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JOURNEY IN A FORGOTTEN LAND

Part I: Food and Drought in the Ethiopia-Kenya Border Lands

by Norman N. Miller

December 1974

If the drought is unduly prolonged, every day takes its toll in human life as well as that of the stock. A sense of impending calamity hangs over the air. Strained faces are turned towards the east, looking for the first signs of a change in the weather. Tempers are frayed and quarrels break out on the least provocation. Listless cattle graze on what looks like a sea of lava boulders....

A Visitor's Impression of Northern Kenya, 1948

The herding peoples who live in the border areas of Kenya and Ethiopia share a common complaint. They believe themselves to be a forgotten people, unknown and unwanted in the capitals of Addis Ababa and Nairobi. This is not entirely true, but the remote, inhospitable nature of their land supports the belief that they are indeed untouched by the outside world. The majority of the people on both sides of the border are Boran, or their near cousins the Gabbra. They are traditionally pastoralists who move with their cattle, camels, sheep, and goats over vast areas of this dry land. Although they are peoples who have always known drought periods, and who have a great capacity to survive in hard times, the abnormal drought of the past 30 months has caused enormous suffering. It is by far the worst in living memory.

The major issue here, as in most arid rangelands across Africa, is how can the people continue to feed themselves. If they follow government wishes and settle into farming, or mixed farming and ranching schemes, they will become totally dependent on adequate rainfall. If they continue pastoral nomadism, moving to pockets of rainfall, they will have a better chance of basic survival, but their overall well-being will not improve. Both options are hazardous. The sedentary farmer becomes a welfare case soon after his second crop fails. The pastoralist's family usually survives drought, but often at a fearful toll of young children and the elderly. Settlement or traditional nomadism are the only two viable options open to millions of people spread throughout the dry savannah lands of Africa. (These include not only the Sahel but major portions of Ethiopia, Kenya, Tanzania, Botswana, and Southwest Africa).

Whether there will be adequate food for human survival in these areas is by and large dependent on natural rainfall and manmade water systems. A few inches of rain a year makes an enormous difference. So too does the distribution and timing of the rain in relation to the growing season. Unfortunately no one knows with certainty what the "new" weather patterns will be but extremes seem to be the keynote. These include record-breaking *low* rainfall in some areas, then occasionally record-breaking downpours and floods in nearby regions, often at totally unexpected times. Shortage of rain has been the main factor. Most wells, bore-holes, pans, and dams, which are the focal point of human settlement, have simply dried up and the people near them have been forced to move on.

Nearly as crucial in this problem of survival are government policies, yet people in the dry areas, particularly nomads, are usually vaguely embarrassing to a central government. They are vigorously independent, untaxable, uncooperative, and often reflect the "skins and beads" stereotype that national leaders dislike. Policies among the affected states vary considerably. Ethiopian officials have been so inept and backward in handling the drought

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NORMAN N. MILLER has been concerned with East Africa's anthropology and politics for more than a decade. In 1959-60 he travelled extensively in East and Central Africa and subsequently, with research support from the Ford Foundation and the Carnegie Corporation, lived in Tanzania, Kenya, or Uganda on seven separate occasions. Dr. Miller has also done research under grants from Michigan State University and has taught at the University of Dar es Salaam and the University of Nairobi. Receiving the M.A. and Ph.D. degrees from Indiana University, in 1966 he joined the faculty of Michigan State where he was editor of *Rural Africana*, a research bulletin in the social sciences. Dr. Miller joined the Field Staff in 1969 to report on East Africa. He was the editor and a contributor to *Research in Rural Africa*, and is the author of numerous chapters in *American Political Science Review*, *Journal of Modern African Studies*, and *Canadian Journal of African Studies*. Since 1971, he has been director of the AUFS documentary film project (with NSF support) and has produced or directed 27 documentary films.

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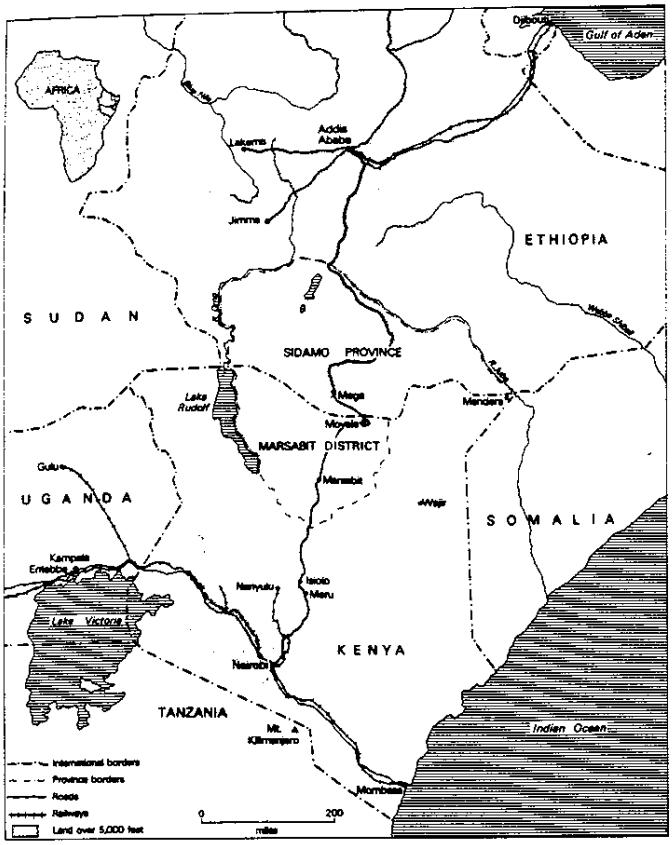


conditions that the entire government has come unseated partially because of it. Kenya has chosen to keep details of the drought confidential, feeling that wealth from other sectors of their own economy can see them through. Tanzania and Somalia, on the other hand, openly admit the drought's effects and actively seek international aid and assistance.

Whenever conditions get bad there is a great deal of finger-pointing and memorandum-writing by bureaucrats. In fact, the entire development policy of these African states is, probably for the first time, coming to a really difficult test. Most governments have been putting their resources into selective cash crop development aimed at export markets rather than into widespread local schemes for dams, wells, boreholes, and access roads which would allow farmers and herdsmen to improve their own conditions. The bigger wealth-seeking schemes assigned to some agricultural sectors have reduced the dry rangelands to third-class policy status. Only now that the weather has turned against them does the realization come that there is inadequate basic local development to sustain the people, *even at a minimal level.* There is a kind of Machiavellian banishment of certain areas to perpetual poverty while selected regions receive the aid to develop agrarian wealth. A few get richer, but many get poorer. The results for the people on the ground are very real feelings of banishment to a forgotten land.[1]

As grim as the picture is, there are two counterbalancing factors to the twin dilemma of poor weather and inadequate policy. First, the dry lands people have enormous resilience. They are accustomed to hard conditions and have experienced drought before. They have built-in safeguards against temporary drought. The severe conditions of prolonged drought, however, dramatically change their chances of survival. Secondly, relief agencies do operate. Admittedly, thousands died in Ethiopia before relief arrived, but the agencies—now some 40 in Addis Ababa—have been operating. In Kenya, missions, hospitals, and international organizations have the ability to offer relief, although in this country the official lack of emphasis has kept their efforts small.

The essential problem for those on the ground is one of survival. The problem for the governments is first to acknowledge the conditions, then to do something on the short term (to get food in) while on the long term to establish rehabilitation policies for both man and land. The problems for the international agencies, and the world at large, is how to insure at least minimal conditions for human habitation for marginal, savannah lands.

People, Weather, Food

The area surveyed, loosely called "Boranland," consists of southern Ethiopia's Sidamo Province and northern Kenya's Marsabit District. The Boran are Galla speakers who trace their ancestry into Ethiopia. They are a part of the Cushitic language group and share racial and cultural similarities with a number of people in the Ethiopia-Somalia-Kenya "Horn" area of Africa. The Boran are traditionally cattle keepers, but recently some have begun to farm or to mix farming and herding. The Gabbra are closely related to the Boran in language and customs but depend entirely on camels, sheep, and goats for their livelihood.

Population estimates for the Boran are guesses at best. People on both sides of the border have always feared enumeration because of possible taxes or enforced de-stocking campaigns. Migrations back

and forth across the border make enumeration efforts even more haphazard. Estimates place the total population in the area surveyed at about 173,000 people, including 115,000 Boran and 20,000 Gabbra.

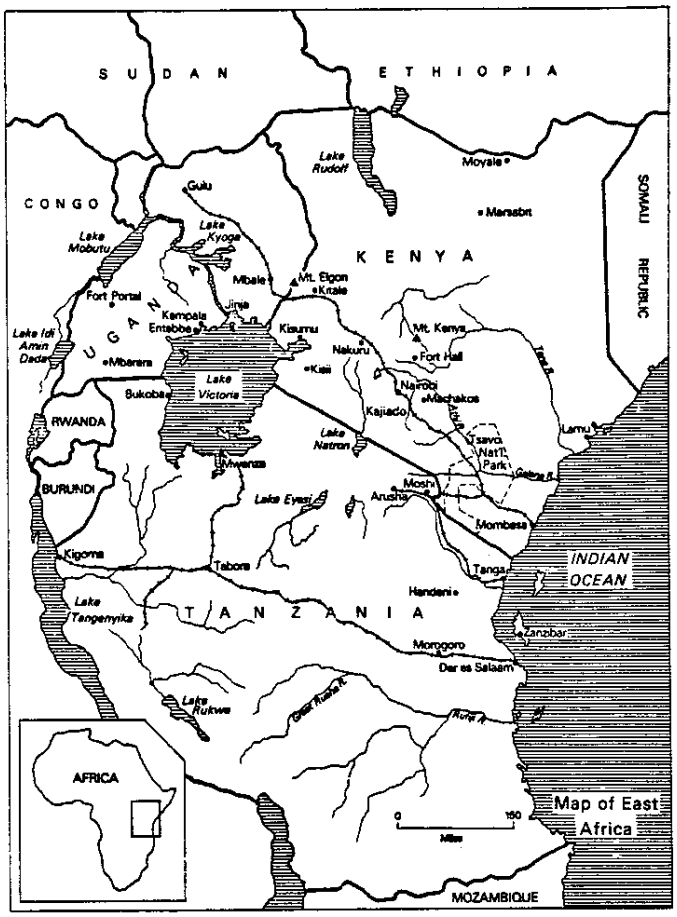
TABLE I

Population Estimate - January 1975[2]

	Kenya Marsabit District	Ethiopia Sidamo Province
Boran	15,050	100,000
Gabbra	17,475	4,000
Rendille	19,455	2,100
Sakuye	800	2,600
Somali	1,200	800
Gurreh	600	2,650
Degodia	100	1,800
Turkana	1,186	400
Other	2,135	500
	58,201	114,850

The last official Kenya census (1970) gave Boranland's density as one person per square kilometer, as compared to 19 per square kilometer for Kenya as a whole. The main settlements are around Marsabit Mountain, the Sololo-Moyale area, Kaisut, Maikona, Mount Kulal, and along Lake Rudolf. In Ethiopia settlement is near Moyale, Mega, Konso, Negelli, and Yavello. The three "urban" areas in the survey were Marsabit (about 6,000 people), Moyale (about 1,200), and Mega (about 2,000). In the entire region there are only five or six areas in which agriculture can be pursued, and this is where human settlement has occurred. (See Part II, Appendix A and B, for more detailed information concerning population and climate.)

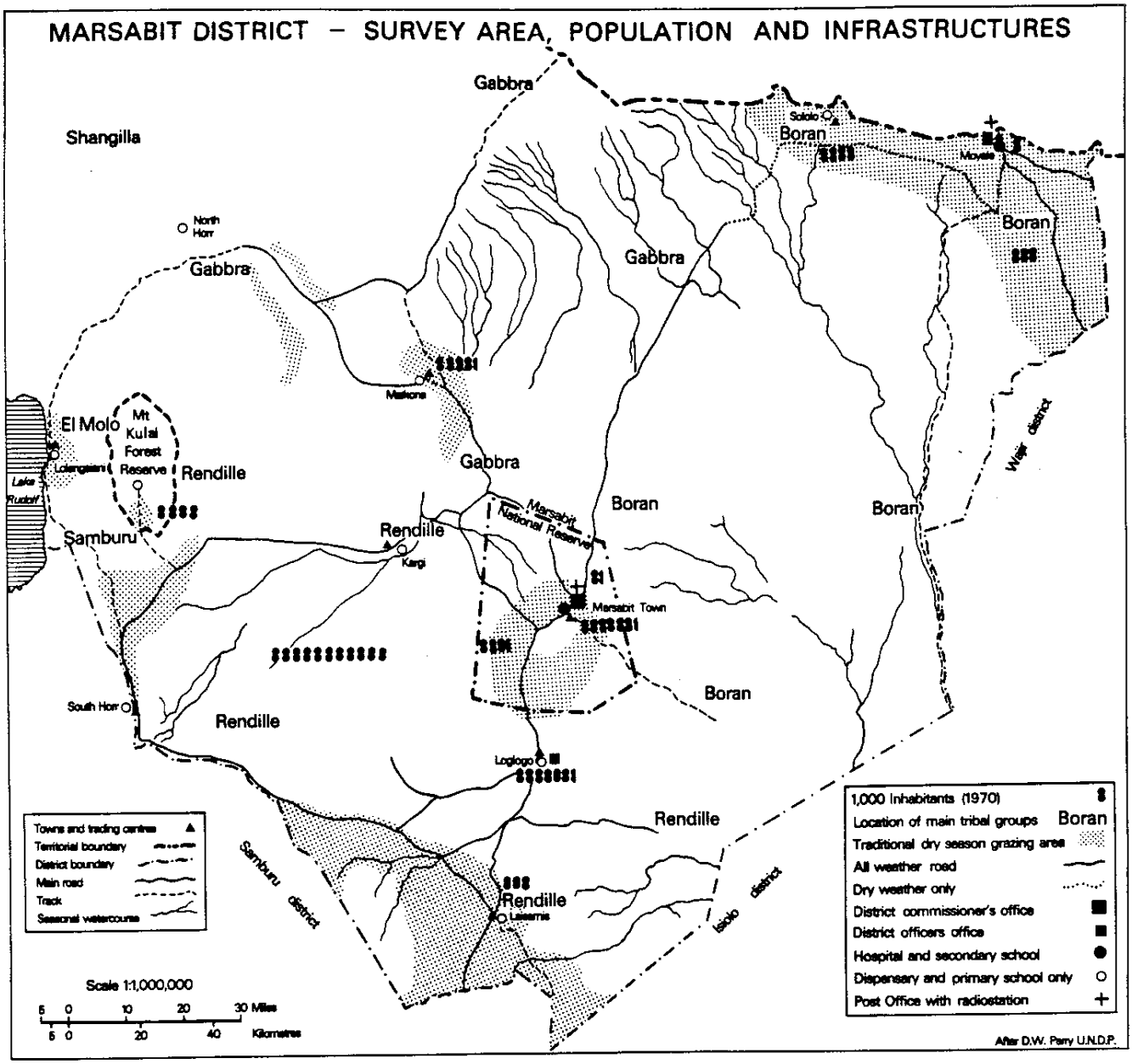
The Boran area in Ethiopia and Kenya is one of extremes. The land ranges from high, fairly cool "islands" to the baking deserts of the Chalbi and the Dida Galgalla. Rainfall normally comes twice a year. Within a few weeks grass is up and grazing for the livestock is renewed. For the farmer who plants just as the rains begin, the next three to four weeks are crucial. If the rains do not continue, at least intermittently, the crops will burn. This is exactly what has occurred during the past almost three years over a vast area of Kenya and Ethiopia; three consecutive rainy seasons have failed almost completely. The rainfall that has occurred has been



episodic and many believe new weather patterns are occurring, although it is too early to confirm this. We do know that the 1973-74 drought was the worst since records were begun in 1919, not only in the low amount of rainfall but also in its wildly deviant timing and distribution. For example, the average rain for the Marsabit Mountain area is about 35 inches a year, the previous recorded low being 19 inches. In 1973 rainfall was eight inches in Boranland while other parts of Kenya endured rains of flood proportions. Then, after 18 months of drought in northern Marsabit District, rainfall was abnormally high in April 1974.

The availability of food is mixed throughout the region and depends on rainfall, grazing, and farming patterns. About 75 per cent of the people rely on cattle, camels, sheep, or goats for almost all their food needs. Their diet, composed of milk, blood and meat, is typical for pastoralists in many parts of Africa. Cattle and camels are occasionally bled if they are in reasonably good condition and water is available. (The water is believed to replace lost fluids.) Cattle, typically, are pierced with an arrow in the jugular vein about every two weeks and yield about one and a half liters of blood each time.

Drought in Boranland.



Most pastoralists are now using some maize flour to supplement their diets, and tea, sugar, and tobacco have been common for some years. Sheep and goats will be slaughtered in difficult times and occasionally are traded for honey or other food. Meat is usually stewed in water with salt and pepper and eaten without spices or vegetables, using the fingers and a knife. Sheep and goat are most frequently eaten; camel meat is not popular and beef is eaten only on feast days or when an animal is near death. *Koce* is chopped meat fried in sheep's fat. It is left covered in fat and remains edible for up to two weeks. Aside from milk, tea is the most popular drink and is boiled at all hours. If a guest arrives he is given milk or tea, whatever the time of day or night. Milk is also drunk immediately after the morning and evening milking. In times of plenty, young Boran men may drink ten pints of milk at a sitting. It has a smoky flavor due to the cleaning of milk containers with burning embers.

Boran are beginning to eat chickens and eggs as a result of experiences in the towns, in the army, or in hospitals. Traditionally a taboo prevented the eating of guinea fowl for fear the birds might have pecked the earth where a menstruating woman had urinated. Other wild birds and game are eaten only by those who have no stock. Their consumption is considered undignified and signifies one who cannot manage to live off his herds. Boran also will not eat elephant or rhino. Giraffe, gazelle, and bushbuck are eaten if they can be found.

The Boran also derive some nutrition from the coffee beans, which are prepared as a "sacrifice," fried in butter and served in milk. Curded milk is considered a delicacy and is offered to important guests. It is solid and can be taken on long trips.

Boran farmers rely more on maize as their main dietary staple than do their herding counterparts. Depending on their wealth, farmers will eat meat, milk, millet, wheat, sorghum, coffee, potatoes, bananas, and tef (edible grass). Locally grown vegetables such as onions, greens, carrots, and tomatoes are also available. Boran in the past have scorned the maize-based diets and even the eating of vegetables (the latter considered food for animals). Prior to the 1972-1974 drought the level of food supplies available suggested around 2,000 calories per adult per day was the norm (1970-71). Estimates are probably low, however, due to the consumption of meat from animals which have died, which was not considered in the survey, and underestimation of sheep and goat slaughter.[3] Comparisons of the general nutritional levels of people in the Marsabit-Sidamo areas indicate that before the famine people were at least as nutritionally well-off as they were elsewhere in the Horn region of Africa (see Part II, Appendix C).[4]

The problem of nutritional level, however, needs careful interpretation. Availability of milk and meat is uneven. Among the Boran several thousand people have been frequently, and historically, on the verge of starvation. A few have been wards of the missions or dependent on charity for their food. Others have become client-herdsmen of richer brethren. With two dry periods a year, seasonal shortages are always expected and usually dealt with by restricting the milk consumption of calves. When drought conditions begin, calves—and later, weak bulls—are the first to be slaughtered. Cattle people are nutritionally stable in the early part of a drought because milk and meat are still available. It is when their herds are depleted, often after a drought has ended, that food is in shortest supply.

Journey in a Forgotten Land

In order to get an accurate picture of the famine in Boran areas, we arranged a survey trip of northern Kenya and southern Ethiopia in August and September 1974. We started from Marsabit Town, the district capital in Kenya, and worked our way across the desert regions to the foothills on the Ethiopian border and then up the escarpment to Mega, a key trade center in Ethiopia. The entire area is the traditional home of the Boran-Gabbra peoples, but conditions at different locales vary enormously. The higher areas around Marsabit are grassland and highland forests; Turbi is a waterless desert with a valued grazing area; Sololo arid scrub bush; Moyale dry hills; and Mega a grassy hill station. In all, the area was a rough 300-mile square, some 90,000 square miles.

Marsabit Town

Marsabit is the district capital and trade center of northern Kenya. It nestles on the upper slopes of Mount Marsabit in a generally dry, cool area. At the government headquarters the newly-appointed District Commissioner (DC) showed genuine concern for the drought victims. He knew the situation had been bad and indeed would become tragic if the next rains failed. He had dispensed some famine relief food, including maize, powdered milk, dried vegetables, and edible oil. He had some supplies left, but was thinking of advising his superiors in the provincial capital Embu, 280 miles south, that he might need more help. In addition to the food, water, which came from a spring up the mountain, was a serious problem. It was very low and would run even lower unless the rains came across the 20 miles of mountain forests to replenish the spring. Conditions for the town dwellers, already under water rationing, could indeed become desperate. The nearest permanent supply of good water is 40 miles away, at the base of the mountain, near Loglogo. A pipeline would be extremely expensive and water trucks only a stop-gap measure.

The DC was familiar with the argument that Marsabit would become a ghost town if adequate water were not available, or if human settlement around the mountain were not limited. The former colonial administration had imposed a strict limit of 500 inhabitants on the town. Since Kenya's independence another spring and pipe had been opened and settlement had increased unchecked. The town now has some 6,000 inhabitants.

In the government Forestry Office the water problem took on another dimension. The forest around the mountain, so vital for local rainfall, was deteriorating at an alarming rate. Farmers had pushed up into the woodlands to clear plots and grow crops in the slightly moister areas. Herdsmen were taking

Marsabit market in time of famine.

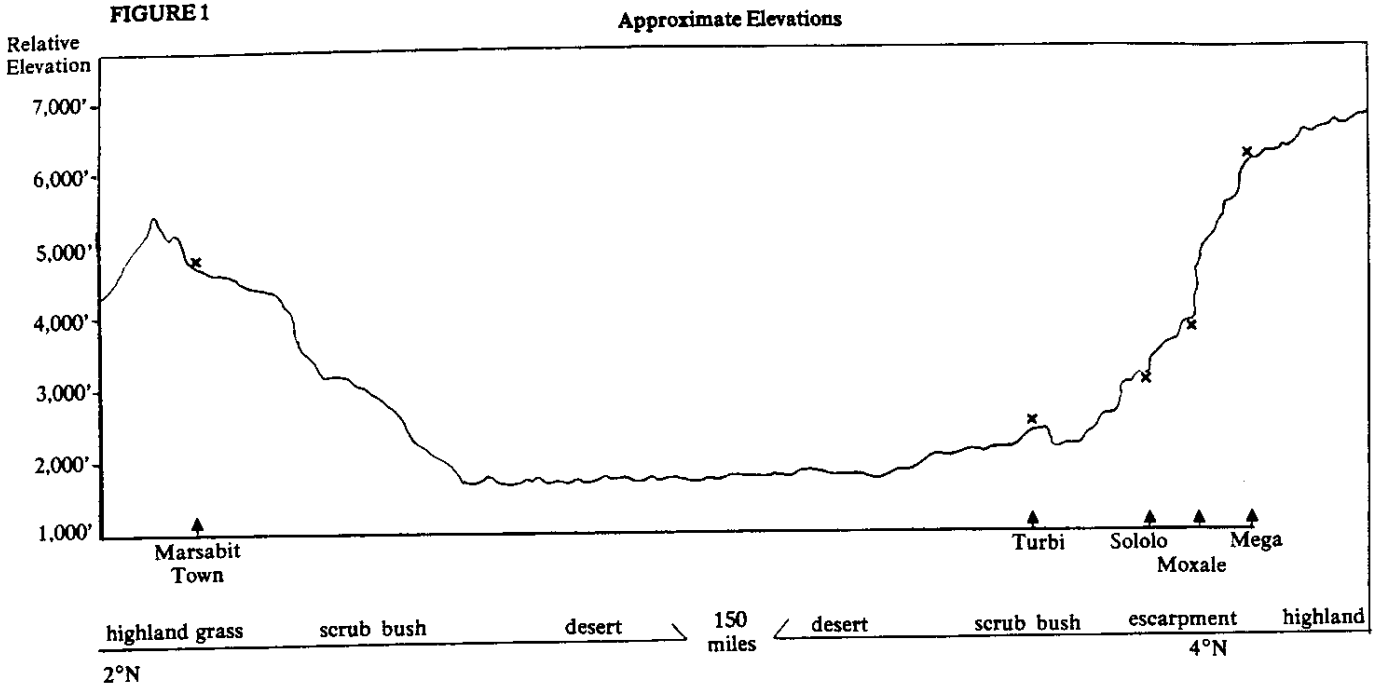
cattle farther up the mountain and overgrazing in many areas. The modest revenue that the Forester received from sales of poles, charcoal, house grass, and cutting permits had nearly stopped. People had become too poor to pay and simply stole the forest products. The small contingent of forest guards was unable to protect the large area. A few fires had already occurred.

The dry conditions also caused increased destruction of the forests by game animals, particularly elephant, buffalo, and baboon. As all wildlife become more desperate for water, many dry land browsers such as bushbuck, giraffe, dik-dik, and zebra moved up into the mountain in search of water and better grazing. Elephant and buffalo, competing for the dwindling food supply, damaged trees, bark, leaves, roots, and seed pods. Such conditions also made poaching easy. Taking advantage of the weakened state of the animals and their large concentrations, the incidence of illegal kills rose at an astonishing rate. While the animal population was decimated, the entire ecological system was disrupted. Few local people excepting the Forester realized the extent to which a diminished forest would affect rainfall and hasten the desertification of the entire area.

The local Forester explained that as the forest deteriorates, rainfall for the whole southern area can be expected to diminish. The main Marsabit forest is above 1,500 meters in altitude, although the forest line varies with the shape of the mountain. Its efficiency at catching rain clouds is considerable. The vegetation is an unusually dense evergreen woodland of croton, strychnos, and open juniper.[5] It is termed a "mist forest" in that rainfall alone does not account for the quantity of moisture. Trees are often shrouded in cloud which causes moisture to run down the leaves and bark and adds to moisture caused by ordinary rainfall. As water catchment areas the forests are absolutely essential. Below the woodland lies a belt of thick grassland ringing the mountain like a collar as much as three kilometers wide. The soil is deep and humiferous and normally produces a crop of tall, perennial grass.

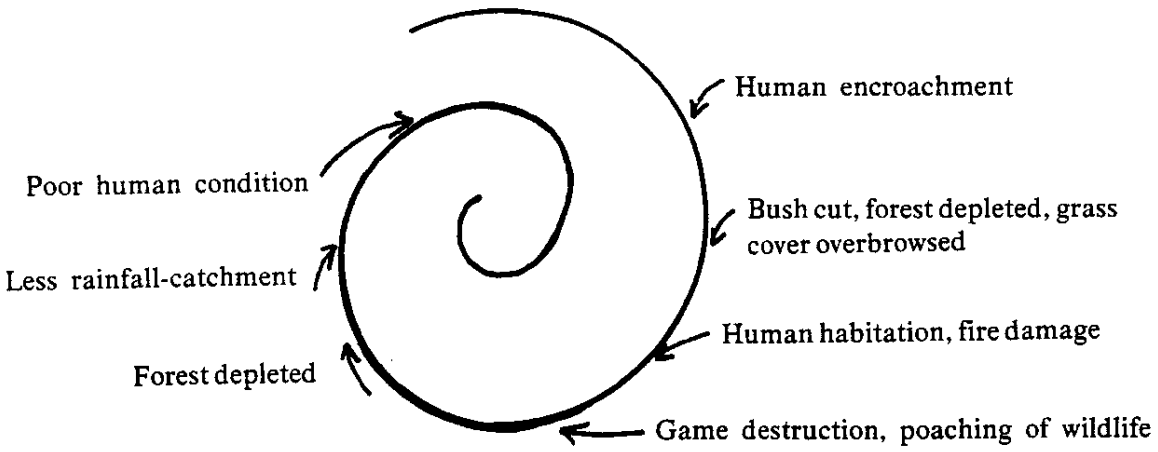
The Agricultural Officer was a young crop specialist who had been trained in the Soviet Union.

FIGURE 1



He saw the prolonged drought in the district as a crippling blow to his programs to improve agriculture, particularly on and around the higher slopes of Marsabit Mountain. For about 15 years cultivation has been encouraged around the mountain and a few very good farms have developed. Many Boran have taken up part-time farming and some have left herding altogether. The Officer gave us the second realistic view of the downward spiraling condition of man, land, and animals. Coupled with the forest conditions, there began to emerge a tragic chain of events, as shown by Figure 2. As drought conditions worsened, pastoralists moved their cattle farther up the mountain, grazing over small farms and into the forests on the mountain. While the concentration of pastoralists' cattle grew, wild animals also came up the mountain, forced to leave the drier areas for lack of grass and water. But the ever-decreasing island of grass had long been home to abundant wildlife. In the resulting competition among pastoralists and the new horde of poachers, both the wildlife and the mountain terrain fared very badly.

FIGURE 2



Nearly all local crops had failed twice by late 1973. Production of foodstuffs was down 70-80 per cent and markets were nearly empty. Prices had doubled and tripled, particularly for maize, beans, and potatoes. Many foods normally sold in the markets—sorghum, tef grass, millet, wheat, barley, and bananas—had disappeared. Most people around Marsabit lived for nearly a year on famine relief plus whatever sugar, tea, and maize they could obtain. As the situation in 1973 continued to deteriorate, many herding people began to move to better areas. Most of the cattle around the mountain were herded north across the fierce deserts to the Ethiopian escarpment, or south to Isiolo where some water and grass were available. Government officers faced serious problems of distribution, profiteering, and illegal food smuggling. Some people were reported to be selling maize in Ethiopia while their own families faced starvation around Marsabit.

The Ethiopian border 160 miles north presented several other food problems. The Kenya government officially exported a little maize to Ethiopia as a gesture of good will to the badly hit northern Ethiopian areas. The fact that the maize was needed in northern Kenya was not publicized and people in Ethiopia thus began traveling south to be in areas where they believed maize to be abundant. Meanwhile some herdsmen were moving north and traders were taking food north out of the district. The situation, sketched by the Agricultural Officer (Figure 3), was termed by him a gigantic mistake that no one could correct.

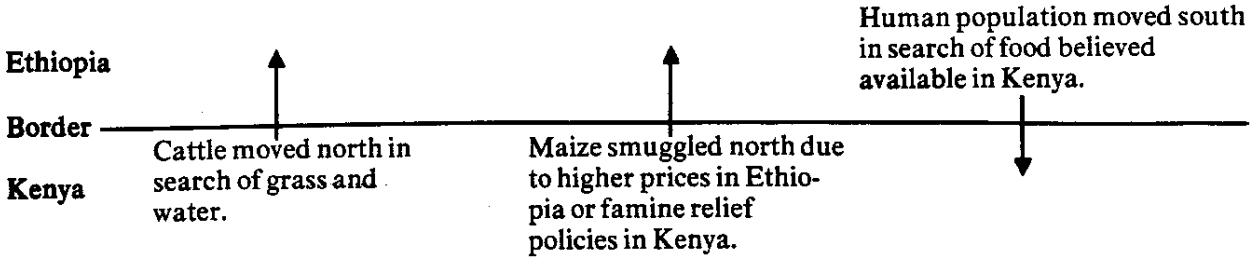
Distribution controls were nearly impossible to apply because the Boran could move with pack donkeys or camels over trails impassable for police vehicles. Traders also could travel with impunity over the vast desert areas, and some customs agents at the border crossings were reported to be collaborating in the illegal food movement.

Attempting to control food distribution in famine times is a Pandora's box. Some people with food sell it for sizable profits, while less fortunate people have to sell their last cattle, sheep, or goats merely to survive. Traders hold back supplies with an eye to market timing, or move food by truck to nearby areas for more profitable sales. Famine relief food often does not reach the children or the aged, but is sold and resold to the highest bidder by family members. Other food is received under false pretenses. In some markets maize marked for famine relief was sold openly.

Profiteering was certainly a part of the dismal picture, but other logistical problems compounded food movement within the stricken areas. Missionaries carried out much of the famine relief, but were not given any special permits to move their trucks; police occasionally stopped and detained the trucks for failure to have proper permits. Obtaining seed has been another major problem for the Agricultural Office. Maize is the staple food, but the ordinary variety, which takes a 180-day growing season, is impractical for drought conditions. The new short-season, 90-day "Katumani" variety is in great demand. The seed processing stations in central Kenya have it, but haphazard ordering by missionaries, government officers, and international relief organizations makes the seed difficult to obtain.[6]

As the rainy season approaches, the struggle to get seed into remote areas takes on life-or-death dimensions. Logistical problems are intense. In April 1974, for example, the Marsabit Agriculture Office dispatched a truck south to pick up a large order of seed just before the rains were expected. The driver disappeared for a week (he was believed to have been drunk in the city, but no one actually knows). By the time he returned with the seed the rains had come and were nearly over. It was too late for many to plant and too late to dispense the seed. Even with some rain, little planting would have

FIGURE 3



Emaciated cattle at Ulanula well, Marsabit. Stone walls are to keep elephants from destroying well.

occurred because many people had to eat their seed or sell it for food; others were already in such weakened physical condition they were unable to plow the hard land.[7]

Two other government offices, Range Management and Livestock Marketing, provided further insight into local drought conditions. The cattle population in the district as a whole was down from 200,000 in 1971 to 145,000 in 1973. These are rough estimates. Probably about 20,000 cattle were lost in the drought and 30,000 were taken out of the district. About 4,000 camels are estimated to have died around Marsabit. All the Range Management reports for 1973-74 indicate a declining and deteriorating range condition.

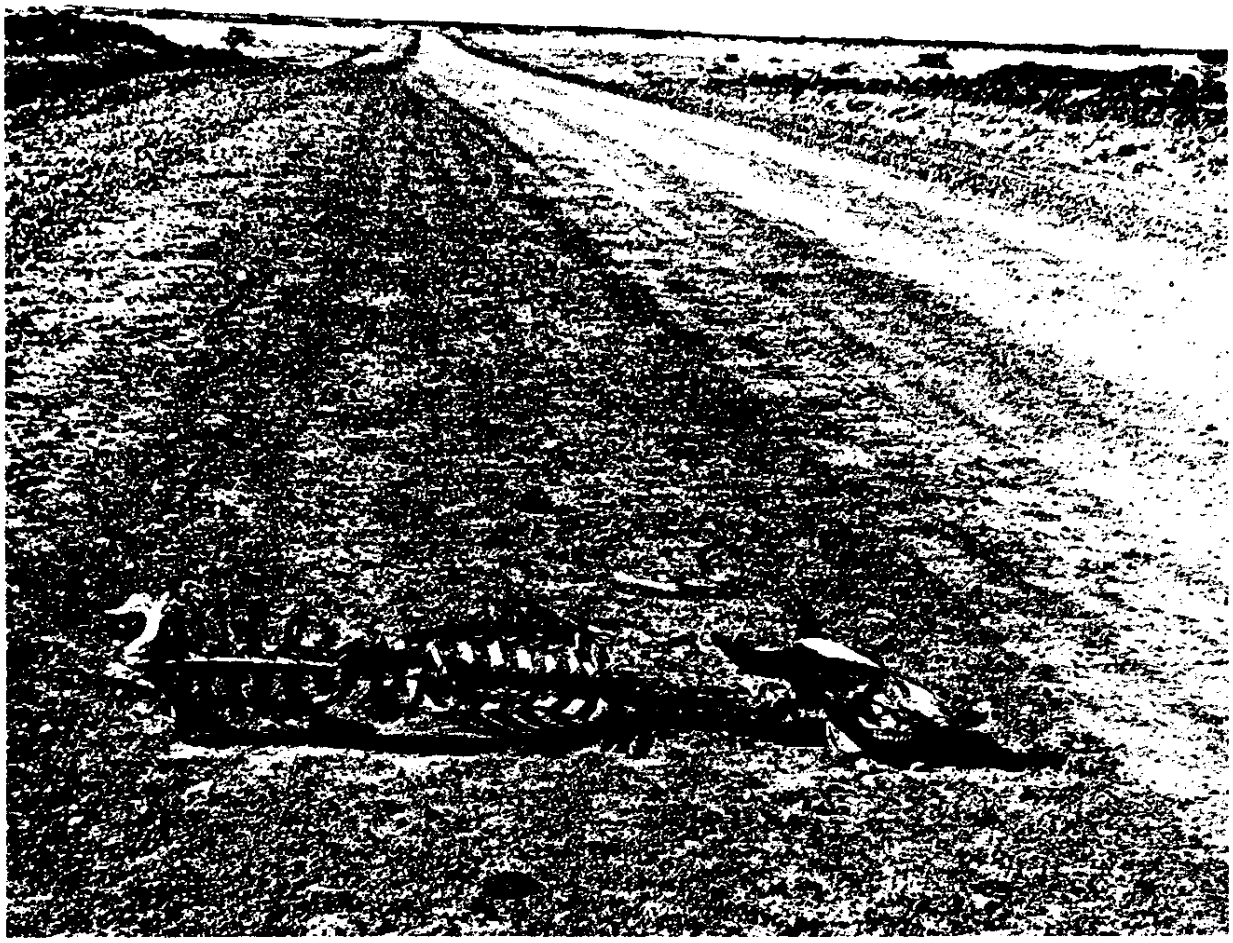
Livestock exports and hide sales (Table II) hint at the people's desperate attempt to avoid loss of cattle. A clear pattern emerges. People attempt to sell drought-stricken cattle and to keep sheep and goats to eat (thus selling more skins than the year before). There is also an increased reliance on sheep and goats, a trend that is disastrous for range conditions. Goats eat the grass stubble down to the roots, which destroys both the existing grass cover and seed-bearing grasses needed for future growth. "Goats make deserts," is an oft-repeated phrase among local government officers concerned with the environment.

TABLE II

Marsabit District Livestock Exports

	1972	1973
Total cattle exported	6891	8412
Total hides exported	2286	3541
Total goats exported	13,767	8493
Total skins exported	19,679	21,264
Total sheep exported	4591	4246
Total sheep skins exported	34,101	33,033

Source: Range Management Report, Marsabit District, Kenya, pp. 9-11.



Cow.

In terms of stock movement, the drought had created an even more perplexing picture. Illegal movements—without permits and disease controls—were causing havoc in the disease eradication program. Drought made the animals easy targets for several diseases and as herdsmen tried to move their emaciated cattle to better water and pasture they ran the risk of spreading disease. Most herdsmen do not report dead animals and checks across international borders are impossible.[8]

Illegal stock movements within districts in Kenya are a shade less hazardous because Kenya has had national inoculation campaigns. Movement into southern Ethiopia or back and forth across the nearby Somali border spells more serious trouble. For example, Bovine Pneumonia (CBPP) has been confirmed in the northeast corner of the district near Iloret, an area inhabited by Dassanetch and Hamar people. This portion of the district is under quarantine, but since the Dassanetch and Hamar are enemies of the Boran, no one is certain that cattle thefts are not in fact causing cattle to be taken to and from infected areas. Cattle theft is the regional pastime and a praiseworthy occupation; in some cases the thefts take on the dimensions of gigantic Texas-style cattle raids with some 2,000 head driven off. When stolen back, cattle may be seriously infected from across national borders.

Drought has been the crucial factor in setting back another type of government program: the settlement schemes which officials saw as a panacea for the management of cattle people. The two new settlements around the mountain, at Songaa and Gombo, each with some 60 new farmer-herdsmen,

have suffered substantial hardship. Many people have lost all their cattle and the National Christian Council of Kenya has come in to provide relief and further support. Another scheme, at Badasa, has met with even more severe setbacks. The local council misappropriated the $4,000 that had been set aside to buy seeds to get the farms started, and elephants knocked down all the new fence posts. According to the Range Officer, the elephants found it "very relaxing to scratch their backs on the posts, and sometimes pulled them out just for sport."

Yet the familiar argument that pastoralists are better off with settled, "organized" ranch schemes is still prevalent among government planners. The government favors fencing in a large area with a permanent water source, then inducing pastoralists to settle there and fatten their cattle for sale to traders and government marketing agents. This is in spite of the fact that during drought settlers become welfare cases while the "traditional" pastoralists are still able to move at least part of their herds to places where grass and water are available.

At Marsabit hospital one could see at a glance the prolonged drought's grim effects on the people's health. But, as the missionary doctor pointed out, "it is only the tip of the iceberg." Most pastoralists do not come to the hospital, nor bring their children, nor stay very long if they do come. If a person is dying his relatives immediately carry him away to be near the cattle corral (and his ancestors) when death comes. Any statistics on deaths by starvation derived solely from hospital records would be totally misleading. Nevertheless a dozen starvation deaths occurred in the Marsabit hospital alone over the past year.

Four prevalent medical problems are directly related to famine. First, protein deficiency, kwashiorkor—which leads to body swelling, hair turning red, peeling skin and eventually death—is occurring mainly in children between the ages of two and eight. Children who have recently been weaned are particularly vulnerable. Kwashiorkor is difficult to treat if in an advanced state because the body chemistry is completely disarranged.

A second major problem is calorie malnutrition—marasmus—which is a lack of carbohydrates and fats in the body. It is commonly seen in adults who are not getting enough milk or meat. Marasmus is treatable if found early, and patients can often be "fed back" to health. But in one case an entire family—father, mother, grandfather, and a child—was known to have died near Bubisa, 40 miles away. Marasmus was blamed.

Third, vitamin deficiency is commonplace. Cases around Marsabit lead to night blindness, drying and ulcerations of the eye and eventually more serious eye diseases. The doctor's survey of a nearby primary school in the summer of 1974 revealed that 65 per cent of the 260 students were suffering from vitamin deficiency. None of the students had eaten any breakfast nor lunch and most expected only one bowl of maize meal per day from their own homes.

The fourth problem, iron deficiency anemia, is so widespread around Marsabit that health officers felt no one in the area could be considered normal in that respect. The average hemoglobin taken is 50 per cent below normal. Such severe loss of iron is due to a widespread lack of milk and vegetables, plus the fact that local water has a very low iron content.

The hospital has dispensed some famine relief foods and was currently running a milk clinic for mothers. Unfortunately, food reserves were so low that only those admitted to the hospital were getting fed. The doctor expected the other health problems brought on by famine to get worse, because even if the fall rains of 1974 came in abundance, food would be scarce for at least another three months. Nor is the broader picture of health encouraging. The famine-weakened population is far more susceptible to other diseases including pneumonia, dysentery, tuberculosis, worms and, when rains do eventually come, malaria.

Overall the famine relief work going on in the Marsabit Town area was dismissed by the medical authorities as inadequate and inept. The district government had responded slowly to the famine. Only when a Nairobi press report wrongly claimed 200,000 local cattle had died did some action occur: the former District Commissioner was transferred to a new post. Whether he was removed because he failed to keep the central government fully informed, or because he failed to keep the famine from being reported outside the district, is the substance of much local debate.

Some relief foods did reach this area, but missionaries active in the effort were told not to claim any publicity, nor to write home about the famine, nor to make an issue of it in any way. Officially it did not exist. The administrative position was that food was adequate and that everything was under control.

Left: Camels at well. Right: Gabbra family outside their house.

Turbi, Lion-Plagued Desert Camp

Some 110 miles north of Marsabit on the new Kenya-Ethiopia road is a hilly outcrop in the desert known as Turbi. A few years ago it was a road-builders' camp, full of tin shacks, repair shops, and heavy equipment. It is now abandoned except for a desolate cluster of Gabbra villages. It is a halfway point for camel-keepers on the desert between reliable water 16 miles to the north and dry grassland to the south. Aside from the Gabbra villages there is a single trader's shack, the road-camp's airstrip, and an Italian missionary who works with the Gabbra from a tent under a tree.

The Gabbra, close cultural cousins of the Boran, have a population of about 18,000. They rely directly on camels and inhabit the desert and arid lands between Marsabit Mountain and the Ethiopian border. Of all the northern Kenya people the Gabbra are probably the most able to withstand hard drought conditions. They are hardy, sinewy, resolute people extremely well adapted to dry areas. Nevertheless they have suffered considerably in the last 30 months. Between 30 and 40 per cent of their camels have died, and even after some rain came in April 1974, abnormal lion attacks continued to deplete their stock.

A few Gabbra are reported to have died from malnutrition, but most of the destitute families—those who lost all their camels—settled near one of the missions and were sustained by famine relief. The Maikona Mission, where Catholic missionaries live permanently, has a new population of about 400 Gabbra families, all drought victims. These people lost all their camels, sheep, goats, and reserve capital. Now, and for the forseeable future, they are complete welfare cases.

Even in good times the Gabbra live at a precarious level of subsistence. Their food is mainly camel milk, supplemented occasionally by camel's blood and meat. Under difficult conditions they will slaughter some of their sheep and goats, but most view this as drought food. Families have tea, sugar, and in recent times some maize meal. Tobacco is a part of the diet and is used particularly to avoid hunger pangs. In addition, a symbiotic food relationship exists with a small desert hunting group known as the Waata, who traditionally provide honey, game meat, and giraffe hides used by the Gabbra and Boran in making milk pots. Waata receive in exchange camel milk and certain parts of any goats that are slaughtered. Under drought conditions the Waata hunters become far more important to the Gabbra as providers of food.

Because the drought has upset the traditional balance between man, land, and animals, lions have made unprecedented attacks on Gabbra livestock. The Catholic Father explained that herdsmen have been forced to invade the scrub bush country the lions inhabit in order to graze their stock nearer the few watering points. Smaller wildlife such as bushbuck, dik-dik, and gazelles, that lion generally feed upon, have fled human presence. Lions need scrub bush areas for cover, so rather than follow the browsing animals into the open desert, they have turned on the Gabbra livestock, particularly the young camels. Herdsmen protect the stock with spears, and usually lions will be killed or driven off. Gabbra of course try to kill lions with groups of herdsmen, but invariably the man who withstands the first charge is mauled before others can assist in the kill. Few human deaths have been reported, but the 14 cases of lion mauling admitted to Marsabit hospital in recent months indicate the seriousness of the situation.

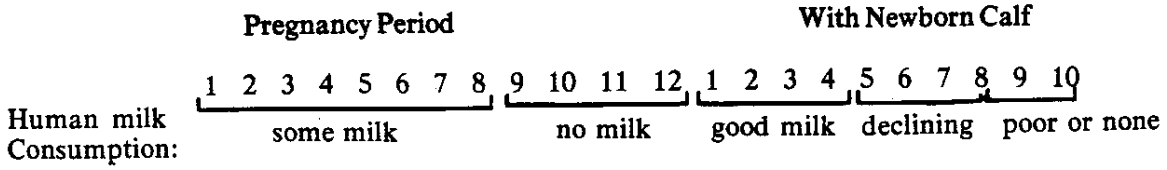
Gabbra households on the move.

Prolonged drought totally upsets the complex Gabbra animal husbandry. Camels have a 12-month gestation period, after which herdsmen must share some milk with the calf. This usually prompts the Gabbra to stagger the impregnation of their camels and thus assure that human needs are fulfilled at all times. A single camel will provide milk in various quantities, depending on the time of her pregnancy (Figure 4).

Because mating occurs only in response to rain, the drought throws the whole cycle out of balance. The lack of rain causes a failure to impregnate and thus a depletion of the basic milk supply. The result is disastrous for a people totally dependent on milk as food. Even with the return of the rains after a drought two other problems face Gabbra herdsmen in getting enough food. First, male camels in their excitement to mate become extremely difficult to handle and may kill each other in vying for a female. Second and more dangerous is the heightened incidence of raiding by enemy herdsmen. Livestock theft and the killing between herdsmen have gone on in this region for centuries. Indeed, there is an entire lore concerning courage in the face of the enemy, revenge, honor, and livestock protection. What is

FIGURE 4

Camel Milk Supply



relatively new is the disarming of the Gabbra and Boran by Kenya authorities (in the 1920s), while their traditional enemies in nearby Ethiopia and Somalia remain well-armed and in some cases mounted on horseback or mules.

The Dassanetch and Hamar, who reside just across the Ethiopian border near Lake Rudolf, are considered the fiercest and most warlike of the Gabbra's enemies. They have effectively cut the Gabbra off from Lake Rudolf and forced them east. On the other side of the Gabbra territory the various raiders from Somalia are slightly less inclined to kill human beings wantonly, but are equally fierce livestock raiders. They have cut off the Gabbra and forced them west into a corridor (see map). In essence, Kenya's camel people have been disarmed at a time when their borders are insecure and their traditional enemies, who have also suffered heavy drought losses, are well-armed and quite willing to recover their losses by raiding.

Most raiding occurs during the rainy season. This has always been so but the drought has added new dimensions. The rains render the roads impassable to vehicles and thus Police pursuit is impossible. Moreover, during rains there are numerous watering points for a stolen herd on the move while dry season raiders are prey to police ambush at the few places where water can be found. Drought heightens raiding because everyone has suffered losses and are anxious to build up herds to acceptable levels. To replenish one's herd at the expense of a traditional enemy is not only a quick solution, but an honorable and daring thing to do.

One case we knew about during a previous rainy season involved the theft of 26 cattle and the killing of a herdboy. He had been attacked and speared repeatedly. On this occasion police tracked the raiders through the bush and captured them by surprise. One man admitted the killing; the others said they had merely "dipped their spears" for the honor of it. All were grown men. The boy was 11 years old.

Violence triggered by drought carries with it other problems. The Gabbra's plight is political in that their grazing areas are increasingly restricted by uncontrolled raiders. Kenya police have tried to stem the raids but the areas involved are huge and largely inaccessible. The Gabbra grazing area is being continually reduced and as they are forced into a progressively narrower corridor the Gabbra abandon traditional conservation patterns. Like the Boran, they will overgraze and deplete the range rather than leave it to the enemy. In the past some pastures were left ungrazed for a few seasons to replenish naturally.

One cannot help but admire the high degree of adaptation the Gabbra have attained in order to live in this sparse desert. Their lack of material wealth, their willingness to keep moving, and their enormous understanding of the environment are incredible to Western observers. In terms of dry land usage, it seems that the only way to have any land utilization at all here is to permit the Gabbra free movement in their traditional pattern. The government probably does not agree. Indeed, we learned later that settlements for the Gabbra are being planned in the Huri Hills to the west, an area that has yet to find permanent water.

The Sololo Mission

Sololo is 25 miles north of Turbi in the foothills of the Ethiopian escarpment. It is a serene, quiet place with a few mud-roofed trading shops, a police post, a school, and a hospital clustered near a mission station. The surrounding country is covered by scrub bush and acacia trees. It is higher and cooler here than at Turbi, and because of the nearby mountainous escarpment, Sololo usually gets adequate rain to support some Boran farmers. Other less permanent Boran villages stretch along the escarpment, inhabited entirely by cattle-keepers.

The drought created havoc for the farming population, as the many malnourished farm children in the Sololo hospital indicated. Then in April 1974, after 24 months of drought, the rains came. They were a great relief to the pastoralists, but tragically the agriculture people had eaten or sold nearly all their seeds. Few were able to plant and in spite of the rain the famine continued for them.

The young Catholic Father at the mission had tried desperately to help the farmers, driving along the 500 miles to southern Kenya in search of seed, and to pick up relief supplies. He had also sent the mission station driver who twice was arrested by Kenya police for driving beyond the one-day permitted traveling time. On another occasion the relief food was seized for a time by the police who believed the driver to be part of a smuggling enterprise.

The food shortage in Sololo had been bad for a long time and the effects of the famine were clearly

Famine relief soup kitchen and Catholic priest.

seen in the mission hospital. Starvation deaths were reported in outlying villages and five or six people, including several children from farm families, had died in the hospital. Others lay emaciated and hollow-eyed in the wards, their bellies distended, their skin sallow and gray-brown. For babies, malnutrition was evidenced by the red tints in their black hair. Several old people had been brought to the hospital, picked up as they lay beside the roads by passing vehicles. The doctor here, as in Marsabit, quickly noted that hospitals are the last place a Boran wants to die.

Famine-related illness did not become widespread for many months after the drought began, when the general health of the people had deteriorated. Some diseases, paradoxically, were actually triggered by the coming of the rain in April 1974. In their weakened state, people were more susceptible to wet-weather diseases such as pneumonia, malaria, tuberculosis, and dysentery, the main illnesses in the area aside from VD. The incidence of famine-related disease is at least partially reflected in the number of patients treated per month (Table III).

The figures indicate that between 1973 and 1974, drought-related illness increased *over two and a half times* in May and June following the April rains. Most of the patients were children, young mothers, or elderly, and most of the children were from farm families. Children from herding families, who tend cattle, sheep, or goats all day, have, on the other hand, the best chance of survival for stealing milk while herding is common practice, even in the face of severe punishment.

Outside the hospital the missionaries were trying to see the people through with famine relief foods. Other efforts were aimed at rehabilitation.

TABLE III

Sololo Mission Hospital
Outpatient Treatment 1973-74

	1973	1974
Jan.	1527	1283
Feb.	1448	1345
Mar.	1865	1434
Apr.	1402	1528
May	1390	2402
June	1347	2932
July	1486	1908
Aug.	1035	1532
Sept.	947	1179
Oct.	1545	1184
Nov.	1143	1063
Dec.	1325	1694*

*In September 1974 a nurse began traveling to nearby villages, which would reduce the hospital outpatients. December figures based on one-half month figure of 847.

Although maize was still impossible to get, a priest found some seeds in southern Kenya, including finger millet, pigeon peas, beans, and cassava. Equally important, a borehole was drilled nine miles from the mission, a pump was installed and a committee of Boran elders was set up to manage the well. The elders controlled the pump by collecting small fees from each herdsman using the water, and then using the money to buy diesel fuel from the mission station. The mission took care of maintenance. The project was running well except that word had spread about the water and the elders were faced with charging different fees for "local" and "foreign" herdsmen, a potentially violent situation among pastoral people.

For us, the key lesson at Sololo was that the effects of drought go on long after the rains come. Without seeds to plant, farmers remain welfare cases. The rains also bring crippling and debilitating diseases, particularly to children and the elderly. Herding peoples, on balance, were better off in Sololo even with the uncertain, episodic rain. They had lost cattle, but most had been able to move some of their herds to Ethiopian water holes and into patches of grass. Now they had a new water hole. Certainly Sololo was another argument for some kind of continued dependence on pastoralism or semi-pastoralism. There were far fewer herdboys in the hospital than farm boys.

Moyale, Kenya

The Ethiopia-Kenya border in this region runs in the higher foothills of an escarpment that eventually climbs into the Ethiopian highlands. The town of Moyale is divided by a dry river bed that serves as the border's demarcation; half the town is under Ethiopian jurisdiction, half under Kenyan. The Kenya government has an administrative post here staffed by young, eager officers starting their service in a remote station. There is a small hospital, a dozen shops, a few bars and brothels, and a petrol pump. It is a brownish, dusty hill station that commands starkly beautiful views over the Kenya deserts below.

Famine conditions had existed here for nearly 24 months when, as in Sololo, a deluge came in April 1974. Nearly ten inches of rain fell in a few days, flooding some areas, creating unsanitary conditions and contributing to illness. Seed was in very short supply and some of those who did plant during the rains were flooded out. The herdsmen around Moyale reported adequate water but poor grass and forage. Overgrazing by sheep and goats was thought to have destroyed even the grass stubble and made replenishment impossible. Some 400 destitute people were still being fed at the local mission. Three deaths were known to have occurred, each blamed directly on starvation. In the town, run-off water from the streets contaminated the wells with human excreta. Fly breeding was excessive; mosquitoes abounded; offensive smells from wet manure heaps wafted through the muddy streets. Roads everywhere were impassable. The hospital reported that several Boran patients, although suffering from tuberculosis, had left with their cattle and had not returned for treatment. The Health Officer noted that local animals sold for slaughter were in such emaciated condition that he had "had to condemn 125 different animal parts."

The local missionary simply said life was hard. Near the mission some of those who were trying to farm were forced to sell their remaining cows for seeds, a dramatic change for any Boran. To traditional Boran, yet another problem was posed by the drought; young men worried openly about their generational discontinuity. Because drought seasons are not counted in the Boran calendar, the age grade system would be out of kilter.

Overall this little border town had probably not suffered as much as Marsabit or Sololo. What was interesting here was how the local administration viewed the people's plight. Very little was done. Government reports universally reflected only the compartmentalized view of a Health Officer, a Crop Specialist, or a Social Welfare Worker. No one looked at the problem as a whole and one administrator seemed not to know what another was doing. There was little success in getting relief supplies to the Moyale area. The only clues to any administrative concern were the Community Development Officer's statement in September 1973 that "symptoms of imminent famine are discernible everywhere."

Southern Ethiopia

Southern Ethiopia has been called the Tibet of Africa. Its craggy mountains and parched valleys are largely uncharted and little traveled. The region was not incorporated into the Ethiopian empire until the mid-1800s and then by conquest from the north. Land was seized and kept as imperial property and later given away to the aristocracy, to civil servants, or to the church. Even today freehold land is scarce and the feudal system prevails. This will undoubtedly change with the new administration, but for an area in such economic disarray, land reform will be slow.

Southern Ethiopia offers little protection against future famine conditions. Agriculture is poorly developed and, as in the rest of Ethiopia, fully one-third of the people live more than 20 miles from any road. Very few people have access to trade centers, schools, or clinics. Dams, water pans, and wells are poorly developed.

Although drought conditions generally have eased, the problems in another sense are just beginning. Many people have sold their possessions for food and some have even sold the wood in their house frames. Herdsmen of course suffered when their cattle died, although they could eat the dead animals. Now that the herds are totally depleted hunger is even more acute. And, other natural disasters have occurred. Ethiopia was struck by army-worm caterpillars just after the April 1974 rains. This was a full-scale invasion with some provinces suffering a 60 per cent crop loss. UNFAO workers were able to stem the army-worm to some degree with tons of DDT, but the crop destruction came at the worst possible time.

Moyale, Ethiopia

The army coup in Ethiopia was the main topic of discussion in the Ethiopian border town and a constant news subject on the radio. Many people blamed the old regime's inept handling of the drought as the primary cause of Haile Selassie's downfall. Conditions in southern Ethiopia were, if anything, worse than in Kenya. The basic poverty level was lower to start with, and the drought had been equally bad. One major difference existed, however. Massive famine relief campaigns had been mounted.

The terrible drought in northern Ethiopia a year earlier, in which some 100,000 or more had died, had in a sense prevented conditions from being worse in the south. Here people at least had a national program under way that helped in their plight. Large-scale relief was carried out by trucks and helicopters provided by the Lutheran Church, the Catholic Church, the Red Cross, the Fourth Brigade of the Ethiopian Army, and even the Imperial Guard. Conditions were still difficult in September 1974, but relief work was continuing.

A generally pragmatic attitude existed among Ethiopian military officials. Haile Selassie's government, which had just fallen, was openly, often bitterly, criticized. The fact that the bureaucrats in the northern drought areas were not sure whether the death toll was 50,000 or 250,000 was proof enough to everyone that the government was totally inept and should be changed.

Officials openly admitted other problems. Smallpox had occurred in some isolated areas in mid-1973 and health checks were impossible. According to Ethiopian Army figures, about 12 people had starved around the Moyale border post. Starvation deaths were registered and there was ample evidence that they did occur. No one in Ethiopia seemed startled by the question "were there deaths by starvation?" was asked.

The entire border region around Moyale was politically tense. Although the Boran consider the area their homeland, other tribes such as the Burji, Sakuye, Gurreh, and Degodia converge on Moyale to trade and to use the hospital. The drought had led to tribal tension and a great deal of stock movement. Everything seemed to be in a state of flux. Some herdsmen were moving south into Kenya, believing the October rains would be good there; others were

moving north in search of good pasture around Mega, Konso, or as far north as Negelli. Rain had fallen erratically and the Boran moved constantly in search of the pockets of good grazing. Tribal clashes over water and pasture occurred on the fringes of the traditional areas and around trading centers.

The border created other tensions. Smuggling of foodstuffs and poached game trophies was commonplace. Consumer goods like pens, shirts, and raincoats were going north. Twelve hundred "proper British umbrellas" were gleefully pointed out by one Ethiopian customs agent. Ethiopian shoes, fine cloth, and spices were moving south. Smuggling was considered a local sport by almost everyone and a few played it in a big way, as indicated by some *27,000* black and white colobus monkey skins that had been captured in Marsabit. They had originated in Ethiopia.

Tribal tensions also existed around water points, particularly new ones where usage priorities had not been worked out. Missionaries in Ethiopia had put in several new wells near Moyale, which rapidly attracted new settlement camps and resulted in several clashes. Those who lost control of the water turned to the mission for handouts and the missionaries wondered openly about the wisdom of boring only a few wells. Each borehole attracted large human settlements even before the first water flowed.

Boran and Gabbra are allowed to move freely back and forth across the border, much to the consternation of many officials. Health personnel despair about smallpox and cholera controls. Cattle officials worry about the unchecked spread of disease. Those concerned with famine relief are perhaps the most cynical, saying that it is impossible to stop people from selling food, often relief food, on whatever side of the border is paying the highest price. As we had learned in Marsabit, one of the problems for the food-short Kenya Boran is that southern Ethiopia, in a somewhat worse condition, has attracted all the maize that could be found. Maize selling for 30 shillings a bag in Marsabit brought 96 shillings across the Ethiopian border, and there were plenty of traders with trucks ready to take advantage of such conditions.

Mega, Ethiopia

Mega was a World War II desert outpost in the Italian campaigns against the British. Above the town a crumbling Italian fort still guards the access to a higher pass, its ramparts and turrets unused since the war's end. The town has some 2,000 inhabitants and is located at a place where a dramatic hilly uplift occurs on the Ethiopian plateau. It is one of the main centers for the Boran; there is usually good pasture here and some farm land for Boran agriculturalists. The town has also served as a major distribution point for famine relief.

The situation in southern Ethiopia became extremely serious at the end of 1973 after the failure of both rainy seasons in that year. By January 1974 major church relief had begun, following a helicopter survey by the Norwegian Church Relief missionaries in Ethiopia. Starvation deaths were reported in many places around Mega (see map) with one small village reporting 68 deaths. People were reduced to eating leaves (called *stingo*) and roots from the nearby bush country. Cattle and camel deaths were substantial throughout the area. The helicopter crew cited 120 dead cattle near one dry well alone. In another area near Mega a completely destitute village had lost all its cattle. After the helicopter crews surveyed some 30 villages, major relief was decided upon.

The efforts were impressive. The Norwegian Church Relief, the Red Cross, Oxfam, the Imperial Guard, the local governor, and later the Fourth Brigade of the Ethiopian Army each contributed and dispensed foodstuffs. Some 460,000 people throughout southern Ethiopia had been reached by August 1, 1974, with over 9,022 tons of relief foods.

About one-half the food came from government stores in Addis Ababa, from UNICEF, and the Swiss Embassy. The remaining food and seed were purchased in other parts of Ethiopia from funds gathered by the Norwegians. The majority of the support came from the Norwegian Church Relief in Ethiopia, but Oxfam, Icelandic Church Relief, Norwegian Youth, Ethio-Japanese Textiles, and the Ethiopian Airlines also contributed. The long-distance hauling of food and seed from the north was by hired trucks, again paid for by the relief organizations. The local distribution was by mission trucks, Land Rovers, and two helicopters, plus camels and donkeys.[9]

Distribution work presented an interesting set of problems. If the main mission stations at Mega, Negelli, and Konso distributed from their central stores they found an immediate influx of people into

the stations. To prevent congestion and attendent problems, such as the development of a squatter population, the main stores had to be shut down as dispensing points and the food moved to the villages or smaller outlying mission posts. Also, the fact that about half the food dispensed was purchased in less desperate regions of Ethiopia caused prices in those areas to inflate and local people to complain. Missionaries who were aware of the hardship this created tried to negotiate fair prices, but some profiteering was inevitable. In a sense it was robbing the less poor to feed the near starving.

The "bush telegraph" very effectively communicated information about where food was being dispensed. Distribution points were immediately known; relief food was redistributed by smugglers and profit-seekers, and resold, sometimes in the Mega market a thousand yards from the mission station which had laboriously sent it to outlying villages. Of course, not all food failed to reach the needy, and profiteering was probably kept to a minimum by the Ethiopian Army, who were alert to it. Again, the experience gained earlier in the north helped the southern drought victims. Yet some relief grain distributed in Ethiopia turned up for sale in the Marsabit, Kenya, market 250 miles south, when price fluctuations made it profitable to do so.

It is undoubtedly true that the massive relief effort made an enormous difference in southern Ethiopia. Nevertheless, acute malnutrition in the form of protein deficiency (kwashiorkor) and marasmus was widespread. Iron anemia and vitamin deficiency were endemic. Scurvy was reported and some people seen waiting by the Mega clinic were so weak they could not stand or walk.

Here, however, the Norwegian nurse and her assistants had obtained results. By comparison to clinics we had seen earlier, her store had ample supplies. Vitamins A, C, and D, Biovit, Fafa (a local nutritional concentrate for weaning babies) SIDA wheat, and Swiss milk powder were all dispensed at the clinic. Perhaps the most astounding "wonder drug" was Norwegian Fish Powder. Despite its terrible smell, the powder's concentrated protein produced visible improvement among famine victims within three days. Missionaries instructed family heads to use the fish concentrate by mixing it into maize porridge to reduce the smell. Once families did this, the visible early effects of protein deficiency—swollen eyes and gray complexion—began to disappear. In fact, the fish powder gave a group of Boran such renewed hope they dubbed it "the substance that gives back life.

In April 1974, after 20 months of drought, the rains came to this region as well. People planted maize, and waited optimistically for the crops to grow and their health to improve. As suddenly as they had come the rains stopped and drought conditions returned to Mega. Crops burned and by August, normally the harvest season, virtually nothing was left. In other areas, Negelli and Konso, crops got slightly more rain and there was some harvest.

The arrival of the rain in Ethiopia creates some problems particular to the region, in addition to those shared with the south. Cold weather accompanies the rains in the highland areas making the need for food more desperate. Cattle in weakened condition are less able to withstand sudden changes in temperature and many die. The cattle often tend to drink so much of the suddenly abundant water that it is fatal. Others choke to death on leeches found in wells during wet seasons.

For humans, the rain brings the same problems reported at Sololo and Marsabit—an increase in pneumonia, dysentery, tuberculosis, and malaria. Even for the relief workers the rains are a mixed blessing. Food distribution becomes more hazardous as many of the smaller roads become totally impassable and others, particularly in mountainous areas, are too treacherous to negotiate. Fording rivers at normally passable points becomes especially hazardous. Lutheran famine reports are sprinkled with such items as "one of the Mercedes dump trucks was taken by a river going far from its ordinary course during a flood. The truck was written off but a large part of it saved for spare parts."

Rainy season conditions here compound other problems. Maintenance of relief vehicles becomes difficult, helicopter flying more dangerous, spare parts harder to obtain, the supply of food from Addis Ababa more eratic. Moisture also means rot in grain storage sheds. In general the arrival of rain means new but equally difficult conditions for relief workers to deal with.

Although the Mega did not improve significantly after the April rains, Sidamo Province as a whole was better off. Missionaries felt their relief work would have to go on, but have devised a "Food for

Journey in a Forgotten Land.

Work" program that they hope will also help improve the wells and roads. At some 23 food distribution points the plan is to ask village elders to appoint revolving work teams. The individuals making up the team may change, depending on their strength and health, but the group is kept working on behalf of the whole community. In exchange for their labor to roads and wells, food is provided for the workers. The plan was devised to avoid the welfare-state syndrome while at the same time improving local conditions. Clearing new roads and repairing old ones will also make the relief work easier if drought conditions persist. Enlarging some of the water holes and building some new run-off catchment systems will help everyone if the rains return to their normal patterns of volume, duration, and distribution.

Summary

Southern Ethiopia and northern Kenya suffered roughly equal hardships as a consequence of the drought. In both areas some starvation occurred, the health of the population deteriorated, and the social fabric began to disintegrate. Cattle and camel deaths were widespread, crops failed at least twice in most places, and usually reliable water holes and pans dried up. Raiding and killing occurred on a small but continuous scale.

A traveler in this part of the world could still leave it with a false impression. Human suffering is difficult to gauge and seems almost swallowed up in the

DROUGHT IN SIX COMMUNITIES
SUMMARY, AUGUST - SEPTEMBER 1974

Marsabit Mt.	Worst hit area in terms of famine, water shortage, lack of seed; surrounding villages abandoned or deteriorating; some deaths reported; 50 per cent cattle loss. Around Marsabit Mt.
Turbi	Gabbra camel losses at 30 to 40 per cent; some families near starvation helped by mission; family dislocation; loss of milk; lion attacks on livestock.
Sololo	Famine deaths and widespread famine-related illness; lack of seed; recent rainfall and water project helping herdsmen.
Moyale, Kenya	Famine and flood conditions; sanitation and health problems in town; lack of coordination by administrative officials; minimal relief efforts.
Moyale, Ethiopia	Starvation deaths reported; tribal tensions; food smuggling; border problems with cattle; illness due to wet weather.
Mega, Ethiopia	Widespread famine, starvation deaths and loss of cattle offset by major relief efforts by international organizations and Ethiopian Army.

vastness of the country. One can be lulled into believing that life is nearly normal because no one really knows exactly how bad things are in the tiny forlorn villages miles away from any road. This lack of knowledge tends to dilute the impact. Travelers come and go, government officers remain politely indifferent, missionaries are sympathetic but fearful of speaking out, and traders are calloused by having seen it all before.

It is only on foot, walking through the villages or around the mission stations and clinics that the full impact of long-term food shortage begins to sink in. It is startling to see the fresh human burial mounds in the village corrals, or to see an old man sitting in the corral waiting to die. It is sobering to see children with dull grayish skins and tufts of red in their hair, or to see people lying on clinic porches because they are too weak to stand. Having known how fat and healthy Boran cattle can be it is a shock to watch emaciated cows being led home to villages in the evening.

Overall the social fabric of the entire area was put under enormous strain. Frequent death, particularly among the very young and the very old, had cast a morbid pall over every community. There was obvious damage to the growth of many children and their parents expressed a rising sense of despair. There was a perceptible loss of will and dignity, an increased dependence on begging and charity and a constantly expressed feeling of bad luck. Every village had experienced a severe economic downturn and very few people had reserves of anything. The social disruption was accompanied by a hostility to government. Particularly in Kenya, there was an increase in civil violence near the borders as well as the expected rise in raiding and killing when the rains came. Everywhere there was a sense of calamity and despair. People felt that their view of the world, which had always allowed them to predict and deal with the future, had somehow erred.

Photographic Credits

Picture on page 7 was taken by the author. Pictures on pages 4, 11, and 14 are by Mohammed Amin. Those on pages 10 and 16 were kindly provided by the District Information Officer, Marsabit, and pictures on page 13 are from the AUFS Documentary Film Project Files.

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NOTES

1. The policy-makers, of course, have had help in this planning from foreign advisers. Nor have many international aid organizations argued strongly against the cash crop and export marketing approach.

2. Estimated by the author after UNFAO, Watson, Baxter, Kenya census, et al. "Other" tribes in Kenya include Burji and a small, mixed group of southern Kenya groups, mainly government officials. Estimates are based on reports from local Ethiopian administrators and missionaries in the area. They are guesses at best. The total population of Sidamo Province, Ethiopia, is estimated at 2,479,000, according to the Statistical Abstract, Central Statistical Office, Government of Ethiopia, Addis Ababa, 1972-73. Asmarom Legesse estimates that Boran and Gabbra together number some 104,000 in Ethiopia.

3. Peberdy, 1970 and UNFAO, 1971.

4. The Kenya average calorie intake per capita daily is reported as 2,360; Ethiopia as 2,160, *Time*, November 11, 1974, pp. 22-23.

5. Dominant vegetation is *Acacia hockii-Themeda triandra* wooded grassland; *juniperus-Olea* forest; and *Acacia mellifera-Chrysopogon aucheri* bushed grassland.

6. The Katumani maize seed also increases the lysine (protein content), which helps offset malnutrition in areas where maize is the staple diet. There is also hopeful new research in high protein crops such as cow peas, pigeon peas and Mexican 142. Poor liaison between research extension workers and farmers hinders widespread implementation of the new drought-resistant varieties.

7. Even in good times the Agriculture Officers face crop disease and insect destruction that includes stalk bores on maize, black beetles on beans, weevils in stored grain, leaf disease on coffee, and cutworms and green worms on vegetables.

8. Trpansomiasis in both cattle and camels is common throughout the area. Under normal conditions an eradication campaign using Ethidium Bromide tablets or Antryade sulphate would be effective. With chaotic cattle movements no one is quite sure. Other diseases, such as hoof and mouth, anthrax, blackwater, heartwater, and Joneses Disease, were worrisome and constantly guarded against. The dreaded rinderpest which historically has wiped out great herds in East Africa is watched for very carefully. During the drought of 1973, 44,082 animals were inoculated in Marsabit District. Pastoralists are anxious to get their cattle inoculated against rinderpest and are quick to report any suspected cases. Both the Range Officer and the Livestock Officer pointed to this fact as evidence that pastoralists were willing to cooperate with the government range services. This may be too optimistic, however. The terrible toll of cattle losses from rinderpest in the past would lead even the most traditional pastoralists to seek protection.

9. Difficulty in getting clean fuel and keeping it dirt free, plus a shortage of spare parts handicapped the helicopter crews. They flew some 482 hours and lifted 614 tons of food.

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