent raids into British territory, and of stopping the loss of life and of stock, and the shooting of elephants so as to have the basis of revenue and trade. Soon, however, these humanitarian and financially based notions gave way to the more mundane and practical tasks of insuring the continued existence of the government posts in the north.

For these early years of administration in the north, the instructions provided to the District Commissioner at Marsabit in 1916 (a district limited to roughly a 60-mile radius of the station), sum up the government's approach to the area: '...your work at Marsabit can hardly be described as administration. Your whole attention must be devoted for the present to two objectives - keeping the requirements of other stations going in meat and transport'. To accomplish these two objectives, a 'tribute of stock and a levy on camels' was instituted.

Initially tribute was demanded only of the Rendille, principally because they were the most readily accessible people, living around Marsabit and along the track to Archer's Post to the south. In 1910, a tribute from the Rendille of 500 camels, considered to be at the rate of one camel for every three houses, was suggested. The Rendille soon complained that they were paying tribute while

no one else was. In 1911 it was recorded that not one settlement remained in the neighbourhood of the Marsabit - Archer's Post track.

In the 1913-1914 administrative year a tax was for the first time levied on the Samburu. The rate of tax being paid remained ambiguous, e.g., the Rendille that year paid 20 camels outright and loaned to the government 485 loading camels, an amount deemed to be 4% of their capital stock. 1914-1915 saw the institution of a tax assessed at the rate of 1½% of both large and small stock. This was declared a tax the Rendille 'could easily afford', and it would seem a figure below the rate of natural increases. This tax with respect to camels was soon construed as a 'levy' for transport stock only with 2,033 and 2,176 head of small stock being paid in tax in 1915 and 1916 respectively (at 1½% this implies the Rendille held at least 135,000 head of small stock in 1915).

Camels were hired on a monthly basis with the levy ostensibly distributed evenly among the various Rendille clans and the three principal Gabbra sections. Camels thus hired did not constitute an offtake of stock from the district, although some did die. Rather, the major effect of this levy seems to have been on the herd structure and specifically to reduce the number of beasts trained as loading stock.

Whereas today a shortage of loading camels is said to hinder the ability of the Rendille to change locations, the elders almost unanimously state that when they were children the Rendille had sufficient loading beasts. An easy conclusion would suggest that the Rendille are simply too lazy to train camels to carry loads; however, I would suggest that their reluctance to train animals is a learned response retained from this early colonial period.

The Rendille were never in possession of numerous loading camels, merely a sufficient number to meet their requirements. The transport requirements of the government on the other hand must have appeared limitless to the Rendille. As early as 1910 an official observed that few animals were broken for carrying loads (and yet the Rendille were shifting over far greater distances than they do now). Thus the numerous recorded instances of poor

quality beasts being sent in on the levy and never voluntarily suggest a natural human response of retaining the better animals for their own loading purposes. And although those 'hired' loading camels were returned to their original owner the numerous occasions on which the administration returned these camels in poor and unhealthy conditions are equally recorded. The insufficient number of camels levied over the years until at least 1930 coupled with their poor condition when returned seem to have resulted in the Rendille training even fewer loading animals: a mild form of passive resistance to a heavy-handed colonial policy.

In 1916 the continued influx of Boran speakers led to the Gabbra of Marsabit District being taxed on the same basis as the Samburu and Rendille: 1½% of their sheep and goats. Previously this had been avoided, 'on account of this difficulty of distinguishing indigenous British subjects from fugitives from Abyssinia, who are not to be taxed' by levying a tribute of 30 head of cattle and 50 head of small stock per section of Gabbra, Borana, Sakuye and Adjuran. Undoubtedly this earlier tribute had little effect on stock offtake. All the three main sections of the Gabbra contributed a total of 90 cattle and 150 small stock, and this probably came only from those settlements that clung to the Marsabit - Moyale road. In 1918, the Borana on Marsabit Mountain, an untaxed element in the north, began nominal payments of 10 head of cattle although their total stock holdings were estimated at 10,000 head. As late as 1921 the two richest elements in the Northern Frontier District, the Somali and Gurre, still paid no tax.

With the administrative takeover by the military in 1921 the dominant discussion with respect to tribute centred on what the various societies could afford to pay. The Samburu and Rendille were seen as quite capable of 'contributing 3% of their stock to Revenue'. Similarly the Gabbra tribute of 50 oxen in 1922 was seen as too low when the minimum stock count recorded was 10,000 beasts. The arbitrary figure suggested was 200 head of cattle and 1,000 goats and sheep. No evidence exists to suggest that natural increase, overstocking or understocking were ever considered in these discussions. Stock was simply viewed as a potential source of

revenue to the country; whether the north could pay for itself or show a profit was always a major concern of the government.

Despite the varying amounts which these bases of tribute suggest as stock offtake, they were often not paid annually. The Samburu had their tax remitted in 1915 because of losses they had suffered in raids and it was not collected again until 1921. The 1918-1919 tax at Moyale was remitted to the various people of the area because of raids they suffered from across the border, 'protection from which they are entitled to expect if they pay Tribute, and no protection whatever was afforded them'. In 1923 the military continued this practice of remitting tribute in view of the widespread bovine pleural pneumonia (BPP) epizootic, although they then considered it equitable that free camel transport be provided instead.

In 1924 it was discovered that the paying of tribute was illegal according to British law even though the colony's treasury accepted it as a form of revenue. The point was questioned but remained unanswered, so as far as the military was concerned - 'illegal or not it continues'.

The tribute system of taxation continued until 1928 when a census was completed which allowed the entire tax system to be altered to one of cash; 20/- per poll was paid. And from 1 January 1931 a tax of 10/- was imposed on everyone. The encouragement of trading stock down-country had introduced the element of cash in the north, and the beginnings of vehicular traffic on the Marsabit Road in 1927 significantly decreased the need for camel transport; there was the basis for a cash economy.

Although the significant change of introducing the framework for a cash economy had been accomplished, the Provincial Commissioner of the NFD constrained in 1926 to conclude that the Rendille had now been under 18 years of administration and still showed 'no sign toward progress' nor had they made attempts to market or trade their stock. In the past trade routes (long distance) had existed in these northern areas, principally via Meru to the south, via Moyale into Ethipia, and across through Wajir to Somalia. The amount of stock being removed from the district by itinerant

traders along these routes is problematical. The trade via Meru out of the district was chiefly in hides and skins although the Samburu were known to drive their own stock to this market. Eventually this trade shifted to Nyeri with the opening of a stock market there. Through the mid-twenties, after which small stock and hides and skins became dominant, Moyale was a significant point for the export of cattle; horses and mules. Some details exist of official figures recorded from stock passes issued at Moyale, but these cannot possibly represent more than the minimum figure and nothing comparable exists for Meru or Wajir. The trade to Somalia primarily represented one of small stock for cattle (35 to 55 head for a heifer in 1912) and cloth.

While there was also localized trade between individuals and small parties of neighbouring societies which supplied the herdsman's requirements in metalware, beads and agricultural products (grain, tobacco, coffee, salt, etc.) it was the barter trade of small stock for cattle that occupied the attention of the administration. It was felt that there was not much demand for cattle and the number disposed of had no effect on the grass and water in the area. The administration's concern was with the number of local traders, who were allowed to operate freely without a licence, and with 'the subsequent decrease in the sheep and goats, which are limited and which are needed in the district itself for Government supplies and for increase'. The accumulation of cattle was seen as having little to do with 'potential wealth' for the Protectorate 'and what is wanted is the increase of demand for goods amongst the nomadic tribes'.

To increase this demand shops were opened, the first two in Marsabit in 1920. By 1922 it had been concluded that the number of local traders was considerably more than originally thought, and that they were undermining the operation of the shops by returning from the market at Nyeri with cheaply obtained cloth, coffee, tea and sugar for barter. In the same year what little trade did exist in cattle was brought to an abrupt standstill when BPP swept through the north and the entire province was quarantined and the cattle market closed. As the disease spread all movement

of stock and trade was forbidden. The situation lasted until November 1927 by which time the disease was long gone and the whole district was 'entirely given over to breeding stock'.

The livestock trade remained the domain of itinerant Somali traders until, in 1927, in an attempt to reverse this situation and also provide the government with greater control, trading centres were established and opened at Kalacha (14 plots) and Koiya (13 plots). Low prices for hides made down-country transport uneconomical and by 1929 Kalacha was closed down. Trade also remained slack in years of good rain as the principal item of trade, maize meal, was not required by the herdsman who had no incentive to sell. The reverse situation occurred in 1928 when famine struck Meru and in 1929 when the repercussions were felt in the Kikuyu area; no purchase power existed in these two main markets to buy the small stock of northern Kenya.

In 1930 the Marsabit administration instituted an abrupt change by eliminating all 'hawkers' licences, 'the policy being to encourage cash trade in the district by the most practical means possible, that of putting a stop to barter'. By May of 1931, however, the policy was reversed, a revival of barter was allowed, and increased small stock export resulted. In 1934, itinerant traders were barred from the northern frontier areas as part of the continuing broad policy to hold the Gabbra and Borana herdsmen in Kenya and away from the Ethiopian border. 'This probably restricts trade to a certain extent but is more than compensated by a greater number of tribesmen visiting the police at Kalacha.'

In the same year it was declared exceedingly difficult to establish any kind of permanent trading centres at Rendille waterholes since it often happened that a waterhole that was very popular one year was thereafter completely deserted for many months at a time. Trading centres and increased demand for commercial goods and products were not making great progress.

By 1935 two trading centres seemed fairly well established; one revolved around Laisamis and the second around the Kalacha - North Horr - Hurran Hura area. A third centre in the Horr Valley at Andere had its permission to trade withdrawn since it was in

Maralal District and the District Commissioner in Maralal objected to it, although on what grounds is unclear. To replace it a new centre was created at Kargi, but by 1938 Laisamis and North Horr remained the only active centres, trade primarily being livestock for tobacco, coffee and cloth.

The Boran themselves began to enter the small stock trade in 1936, posing as rivals to the itinerant Somali traders. This was a direct result of the institution of controlled prices at Nyeri and the preference of the Boran for taking their own stock there in order to obtain the higher price. In June all the Somali stock traders were ordered out of Marsabit District and even those few allowed back to trade in camels for small stock were finally closed out in 1941 in order 'to conserve the meat supply'. Throughout this period the high prices sought by the local herdsmen for their small stock did not serve to encourage trade and by 1937 only three shops each remained open at North Horr and Laisamis; the centres at Koiya, Kargi, Kalacha and Hurran Hura were all closed.

In 1934 rinderpest had reappeared and spread throughout the north. A massive vaccination programme was instituted, but only in Samburu District where settler pressure, based on fear of the disease spreading, influenced the government. Although 96,000 head of cattle were vaccinated for BPP and 50,000 for rinderpest, the District Commissioner expressed the irony of the situation when he commented that these measures were useless unless an outlet and market could be found for the increase they would cause.

The trade in cattle, however, continued to lag and received little attention. In 1939, for example, cattle sales in Samburu were described as 'unsuccessful' because of drastically fluctuating prices for beasts of the same size and quality. The Samburu were left baffled by this situation, yet no attempts were made to explain the sole agent's price schedule. In the event, more cattle were bought and exported than in 1938, but the return to the Samburu was only half of the 1938 price.

During the war years an 'Exchange Supply Board' came into existence, apparently in order to ensure the supply of meat to the

army. The available figures suggest that a moderate increase in offtake occurred, but primarily in small stock. In 1944 the government decided that the Rendille, who had only five or six men in the army, had done little for the 'war effort' and would therefore be required to increase the stock they provided for slaughter, including camels. There was 'strong opposition' to this by the Rendille and three months later the government-appointed chief, Ejerre, was sent off to Garissa into exile for his 'duplicity' in outwardly supporting the government position while being the backbone for the Rendille resistance (precisely what form this opposition took is unclear but further investigation might be profitable if any notions of enforced 'proposals' are to be considered in the future).

In the immediate post-war years a number of types of stock auctions were tried with the Somali stock traders as the principal pawns. In 1946 auctions were held in locations said to be convenient to the people: North Horr, Laisamis, Kargi, and Marsabit. The Somali stock traders who purchased at these auctions for resale to the Meat Marketing Board (MMB) at Isiolo were encouraged to create a fair-like atmosphere in which the money the herdsmen received from selling their stock could be immediately used to purchase tea, cloth, sugar, tobacco and maize meal. In the same year a first effort was made to organize at Banya a small market at which the Dasenech were encouraged to sell their excess millet (to make available to the northern Boran the cereal food needed) and in exchange buy blankets, tobacco and coffee.

The stock-fair auctions proved quite successful but ground to a halt when in August 1947 the MMB, motivated by better prices and in the hope of providing a check on the illegal small stock trade going to the Meru and Kikuyu reserves, decided to purchase directly from the local population themselves. The itinerant traders were once again restricted from participating in what was quite clearly becoming a lucrative trade, yet they were still encouraged to attend the MMB sales to sell cloth, tea, sugar, etc. (where the government still came to collect the herdsmen's tax payments). The dichotomy between the auctions at which the MMB's only interest was purchasing

livestock and the 'fairs' at which the traders integrated the buying and selling of livestock and goods, thus encouraging the herdsmen to sell, would have been greater were it not for the severe shortage of meat that developed down-country in 1949. This shortage was reflected in the high prices the MMB was willing to pay that year, and resulted, not surprisingly, in the highest sheep and goat export ever recorded from the north: 33,274 at an average price of 8/- per head.

In the same year of peak export, it was stated by a Marsabit official that the Rendille, Gabbra, and what he called the 'Chalbi' Boran could 'well afford' to export annually 15,000, 8,000 and 1,000 head of small stock respectively and 100 head of cattle each, thereby obtaining adequate funds for their necessary purchases and tax payments. It does not appear, however, that these figures were ever reached again (it seems likely that in 1949 they were, although no breakdown of the sale distribution for that year exists) until the late 1950's or early 1960's. The question is, why?

The notion of a cash-based economy had slowly been taking hold in the north and small stock were more and more readily being brought in for sale. The value of cash and the desirability of having it were reflected in the number of shops which could now successfully operate, and in the Gabbra and Borana preferences for using the higher-paying Garba Tula facility. 21 shops were now operating in Marsabit District in 1949 (15 at Marsabit itself including a tailor and two posho mills, three at North Horr, two at Laisamis and one at Kargi), a significant increase over past years.

In 1951, aware that the trading facility at Garba Tula paid an average of 15/- per head for small stock as opposed to the 12/50 offered at sales and by the now renamed Kenya Meat Commission, the Gabbra and Borana demanded, and were granted, permission to drive their stock there themselves to obtain the higher price.

These higher prices, however, were not maintained and the MMB lost interest in operating its own auctions. In 1950 the Somali traders were once again involved, this time through stock-trading licences. Offered initially for Kargi and Marsabit, and later

Maikona and North Horr, these licences obtained stock which was resold at Laisamis to the MMB and later to the KMC at Isiolo (the MMB served as the sole authorized stock agents to purchase from the Rendille at Laisamis).

By 1953 the Gabbra only exported 13,828 head of small stock and the Rendille 4,268; the average price had fallen to 10/81 and 10/16 respectively. The 100 head of Gabbra cattle and the 80 head of Rendille cattle only earned an average of 95/- and 83/- respectively, or around eight times the value of a sheep or goat. This was surely far below the economic value a herdsman placed on his ox, irrespective of the social or cultural value he might attribute to such a beast. In the peak export year of 1949 it was said only 317 head of cattle had been brought in for sale because of continued opposition by the herdsmen to selling cattle or camels. However, it seems that the opposition was based rather on economic reality, and that the prices offered were simply too low.

The most complete figures available for the export of livestock are from 1959 for live beasts and 1960 for hides and skins (see page 178). Together these offer a representative account of stock export from the Northern Frontier Province just prior to Independence, although a certain amount of 'illegal' trade must still have existed, especially eastwards towards Somalia. The methods employed at this time involved 30 local stock traders who bought at local sales organized by the District Commissioner (through whose presence it was felt the local herdsmen received a fair price).

The DC supervised the sales, the stock traders bid, a fair price was agreed, the trader paid the DC, the DC paid the local herdsman, and an administrative policeman escorted the herdsman to a tax collector where he paid his *kodi* or tax. 'Works well and satisfied locals' was the comment on this system in 1960. In 1961 the same stock trading method was characterized by the new DC as 'hit and miss' and in need of 'drastic revision' because the KMC did not make direct payments and had to 'muddle along on 30 very incompetent local traders'. The new DC tried direct buying schemes in the same year and describes them as having had 'excellent results'. Thus at the end of the colonial period no standardized

marketing scheme yet existed in the north, only the continued introduction of oft-repeated earlier attempts.

Given this background, it seems inappropriate to refer to the opposition of herdsmen to selling their livestock and to suggest this is due to their misguided love of these beasts. A more realistic conclusion would be to lay the criticism for the failure of an effective marketing system clearly at the feet of the bureaucrats who, as they were transferred, changed the methods by which the market was to operate. Had the herdsmen been offered fair prices as in 1949 (or as periodically occurs today) they would have sold their stock.

A considerably more accurate picture of the quantity of stock traded and exported from the various districts in northern Kenya could be drawn if more time was available and this was a specific project in itself. The widely varying statistics found in the various administrative archival records would need to be assembled; as noted in the section on methodology, this is no easy task. These statistics would include the number of monthly safaris to the small stock market at Nyeri, figures on meat supply to the various government stations, and diffuse information on the early export of hides and skins. The quantity of cloth imported to the various districts, if the exchange rate was known (probably quite easily verified from oral sources), could serve as yet another indicator of stock trade levels.

The material available in the National Archives excludes other possible sources as yet unexplored. These might include archives of the Veterinary Department and the predecessors of the Kenya Meat Commission. The most elusive and largely unknown data are those of exports either by local herdsmen themselves to other market places, or by itinerant traders. This information would have to be sought from oral sources.

Livestock export figures for 1959

District	Sheep and goats	Slaughter cattle	Mature steers	Heifers	Camels
Marsabit	40,727	1,724	-	-	-
Isiolo	26,519	3,179(S)			28
		3,738(B)	1,510(B)	97(B)	
Moyale	3,886	2,477	646	541	-

Livestock product export figures for 1960

District	Sheep skins		Goat skins		Cattle hides		Camel hides
	sd	gd	sd	gd	sd	gd	
Marsabit	49,655	-	32,819	-	648	3	8
Isiolo	148,027	804	83,307	413	3,865	1,098	-
Moyale	44,481	-	52,263	-	2,002	-	3,078

S = Sakuye

B = Boran

sd = suspension dried

gd = ground dried

9.1 Livestock

The following is oversimplified but it contains a grain of truth: 'It is the old story of the vicious circle. The natives amass stock until the country will no longer carry it, a period of drought or disease occurs, heavy losses are incurred and the process of amassing stock again commences.' So summarized a provincial administrator in 1928. In its simplicity this adaptation worked, and some animals survived from which herds could be rebuilt. Similarly, the lives of the herdsman and his family 'insured' their survival as for example in 1938 when the rains failed and all the northern societies suffered heavy losses; 'but happily all the locals are wealthy in livestock and the death of a proportion of their stock did not result in any loss of human life nor serious suffering to human life.'

The effects of natural environmental crises, as well as those of raiding, but the latter to a far less significant degree, acted as impediments to unlimited growth. The effect on the environment was to allow the recovery of overutilized pasture in preparation for a renewed expansion following a return to more normal conditions. The concomitant effects of increased herds on existing pastures are clear. Unchecked growth led to the need for increased grazing and to stabilizing effects which could include among other things long distance moves to rarely used pasture or hostilities with neighbouring societies to gain effective use of new pastures.

Unfortunately, the early administration only saw the pastoralists' adaptation to an ever-changing environment in terms of the 'vicious circle' argument and failed to comprehend that adjustments in patterns of movement, shifting emphasis to particular animal types, and supplemental products from non-pastoral activities also played a large part in correcting the imbalances produced by drought and disease. With various limitations placed on their traditional flexibility and the subsequent introduction of various veterinary services, the pastoralists were forced more and more into an existence which in the end was the image of the administrator's 'vicious circle' stereotype.

Veterinary services, initially in the form of inoculations, were introduced in Samburu District in 1925 when both the Samburu and Turkana suffered heavy losses from bovine pleural pneumonia (BPP). The prime motivation was not, however, the saving of the animals, although this played a part as hopes of a profitable market for revenue still existed, but rather the fear that the epizootic might spread to the white settler farms to the south. The Leroghi area continued to receive the most extensive coverage by inoculations; again in 1935 with a vaccination campaign against BPP and rinderpest; and in 1942 with universal compulsory inoculation on Leroghi and non-compulsory inoculation in the surrounding low country for both BPP and rinderpest. The 1935 campaign however already drew criticism that it was a useless exercise unless outlets and markets could be developed, and affirmed an opinion advanced by the DC in Marsabit in 1934 that if there was no stock disease the district would become overstocked.

With anthrax among the camels of the Rendille and Gabbra in 1949, the extreme position of encouraging disease was being expounded by officials: 'But my own feeling is that the Rendille own far too many camels anyhow, and that a bit of disease now and then is to be encouraged in their stock provided it doesn't reach epidemic form'.

Having placed limitations on the herdsman's movements, and provided a veterinary service which assisted the herdsmen to add to their holdings by placing districts in quarantine, banning all movement of stock for long periods even after the disease had disappeared, and (less successfully) trying to develop new, improved breeding strains, the administration then failed in its feeble and haphazard attempts to provide outlets for the additional stock increases it had actively encouraged and indeed helped to create. Now the administration, when they began to reap the negative results of their unco-ordinated and unenlightened policies, asked the pastoralists to pay the cost by allowing their animals to die of disease. In 1951 this was precisely the policy adopted when the Provincial Commissioner of the NFD banned all inoculations.

Livestock censuses of various kinds were conducted (see the

tabulations below) but no record exists to indicate that an attempt was ever made to determine the ratio of adult stock to adolescent, the variations in herdsmen's holdings, or the actual stock required for existence by a family or settlement unit. The following limited information has been gleaned from the archival records and is offered in the hope that human ecologists might find it a useful comparison when they make their own determinations on these matters. As this report indicates no future recommendations can realistically be made on the basis of such elementary data.

1933: Samburu

Total head of cattle	Location	% Female	% Male	% Calves
40,050	Wamba - Kirimun	54.1	31.1	14.8
38,464	Barsaloi to L. Turkana	58.0	26.2	15.8

1955: Samburu

Total head of cattle	Location	% Adult	% Calves
61,550	Leroghi	68.73	31.27
93,700	Wamba	68.73	31.27
84,600	Baragoi	69.15	30.85

Material in terms of family or settlement units to stock is limited. These examples from the Gabbra and Samburu might prove useful on a comparative basis.

Example 1: Gabbra

16 houses	12 men	69 she-camels	1,320 small stock
	16 women	23 male camels	
	30 children	26 baggage (?) camels	
		30 calves	

Example 2: Gabbra

25 houses	12 men	44 she-camels	2,750 small stock
	25 women	14 male camels	
	48 children	54 baggage (?) camels	
		15 calves	

Example 3: Samburu

	21 men	1,128 cattle	1,126 small stock
	32 women		(125 donkeys)
	17 moran		

From other censuses the head or cattle per owner ranged as follows:

1925 The average per owner by section (Samburu) ranged from 21 head to 124 head; the average for the total 1,261 stock holders was 81.4

1926 A survey of 1,027 stock owners indicated average holdings of 60.8 head of cattle and 47.8 small stock, or based on the entire population of 6,574, 9-10 (9.5) head of cattle per individual and 7.8 (7.5) head of small stock.

In addition to the above information, the following analysis of cattle from the Isiolo area was recorded in 1932 and should be useful for comparison.

For cattle kept under 'improved conditions' of management at the Animal Husbandry Centre in Isiolo the average calf at birth weighed 42 pounds, much higher, it appeared, than those calves born under general conditions in the district.

Full growth is not attained by these animals until they are about six years old. This slow growth is apparently due to a number of causes summarized as follows:

1) breeding prematurely
2) scant and insufficient nourishment in various seasons
3) hereditary characteristics

Premature breeding has a life-long deleterious effect on the animals. Females scarcely, if ever, provide sufficient milk to rear their first calf successfully, so even from the outset cattle

often commence their existence under suppressed conditions of growth.

Sexual maturity occurs at an early age: 12-15 months in females, heifers calving down at 24-26 months of age; bulls mature at a slightly older age; some oxen are castrated as calves, others at two to three years.

The following annexes present chronologically what can be gleaned from the archival sources on past stock populations (by society) and the incidence of stock disease (by stock type).

The small amount of information available on tsetse areas is collated under a separate section headed 'Tsetse' and is included as an annex to the Grazing section, although the oral record is virtually silent on tsetse as a cause of migration and movements.

9.2 Stock population profile: Rendille

1904 The Rendille are described as holding immense herds of camels and small stock but no cattle. From camels observed watering at Sorgoti, it is estimated (and probably an underestimate) that the Rendille own 50,000 head. One man (Lessergi) is said to have 2-3,000 camels and another (Lamarru) along with several others have 1,000 plus. One camel is valued at 12 ewes or female goats.

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1910 The Rendille consist of 'only 21 villages altogether' but they own thousands of camels, sheep and goats. A tribute of 500 camel would be at about the rate of one camel for every three houses. Few camels seem broken for carrying loads.

1913-1914 In tribute paid 20 camels, and loaned for transport 485 camels calculated as being 4% of their capital stock.

1914 A new tax system was introduced - 1.5% of camels and goats. The Rendille paid 103 camels at 30/- per head; 17 camels at 20/- per head; and 1,095 sheep and goats at 1/50 per head. In addition a large quantity of stock was handed over to the Rendille from the Turkana expedition.

1915 1.5% tribute equalled 2,083 small stock.

1918-1919 The Rendille are estimated to own 30,000 camels and 180,000 small stock, the latter figure based on tribute paid, the former figure 'problematical'.

1919-1920 Anthrax 'rampant' and deaths of Rendille camels 'could only be counted in thousands', and far exceeded those incurred the previous year. Tribute was decreased greatly owing to excessive mortality in small stock from drought and anthrax.

1920 Camels = 20,000; small stock = 178,000. Anthrax in Rendille camels led to the situation where a settlement that previously could provide ten baggage camels could now only with great difficulty supply four.

1921 Rendille (and Samburu) are 'a wealthy people quite capable' of paying 3% of their stock as revenue.

1927 The animal population for the entire NFD to Wajir is estimated at 221,600 cattle, 637,100 small stock and 386,500 camels, and 'if anything these approximate figures are below the mark'.

-- Severe loss from disease of both camels and cattle in the early part of the year.

1930

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1938 'Heavy' losses suffered by all societies in the northern areas due to drought. Rendille losses were difficult to measure 'since so very wealthy' in camels and small stock. A description by one elder states that before the drought they had so many sheep and goats they had little idea of the numbers, but by the end of the year everyone knew roughly how much stock he possessed. In camels the 'heaviest losses' were among those Rendille who stayed at the lakeshore. Those between Baio and Laisamis lost a greater portion of small stock than camels; cattle owners at Laisamis lost 'heavily'. Chief Kupess at Laisamis lost 80 head of cattle from starvation.

-- The Rendille have thousands of camels.

1949

1951 The Rendille are described as 'rich in stock' althougn the drought of 1949-1950, coupled with a high incidence

of disease in recent years, killed off 'a high percentage of their holdings'. Elsewhere, it was estimated the Rendille lost 20% of their stock and due to the severe drought famine relief in the form of posho was distributed beginning in January. The Provincial Commissioner stopped all inoculations (see introduction to stock disease profile).

1952 Severe drought in Rendille but no stock loss.

1953 Marsabit District free of disease and so despite adverse conditions little stock lost.

9.3 Stock population profile: Gabbra and Borana

1918-1919 Gabbra camels estimated at 8-10,000 and small stock at 45,000 head. In addition to drought, anthrax led to Gabbra losses of 'a very large amount of stock both sheep and goats'.

1920 Gabbra camels = 8,000; small stock = 45,000. Boran cattle = 37,000. Those Boran, Gabbra and Sakuye at Garba Tula District had 5,000 camels, 150,000 small stock and 32,000 head of cattle.

-- 1923 (February) Gabbra/Boran cattle on Marsabit Mountain 'cannot amount to less than 10,000 head'.

1924 Prolonged drought and outbreak of BPP, but actual losses were not great and the disease was not as prevalent as in past years. At Garba Tula, although grazing poor, the rains failed and 'many' small stock died, their numbers were still enormous: one manyatta with five bomas of small stock and each with 2,000 head.

-- Stock estimates for Moyale District suggest: Boran and Gabbra cattle = 18,000; camels = 15,000 and small stock 1,500. (Few small stock due to their being herded on the Uaso Nyiro far to the south. In 1957 the Sakuye were said to be the only society in Moyale District to keep large quantities of small stock.)

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1929 Although horses were previously kept in the NFD area, today they are simply aliens as only three or four could be gathered together in the district at one time.

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1936 In Isiolo District the cattle of the Sakuye and Borana at Kinna and Besan Adi total approximately 6,000 head and those at Sericho 3,500 head; Sakuye camel manyattas = approximately 5,000 head and small stock manyattas approximately 20,000 head.

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1940 Those Boran from Sololo who moved to Marsabit in the dry season across Dida Galgalla lost a large number of animals but the 215 men, 235 women and 362 children still arrived with 10,000 head of cattle and 3,000 head of small stock.

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1943 Boran stock mortality, especially among young stock, was 'heavy' from the drought.

1946 Boran from Moyale District are only gradually recovering from their large stock losses in 1943.

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1953 In Isiolo District the rain failure in April led to small stock mortality estimated at 10,000 head.

1956 The December 'severe losses' to Gabbra stock resulted from drought and were only slightly alleviated by unseasonal rain in January. At the end of 1956 the daily stock losses were said to be 20 head.

1957 Marsabit Mountain stock census recorded 14,800 cattle on the mountain with water estimated only sufficient for 10,000.

9.4 Stock population profile: Samburu

1913-1914 The Samburu paid in taxes 32 oxen, 32 heifers and 862 sheep and goats, believed based on 1.5% of their capital stock

1914-1915 Tax paid was 400 oxen, 1,600 sheep and goats and 50 donkeys, based on 1.5% of their stock.

1915 The Samburu especially suffered heavy stock losses from rinderpest; on the southern part of the area their

estimated loss was 60% of their capital stock. An estimated 10,000 head of small stock were traded to Somalis for cattle in two months.

1919 The Samburu in Archer's Post District are estimated to hold 30,000 cattle and 150,000 small stock.

1922 In Samburu District it is estimated the Samburu hold 150,000 head of small stock and 150,000 head of cattle or 80 head per owner (divided list of owners on register by the number of cattle). Donkeys were said to be only owned in ones and twos but are much sought after.

1923 An observer found only about 3,000 head of cattle on Leroghi and 2,000 head of small stock; probably due to BPP in the high country and too cold for sheep. The total stock south of the Garissa Hills at this time was said to be under 12,000 head of cattle and under 2,000 small stock.

1924 Two years ago cattle recorded to number 15,000; last year's report suggested 70,000 but now approaching 100,000 again. The most recent report now places small stock at 130,000.

1925 With inoculations by the Veterinary Department a census revealed 1,261 Samburu stock owners with 102,569 head of cattle as follows:

Lorogishu	144 owners	12,545 head	(87/owner)
Lokumai	103 owners	9,669 head	(94/owner)
Masula	460 owners	44,800 head	(97/owner)
Longwesi	52 owners	4,229 head	(81/owner)
Nyaparai	23 owners	1,336 head	(58/owner)
Longeli	110 owners	9,270 head	(84/owner)
Loimusi	252 owners	5,182 head	(21/owner)
Pisikishu	117 owners	15,538 head	(123/owner)
	1,261 owners	102,569 head	(81.4/owner)

A lung disease similar to BPP affected goats and sheep and the numbers decreased due to trade out of the district so that a man who a year ago had 80 to 100 sheep and goats today has only 30.

1926 It was estimated that in the past two or three years the small-stock population has decreased by 30%.

1927 The Samburu were said to hold 120,000 head of cattle of which half grazed on the Leroghi Plateau.

1928 Samburu cattle were said to number between 120 and 140,000 and their small stock the same. It was also recorded that the Samburu had 'few' pack animals. A census was conducted from village to village on the Leroghi Plateau with 'extreme care to obtain accurate figures' and represents the lowest minimum (6,574 people counted). Cattle = 62,314; small stock = 49,126; donkeys = 3,318 and camels = 189, or 9-10 head of cattle and 7-8 small stock per stock owner, representing approximately half the cattle owned by the Samburu but less than half their small stock.

1932 The observer of the 1923 estimates returned in this year and found less stock, especially sheep, than he had expected and concluded that this was a result of the Samburu never having fully recovered from their losses to BPP and of continuing to sell and exchange small stock with neighbours and traders.

1933 Two detailed stock surveys were recorded in this year, one by the Veterinary Officer and one by the Isiolo Stock Inspector, both done as a result of the need for accurate information by the Kenya Land Commission. Both surveys include Turkana stock in the Elbarta area as well as the Samburu stock. The Veterinary Officer considered the region in three areas and recorded a total of 117,389 head of cattle:

Northern area: Elbarta and Barsaloi (including Horr Valley, Ndotos and Kulal)

37,798 cattle (Elbarta 13,722); 20,503 sheep (4,375); 22,709 goats (5,652); and 4,267 donkeys (1,316).

Central area: Leroghi and surrounding locations:

38,391 cattle.

Southern area: Uaso Nyiro and Kirimun: approximately 41,000 cattle.

In a more detailed survey but less complete the Stock Inspector recorded *fora*:

	Northern area: Barsaloi to Lake	Southern area: Wamba and Kirimun
Cattle: females	23,215	20,828
males	10,491	11,951
calves	6,316	5,685
Sheep	21,474	22,387
Goats	23,742	10,362
Donkeys	4,511	2,236

In this survey nothing was counted in the areas including Ilaut, Arsim Oldonyo Boi, Ngurunit, Irerr, Odermuru, Sendait, Laisamis, Merille, etc., but an expectation of at least 10,000 head of cattle is recorded.

1935 From a location called El Choki 134 stock owners with a total of 8,060 head of cattle, 18,500 small stock and 508 donkeys were relocated. Each owner's individual holdings were recorded, the 'wealthiest' having 902 cattle, 1,535 small stock and 30 donkeys.

-- A number of Samburu were moved from out of Marsabit

1937 District at Kulal and Ngurunit back to Maralal District. The 21 Samburu at Kulal were with 32 women and 17 moran herding 1,128 cattle, 1,126 small stock and 125 donkeys, while the one Samburu at Ngurunit with one wife held 26 cattle, 30 small stock and 3 donkeys.

-- A census of Samburu was begun but abandoned in March.

1939 The government also agreed to the Samburu demand of not culling surplus bullocks and older stock until the census is completed.

-- The Samburu cattle population is generally estimated at

1942 120,000 head but still no census.

1950 Rinderpest spread across the region and inoculations were carried out and a census compiled as it was felt that almost all animals were brought in for inoculation.

	Adults	Calves	Total
Leroghi area	42,300	19,250	61,550
Wamba area	64,400	29,300	93,700
Baragoi area	58,500	26,100	84,600
	165,200	74,650	239,850
Additional inoculations:			14,000
			253,850 head of cattle

1951 Figures from various parts of the Samburu District show in a year of good rain a 10% stock increase is recorded. At a rate of 1 head of cattle per 25 acres the district will support 260,000 head. The number of small stock is unknown.

1952 -- 1954 Small stock still uncounted; perhaps half a million. The cattle figure in Samburu District is now likely to be nearer 300,000 head.

1955 -- 1957 Cattle population estimated to be 345,000 head plus. 'Believed' the district has around 250,000 head of cattle.

9.5 Stock population profile: Turkana

1918-1919 The Turkana went up to the South Horr Valley during the year and then back to Elbarta where their stock was virtually wiped out from starvation.

1921 An estimate of Turkana stock on Elbarta and east of Suguta belonging to 3,000 owners prior to the 1921 move: cattle = 20,000; small stock = 25,000; donkeys = 1,000; camels = 5,000.

'Compelled' to live in the Suguta Valley, the Turkana cattle died by the hundreds. An investigation concluded they had lost an estimated 45% of their stock in this move and so were allowed back on Elbarta.

1925 From a stock census carried out by Veterinary Department while doing inoculations: in three locations 164 stock owners held a total of 9,404 head of cattle, or in each location an average of 5,855 and 63 head per owner.

1928 The Turkana stock grazing on Elbarta was estimated at 25,000 head of cattle and 60,000 sheep and goats; the human population is estimated at 5,000. Another estimate placed these figures at 20,000 cattle and 50-60,000 small stock.

9.6 Livestock disease.profile

Year	Cattle	Camels	Small stock
1905		Contraction of bad cough remembered by the Gabbra.	
1907	Gabbra cattle reduced drastically by disease called *matita*.		
1908	Rinderpest suffered by Gabbra and Borana.		
1911-1914		Percentage of Rendille camels die of disease appearing as mumps - it appeared in c.1911 and has remained since.	
1912	Rinderpest outbreak.		
1913	Rinderpest in Moyale District in September from Serenli - District quarantined; no stock in or out.		
1914	From October until February (1915) Samburu suffered heavily from rinderpest, especially in the south of the NFD where as much as 60% of capital stock was wiped out. (Gone by June 1915.)	In the border area with Ethiopia camels suffer from *kut* and trypanosomiasis. Towards the end of the year losses were severe.	

Year	Cattle	Camels	Small stock
	In Moyale sporadic outbreaks of rinderpest - deaths recall those of 1912.		
1915	From late 1915 until March (1916) a mild outbreak of rinderpest among the Samburu at the Uaso Nyiro, but no great damage.	Rendille stock healthy and no camel disease.	
1916	No epidemics recorded through 1918.		
1918-1919	Rinderpest is present in certain Samburu manyattas but is not serious and mortality is not high.	Prolonged drought and anthrax have resulted in losses of camels and goats by the Rendille and the Gabbra which far exceeded the year's natural increase. The Gabbra especially suffered heavy losses but both they and the Rendille lost all their young stock.	
1920		Both *fora* and settlement stock are dying of anthrax. A lot of sickness among Rendille stock, especially camels, the last six months. A settlement that previously could supply 10 baggage camels can only with great difficulty now supply 4; 'deaths could only be counted in thousands'.	

Year	Cattle	Camels	Small stock
1921	Stock is healthy in Marsabit District, and no heavy mortality as in previous year. A good year for stock breeding in Moyale although a number of young animals were carried off by a lung disease whose incidence appears to be annual. Mild rinderpest in Samburu and Turkana stock; losses were few as cattle sickened and then recovered.		
1922	BPP east and west along the frontier at Moyale - came from Ethiopia in June. The district was quarantined but it still spread south although actual stock losses not great.		
1923	By March Samburu cattle were dying by the thousands and the Samburu were leaving the Leroghi Plateau country for the low area. At the end of the year cattle were still dying but the disease seemed to be rapidly declining.		In certain places, Barsaloi is one, goats get scab and become useless for milk and unpleasant to eat; some die.

Year	Cattle	Camels	Small stock
	Turkana and Samburu owners said to consider themselves lucky if half their animals survived (1,500 tax animals of the government were reduced to 90 by the disease). The losses are just cause to fear famine the next three years.		
1924	BPP losses negligible, the disease seeming to have abated in Marsabit and Moyale areas. Boran cattle at Zaricho in the south still dying but traced to traders from Kismayu. In Moyale in August a slight outbreak of rinderpest occurred with calves dying. In Garba Tula District (except Merti) the outbreak is serious. All movement and trade of stock remains forbidden.	Camel disease east of Moyale but died out quickly. The camels are still not yet fit.	The only disease striking goats is a form of pleuropneumonia 'peculiar to themselves'. Among flocks so attacked losses are 'sometimes heavy' but it never seems to spread very far.
1925	BPP continued and both the Samburu and Turkana suffered heavy losses. The Veterinary Department began inoculations.		A similar disease to BPP among the goats affecting the lungs has caused 'heavy' deaths.

Year	Cattle	Camels	Small stock
			The number of sheep has also been reduced by their leaving the district. A man who a year ago had 80 to 100 small stock now has 30.
1926	BPP deaths remain large among the young stock in the south of the region. Moyale District is said completely free of it.		
1927	The quarantine imposed in 1922 was lifted in November.		Sheep in Samburu District suffer to a large degree from lung disease and worms.
1928	Herds were 'decimated' by drought in Marsabit, coupled with anthrax 'being common' and rinderpest 'rampant.' In Moyale large numbers of young stock died from drought. (At Archer's Post stock increases were reported among the Samburu and Turkana there.) The number of deaths from trypanosomiasis increased due to use of fly grazing areas in the drought.		

Year	Cattle	Camels	Small stock
1929	The effects of last year's rinderpest are still being felt. Cattle are in poor condition and most cows aborted resulting in hardship and a scarcity of milk. Moyale reported that rinderpest 'always' kills a certain number of young calves but the older stock are immune.	Camels suffered to a certain extent from the drought.	Sheep have reportedly died in some areas from eating locust.
	No serious outbreak of stock disease was reported from the south of the region (Isiolo).		
1930	Marsabit District was again quarantined with 'heavy losses' from BPP in the early part of the year. In Moyale no serious outbreaks other than the usual mild rinderpest on the frontier. In the south (Isiolo) an extensive outbreak of gleeziette *(nginyot* in Samburu) during the first eight months caused 'considerable loss' amongst Samburu stock.	Camels reported ill - believed to be from camel pox and *berkurus* (Som).	Goats suffering from *gezdor* - a form of pleuropneumonia; sheep are not affected.
	The decision was made by government to organize the veterinary service in the NFD.		

Year	Cattle	Camels	Small stock
1931	Blackquarter among the cattle on Marsabit Mountain. In Moyale no serious disease, but mild rinderpest still fairly common along the frontier. No serious outbreaks of disease in Isiolo District.	A mysterious unidentified camel disease has appeared in Marsabit District.	
1932	Isiolo District was closed for the sale of stock because of BPP being 'prevalent' in Samburu herds.		
1933	It is estimated that 96% of Samburu stock have or have had and survived BPP. No serious disease in Moyale.		
1934	A rinderpest outbreak 'particularly prevalent' around Marsabit town began this year, 'however local herds possess a certain amount of immunity and the mortality was never that great'. BPP was reported at intervals throughout the year. In Samburu rinderpest spread from buffalo herds at Mugi.	In Moyale District camels suffered from *kukan*, and on the Mandera side *knut* (anthrax) was present.	

Year	Cattle	Camels	Small stock
	Began mildly but increased in severity and 'severe losses' were sustained on Leroghi. It did not reach Elbarta, Wamba and the northern areas.		
1935	In Moyale mild rinderpest, but in general a good year for stock. Rinderpest in Samburu throughout the district and in the game as well. Vaccinations began: 96,000 BPP and 50,000 rinderpest.		
1936	Rinderpest in Isiolo District at Koiya and Selbarwa with 2,000 animals dying through November; 40% of the Somali cattle at Kipsing grazing area died of BPP, but disease isolated.	An unidentified disease killed a number of Rendille camels at Gus in November.	At Sericho and the north Uaso Nyiro areas some sheep and goats died recently; cause unknown.
1937	Some continued loss from BPP among Rendille cattle at Laisamis. On the whole, very little disease among stock.		
1938	In Marsabit District 'very little disease' among the stock. In Moyale District heavy stock loss due to malnutrition.		

Year	Cattle	Camels	Small stock
	Cattle among the Rendille have BPP.	Anthrax among Dejodia camels - not epidemic. No serious epidemics among camels or sheep and goats in Isiolo.	
1939	No serious outbreak of stock disease. Commonest complaint is BPP among the cattle (Marsabit District). In Samburu cattle have rinderpest and BPP - commonest complaint.	Commonest complaint: anthrax among camels. Gabbra camels in October suffered 'heavy mortality' from anthrax. Rendille free of disease.	Goats of Marsabit District are free of disease.
1941		Rendille camels taken for meat and baggage in the war effort had a disease, 'seemingly a form of malaria' which swept 'many' of them away.	
1942	Blackquarter killed off Rendille cattle at Koiya area in October. On Leroghi universal compulsory anti-rinderpest inoculations done.		
1943	Again compulsory inoculations done on Leroghi. At Marsabit Mountain 'fairly severe losses' from rinderpest; first in seven years.	Anthrax suspected at Karsa in July.	

Year	Cattle	Camels	Small stock
1944-1946	No serious diseases recorded in Marsabit, Moyale, or Samburu districts.		
1945	Leroghi area free of BPP for past two years and rinderpest for the past four years running.		
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1947			Gabbra lost herds to a disease called *biraa*.
1948	Rinderpest among the game on Marsabit but it did not spread to the cattle.		
	Marsabit District reported that anthrax, BPP, rinderpest, foot and mouth, and trypanosomiasis all occur in the district.	Anthrax among the Gabbra camels is more serious than 1948 and caused a 'considerable' number of deaths.	
1950	In the Samburu area rinderpest began among the game and spread across the district.		
1951	Rinderpest in the Rendille cattle at Laisamis - inoculations provided. BPP among stock at Sololo but separated from the other escarpment stock. In Marsabit inoculations stopped and as a result so did meat sales.		

Year	Cattle	Camels	Small stock
1955	Rinderpest epidemic among Boran and Sakuye - no one escaped the effects and some lost their entire holdings (Isiolo District).		
1956	Remembered as a year of rinderpest by the Gabbra.		
1957	Cattle in Isiolo with SAT 2 foot and mouth - quarantined.	*Dukan* derives from Wajir and Garissa - infectious and epidemic in Boran. Camel trypanosomiasis inoculation teams are popular along the Kenya - Ethiopia border areas.	Two-thirds of Boran sheep in Benane - Garba Tula - Matarsa - Merti - Madgo areas have died in six weeks - probably pneumonia.
1958	Rendille have suffered 'fairly heavy' livestock losses due to diseases (unspecified).		
1959	Rendille suffered 'fairly heavy losses' in the main through rinderpest and black-quarter. Gabbra suffered 'a number' of losses from rinderpest. SAT 2 foot and mouth stopped all export through Maralal. Large scale rinderpest inoculations in May and June in Marsabit District. Only Boran on the mountain did not co-operate.		

Year	Cattle	Camels	Small stock
1960	February - rinderpest outbreak among the Boran on Marsabit Mountain. Rinderpest entered Marsabit by game from Samburu. Also into Isiolo and presumed by game. Foot and mouth swept through Moyale District in July and August but burned itself out without any severe effects.	Camel trypanosomiasis inoculations continued in Moyale District.	

10. Forestry profile

Little information is available from either the written or oral record regarding the earlier history of the forests in the north of Kenya. The information that can be gathered from the colonial archival records is presented chronologically below; details of demarcation, fires and regulated grazing dominate. Information regarding the fauna of the forest areas will be found in the 'Wildlife profile'.

In 1958 a botanist of the Coryndon Museum in Nairobi, B. Verdcourt and the former Deputy Conservator of Forests in Uganda, I. R. Dale, visited South Kulal and proposed the following chronology for the forest on Mount Kulal. Unfortunately, the basis upon which this chronology was founded was not included.

c.AD 1750 The old mist forest extended lower down the mountain than at present.

c. 1750-1850 The climate was desiccating and the mist forest was destroyed by grass fires with the exception of the summit areas at 7,000-8,000 ft.

c. 1850-1900 The climate became wetter and a young mist forest regenerated down to the 6,000 ft contour with a fringe of cedar extending below 6,000 ft.

c. 1900-1950 The cedar fringe was largely destroyed by grass fires.

A confirmation of this chronology, further details, and its applicability to the other forests in the north would be useful. In this respect the observation made by a traveller in 1908 regarding the increased grass fires on the Leroghi Plateau as a result of depopulation destroying the forests offers a parallel to the Kulal forest in the above chronology of 1900-1950. During this period, up until the late 1930's and early 1940's, Kulal was also depopulated as a result of the Samburu fear of hunters, raiders, etc., from across the Ethiopian border (see 'Movements of the Samburu'). This depopulation, resulting in grass production with no stock to eat it back, could similarly account for the destruction of a cedar fringe on Kulal by grass fire.

Regarding the species dominant in the forest, it was observed in 1927 that Kulal was higher than Marsabit and held many species, especially *Juniperus procera*, not found on Marsabit, while abundant on Marsabit but absent on Kulal was the shrub *Bauhinia tomentosa*. In 1928 the Kulal forest was described as being chiefly of cedar and olive, *Labiatae* holding pride of place with balsams and various species of pepper plant plentiful.

From 1927 to 1928 the District Commissioner at Marsabit was H. B. Sharpe, who took a unique interest in the mountain flora. He began a remarkable programme of planting out seedlings. A 'considerable variety' was tried and 'a few of practically all growing' were noted in 1928; specifically mentioned are:

> *Jacaranda mimosifolia, Spathodea nilotica, Grevillea robusta,* two species of *Acacia,* five species of *Eucalyptus, Solanum robusta,* four species of *Cupressus,* four species of *Bauhinia, Casuarina leptoclada, Juniperus procera,* both black and green olive species, *Cassia fistula* and *Cassia florida, Poinciana regia* and *Cordia holstii*.

In 1929 on two occasions locust and at other times caterpillars, cutworm and small black beetles took a heavy toll of seedlings and a

layer of younger trees planted in 1927 and 1928. Of the 1928 trees planted it was reported:

> *Eucalyptus salmoniaetolia* dies out; *Brachychiton populneus* lives but does not grow; *Callitrus robusta* dies; *Poinciana regia* makes poor growth and dies; *Cestrum avrantiacuna* dies; and *Cesalpinia pulcherrina* makes poor growth and dies.

Oral source material on forests is vague and seldom usable. Some people have expressed the idea that a forest may once have existed on the Huri Hills and have been totally destroyed in the late nineteenth century. There is no evidence in the oral record to support this notion. Two of the earliest recorded comments about the Huri Hills which actually mention 'trees' or 'forest' do so merely to note their absence: 'no part is forest clad...[the area] consists of open rolling grass plains', and 'the higher slopes of the Huri Hills have luxuriant long grass but no trees or water'.

Similarly, in the earliest written mention of the Huri Hills there is no statement of anyone even observing a tree stump, much less a burnt one. Any informant specifically questioned on this topic who suggests otherwise, e.g., 'As a young boy...' is simply providing the answer he assumes the questioner would like to hear, a not uncommon phenomenon.

The following chronological profile details the information found in the archival record which specifically concerns the forest regions of Mount Kulal, Marsabit Mountain, the Leroghi Plateau and other lesser areas such as Nyiro and the Ndotos.

Year	Marsabit	Kulal
1902		
1925	Cattle on Marsabit are now so numerous 'as to cause serious and constant harm to the Marsabit forest'.	
1926	Application to have forest gazetted to keep the Gabbra from destroying it. The forest	

Year	Marsabit	Kulal
	has suffered 'seriously' of late years by Boran pastoralists who burn outskirts 'recklessly' and in dry weather herd their stock there in a manner that destroys young saplings.	
1927	Marsabit gazetted in year. Marsabit has been destroyed to an alarming degree by Gabbra and their herds, now removed. Cutting for poles or building material is allowed by village traders if they replant; did so but year so dry 90% have died. Seedling trials begun - see introduction.	Kulal is 2,500 ft higher than Marsabit; not gazetted. Forest on Kulal is chiefly of cedar, is fast 'disappearing'. Labiatae seem to hold pride of place with balsams and species of pepper plant plentiful. Country recently devastated by fire and most of cedars burnt. Another fire like the recent one would devastate the mountain entirely. Cedars estimated at c.6,000 ft.
1928	Stock now only allowed in forest when starving a month before short rains. It 'doesn't do much harm and may do good', keep back choking grass. Two serious fires in forest.	Parts of Kulal badly burnt by Turkana in year.
1929	More seedlings planted out in the short rains. Economic value may occur for cedar pencil slate export. Their climatic value is 'doubtful' according to Forest Advisor. The disappearance of guinea fowl and spurfowl off Marsabit Mountain has not been explained.	

Year	Leroghi	Others
1902	With the absence of the Laikipiak, Leroghi is depopulated and the grass no longer kept back by large herds; concern exists for 'the alarming rapidity with which the forests on Leroghi are being destroyed by grass fires'.	

Year	Marsabit	Kulal
1930	Valuable work of planting seedlings undone by locust in April, but with good rains many young trees have recovered.	
1931	Two serious fires on Marsabit; one in September on Gof Bongole area. Owing to drought, cattle in forest glades.	
1933	Value of the forests is climatic - catch clouds and moisture condenses onto ground and helps springs. Therefore it is essential that the forests should be preserved and grazing must be temporary only in real drought crisis.	
1934	So many cattle watered at Crater Lake in the year 'that they have reduced its size considerably. At the present rate it looks as if it may dry up completely within a few years'.	
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1936	June-July epidemic grass fires on Marsabit Moutain. One especially large fire consumed 15 square miles and was kept out of the forest by a strong lugga.	

Year	Marsabit	Kulal
1937	The number of tracks to forest wells seems to have increased 'considerably' in recent times. Problem is that when stock is taken to water both sides of tracks are grazed. In the forest Crater Lake (Sokorte Guda), Eil Waden and Badasso, usage refused. Serious fires on forest edge between Gombo and Karsu Gudas, one especially extensive in October. Even after long rains Boran cattle still on the edge of the forest even though excellent grass and water available elsewhere; only move off on direct order.	

Year	Leroghi	Others
1931	At least half of all the Samburu reside permanently on Leroghi in and below the cedar belt. This year as a result of drought one influential headman went to the grasslands above the cedar forest.	
1932	Much damage to the forest in the past by fire but from the number of dead trees other causes exist as well. In recent years no doubt rain has decreased and affected young trees.	

Year	Leroghi	Others
1933	Drought has affected Leroghi and an increased number of cedars have died.	
1935	282,000 acres of Leroghi gazetted - no cattle allowed in forest since June.	At Maralal baraza, Masula section of Samburu congratulated on the way they preserve grazing and forest on Mt. Nyiro.

Year	Marsabit	Kulal
1938	In view to protecting forest from burning, cattle have not been allowed on the southern side for some years past - now country is infested with tsetse and ticks.	
1945	One fire attacked the eastern forest fringe in July. Heavy elephant damage to young trees at Balessa Bangoli reported.	
1946	Plans for demarcation of Marsabit Forest Reserve finally approved.	
1947	37,000 acres of forest on Marsabit demarcated.	
1948	Government ruled Boran must now regard Songa area water of forest closed forever; never again to use Sokorte Gude or Sokorte Dika. *Okna* species on mountain usually cut for buildings and poles. Around the government boma approximately 800 trees of	Southern Kulal visited - forest 'satisfactory'; little recent damage from fires. In one area at least seedlings are reproducing 'satisfactorily'.

Year	Marsabit	Kulal
	exotic species planted - mostly *Croton macrostachys* seedlings and *Ficus hochsteterii* cuttings. Greater part of Marsabit District included in Marsabit National Reserve from this year; so far effect not felt.	
1949	Believed 25,000,000,000 gallons of water fell on Marsabit's 37,000 acres of forest annually, yet still a chronic water shortage.	Boundary cut around Kulal forest completed this year.
1950	Water shortage continues and one is forced to believe as in 1949 continued desiccation of the forest goes on. The Forest Officer has agreed the eastern side of the mountain poses a fire hazard, previous fires having done 'much' damage; no funds however so earliest work will be in 1952.	

Year	Leroghi	Others
1948	Leroghi forest grazing open to Samburu throughout year and permission received from Forest Department for Samburu to build manyattas in the Forest Reserve - several moved in October. Has helped to keep the grass down. No forest fires.	- only on the main ridge of Suran is any real forest left; elsewhere deforestation and erosion severe, contributing to desiccation of Elbarta area. Many signs of past fires. Residence of more Samburu than on Mathews and desiccation more advanced. Demarcation, which will be

Year	Leroghi	Others
		strongly opposed by Samburu who habitually graze thousands of stock there, to begin in 1949. Mathews forest - very fine forest, practically untouched along the ridge, only lower foothills and valleys damaged by fire and overgrazing. Closure since July has resulted in remarkable degree of recovery. Ndotos - demarcation of forest finished in March. Nyiro - demarcation begun in October, to be completed in 1951. No fires in either forest and illicit grazing in by no means alarming portions.

Year	Marsabit	Kulal
1950 (cont.)	Forest Officer declared it a waste of time to try to regenerate forest fringes: one possible way being to attempt filling isolated pockets but this might prove unsuccessful. As in previous years 'considerable quantities' of firewood and building material cut from forest but carefully rotating and on the whole the forest is in 'good condition'.	

Year	Marsabit	Kulal
1951	Previous fires have assisted desert to creep in. Fire hazard on eastern side of forest and so a 30 ft wide fire break was constructed in late November. By the end of December the fire break was overgrown with six foot high grass. Forest boundary surveyed and hope to gazette it in 1952. All efforts to plant out seedlings in last two years have been frustrated by drought. On the whole the forest is in 'excellent condition'.	The Divisional Forest Officer (stationed at Thomson's Falls) visited Kulal in December 1950 'and complained that the cattle were damaging the forest'. The District Commissioner thought the situation was exaggerated. The whole southwest of Marsabit District including Kulal is within the Marsabit National Reserve.
1957		The extent of mist forest on Kulal is 40 square miles. Pipeline to tap springs prospected.
1958		The extent of Kulal's forest revised from 40 to 80 square miles. Tentative chronology (see introduction to section) proposed.
1959	A fire in October at Baldessa destroyed 7,000 acres of forest, bush and grasslands. The shrub *Triumfetta flavescens* continues to encroach on grassland around the forest.	
1960		The Kulal forest is healthy but suffering the effects of livestock using water deep within the tree lines. Plan to pipe water to the 4,000-ft contour and close the area above to both human and stock population. South Kulal was closed all year to livestock. The scheme on North Kulal remains incomplete.

11. Wildlife profile

As those animals which were observed on the mountains and those which were observed off the mountains are all part of closely related ecosystems, they are treated together below and no comments on wildlife will be found in the section related to forests. Those people looking for linkages between forests and wildlife can do so using the chronology for cross-referencing.

As the Government Station was on Marsabit Mountain, there is the usual bias of more observations of game in and around the Marsabit forest area than elsewhere.

A dominant aspect with regard to wildlife in the early years of government administration was the activity of hunting parties from Ethiopia. Well armed, these hunters were particularly interested in ivory and rhino horn for their value, and in shooting buffalo for their dinner. While recognizing the destructive effect of these hunters on the game, administratively the government was concerned with hunting as another aspect of the failure of Ethiopia to recognize and administer in a 'gentlemanly' fashion a demarcated frontier between Ethiopia and British East Africa (more details of these Ethiopian incursions and their effect on the movements of the local population are to be found in the section on the various societies, especially those on the Gabbra, Boran and Samburu).

The technique principally employed by these hunters, who generally travelled either along the eastern shore of Lake Turkana or along a route linking rain-pools through the Huri Hills and southwards, was to befriend and treat in a businesslike way those peoples met along the frontier regions. To the south the peoples encountered were treated with contempt and were often raided for stock when food supplies ran low. It was simply a matter of practicality: the hunters would again have to pass through the area of the frontier peoples, while the others were on the southern extent of the region hunted. Certainly this hunting from across the frontier accounts for the fact that not even the oldest elders among the Dasenech on the northeast corner of Lake Turkana have ever seen an elephant.

With respect to hunting by the local populations of the area, it should be noted that in the past this was chiefly an occupation of the Boran speakers and the Turkana. Of the Samburu it was said that they did not kill game unless it was a threat to their stock. It was said of the Boran, Gabbra and Sakuye that they were 'addicted to killing for profit, prestige and giraffe for water buckets'. In the past, hunting by the Boran speakers and by the Rendille was often from horseback with a bow and arrow. Traps such as hide nooses and spiked wheels were used especially on giraffe by the Turkana. Giraffe were reported almost exterminated in the South Horr Valley in 1934. The Turkana are also said to have taken the heaviest toll on the rhino population. In 1921 it was claimed that the Turkana were killing several per week, and in 1934 it was noted that further west than Irerr and the Horr Valley the rhino had been completely exterminated. The ndorobo elements are throughout the records said to be major culprits in hunting wildlife. Certainly a large trade existed in ivory and rhino horn carried out of the north, either to Ethiopia or Somalia by itinerant traders, but what proportion of hunting related to this market and what was culturally based is not clear. The role of hunting in the various societies of the area: its use as a food source, as a cultural tool (e.g., oryx horns, to which small stock are tied to prevent their straying), and the prestige value of killing certain animals, if explored in depth by a human ecologist, might elucidate further the information contained in this profile.

1908	Leroghi	Several herds of buffalo, totalled about 1,000 head, seen when Leroghi crossed.
		Elephant evidently causing considerable pressure as spore seen every few hundred yards.
		Other game very little.
1911	Ngurunit	Elephant previously watering here although now dry.
	Ilaut	Appeared as if elephants stood around watering like herds of cattle (May).

1916	Koroli	Game present in large numbers including rhino, Grevy's zebra, oryx, ostrich, Grant's gazelle and in the wet season, ducks and geese.
	Karawe	Game 'fairly plentiful' and signs of 'huge herds of buffalo'.
	Kalacha	Game 'plentiful' and signs of buffalo.
	Lorian	Buffalo reported dying in 'considerable' numbers at the beginning of the year.
1919	Maidahad southwest to Koronli	Plenty of game seen.
	North Horr	'game numerous' - lion, zebra, oryx, gazelle, gerenuk (September and October).
1921	Seye area	Elephants in large numbers; remarkable for young of about five years. Dead elephants often found below the Ndotos.
	Kulal area	Ethiopians have almost cleared the area of elephants - survivors found in South Horr Valley and Ndoto Mountains.
	Elbarta to lake	Rhino being killed off by the Turkana at rate of several per week (November).
	Kulal to North Horr	Extensive hunting by parties from Ethiopia, 'their destruction amongst the game in the last few years has been tremendous. Herds of elephant have been wiped out and places where rhinoceros were in plenty, are now only remarkable for the complete absence of these beasts'.
1923	Mathews Range	2,932 pounds of ivory brought in or confiscated during the year and 1,196 pounds of rhino horn purchased (a government scheme to stop rhino horn trade).

1925	Samburu District	Rhino common all over Elbarta plains; giraffe thick and on increase all over the district. Lesser kudu holding their own with good numbers of female and young seen; large tusk elephants becoming rare but female and young holding their numbers. Buffalo in good numbers at certain times of year on Leroghi and Mathews and although reported to have suffered rinderpest, it is unlikely 'the effect was all that serious'.
1926	Samburu District	Rhino are numerous everywhere and not decreasing. Lesser kudu seen in new places and not decreasing. Breeding herds of elephant keeping up although do not hear of large tuskers in district. Greater kudu increasing due to inaccessibility.
	Marsabit Mountain	Game has ceased to frequent open slopes of the mountain due to large herds of cattle grazing; probable that elephant herds are fewer than in the past.
1927	Kulal forest	Buffalo and greater kudu are 'plentiful'; klip-springer, duiker and monkeys 'fairly common'; rhino only in dense bush of the lower slopes and no elephants. Ethiopian hunting lairs generally overlook water, and buffalo, elephant and rhino bones testify to the slaughter.
1928	Marsabit District	Rinderpest has 'decimated' buffalo and greater kudu in the district; some other unknown disease affected giraffe; and young elephants suffered 'high mortality' with no outward signs, and does not seem to be starvation, just before the November rains. Good herds of greater kudu 'getting scarce': a five-year hunting prohibition recommended.

	Samburu District	'Large herds' of elephant encountered from time to time. Rhino suffered 'considerably' from drought but 'plentifully distributed' over the district. Lions 'scarcely encountered but by no means rare'. Giraffe, buffalo, eland, oryx, zebra, impala, gerenuk, Grant's, dikdik plentiful and not shy, so ignorant of hunters.
1929	Marsarbit District	The rhino population is larger than originally thought, or from the amount of horn brought in or captured they would be extinct by now.
	Moyale area	Still a few small elephant and rhinoceros around. Giraffe still plentiful but a lot killed each year; oryx and gerenuk in most parts of district.
1930	Moyale area	'There is not much game left here', consists of a 'fair number' of giraffe, a 'few' oryx, lesser kudu, gerenuk and ostrich. A single elephant or rhino is occasionally met.
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1932	Isiolo District	Giraffe and ostrich on increase, rhino and eland 'decidedly on decrease'.
1933	Marsabit District	Game died in drought of the first nine months; especially rhino who fell into wells and were unable to get out (six in last weeks of drought at Laisamis).
	Kulal	Buffalo reported dying of starvation.
	Moyale District	'Very little' game left in the district - elephant, rhino and buffalo extinct. A 'good number' of giraffe remain and a 'fair number' of oryx, lesser kudu, gerenuk and dikdik.

	Isiolo District	Some experts think elephants are on the increase or at least keeping up population but 'doubtful' as far as this district is concerned. Rhino 'definitely' on decrease and the same is 'probable' for greater kudu and eland. The game suffered heavily in the drought and especially when the Uaso Nyiro dried up.
1934	Marsabit Mountain and forest	'Still a number' of elephants but leave forest whenever sufficient rain. Rhino 'still' in forest and on edge. Buffalo have 'suffered severely' from rinderpest at beginning of the year and 'still not much in evidence'. Greater kudu found but keep to the forest. Bushbuck 'common'.
	Marsabit District	Elephant: large herds between Irerr and Baio. Also common at Arsim, Ngurunit and occasionally the Horr Valley. Rhino: mainly at Laisamis, Merille, Lesedon and numbers at Irerr; further west finished by Turkana. Few on lower slopes of Kulal but on Chalbi always seen at Gamra and sometimes at Koronli. Greater kudu: Kulal still the best place to see them and a number also on lower slopes on sides of Horr Valley. Lion: found scattered over the district, 'most commonly' met at North Horr and Gamra and in forest on Kulal. Giraffe: 'common' in south of district. Oryx and Grevy's 'very common' all over district; especially see 'huge herds' of oryx, topi, Grant's and zebra on shore north of Alia Bay.

1935	Marsabit Mountain	None of elephants on mountain have big tusks. Fifteen greater kudu seen together on mountain recently.
1935	Marsabit District	A 'big toll' of giraffe taken every year. Kulal and Marsabit are the major outposts of the district's game.
	Samburu District	Rinderpest in the whole of Laikipia and Samburu; game also affected.
1937	Marsabit Mountain	No change in the number of elephants or their comings and goings, most numerous near Gof Bongole and between there and Eil Naden. In rains go off to area of Lug Jaldessa. Buffalo are frequently seen at Gof Bongole in large herds and also at Eil Naden and Baldessa; they are not numerous on the mountain's north side. Rhino are usually seen at the Songa lugga and in the vicinity of Lug Jaldessa but not in very large numbers. Leopard are 'very scarce', presumably most having been caught in traps a few years ago and no doubt in consequence baboons are increasing and a serious threat to shamba owners.
	Marsabit District	Giraffe are observed throughout the district but especially near Marsabit Mountain and in the Huri Hills.
1938	Leroghi	Planned destocking could not occur until the zebra were greatly reduced; by September 5,000 plus 'exterminated' and destocking began.
1939	Marsabit District	Buffalo and rhino are scarce although a number of rhino seem to be in the Laisamis - Merille area. Elephant were seen throughout the year at Gof Bongole, Sagunte, Malkajira and one herd at Koiya (July).

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1941	Marsabit District	The Army are shooting game in the district indiscriminately, especially kudu and giraffe; one officer shot seven giraffe.
1942	Marsabit District	In April the forest and a stretch of country to the south and east declared a game reserve.
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1948	Marsabit Mountain	Rinderpest among the game of the mountain. On 24 September 1948 all the game reserves in district became a national reserve with the boundaries extended to include all of Marsabit Mountain. All game, elephant, rhino, leopard, buffalo, giraffe and lion 'plentiful' on Marsabit. Also greater kudu on mountain.
	Kulal	'Appears to be depressingly void of big game but so little is known about it at present that no final judgement can be made.' Greater kudu are found on the mountain.
1949	Marsabit Mountain	The elephant and greater kudu population on Marsabit is increasing. Rhino are plentiful on the mountain's east side. There are buffalo, lion, leopard and smaller fauna 'in plenty'.
	Kulal	No elephant; cleared by Ethiopian poachers in the past.
1950	Samburu District	There are elephants in the district but their numbers are unknown, although they must run into the thousands and increase every year.
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1952	Moyale District	There are lions near the town. Greater kudu are plentiful around Gurar and especially on the Gar Derei range. Ethiopia continues as a ready market for rhino horn, ivory and leopard skins.

1953 -- -- --	Moyale District	The game quantity in the district is so small it cannot be considered as a source of supply.
1957 --	Samburu District	'Generally a good lot of variety' of game in the district, although lions are rare. Rhino are 'very common' within the national reserve.
1959	Marsabit District	Game on the mountain and in the plains 'remained plentiful'.
1960	Kulal	A large number of kudu, buffalo and bird life are on the mountain.
	Isiolo District	Rinderpest killed many giraffe, buffalo and other species in various parts of the district; it entered the district from Samburu. 'Rhino seem to be becoming scarce' - only ten seen in the past year and lion too seem to be becoming scarce. All along the quarantine area by the Uaso Nyiro are large herds of elephant, buffalo and all other plains game.
	Marsabit Mountain	Rinderpest on mountain, from Samburu District, took heaviest toll of greater kudu, buffalo and bushbuck, kudu recovering by the end of the year.
	Marsabit District	Huge herds of zebra and topi seen near Ileret; hippo appeared on increase at Alia Bay; elephant and rhino plentiful in district.

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