

INSTITUTE OF CURRENT WORLD AFFAIRS

JBG-40  
Thirsty Land

Poste Restante  
Arusha, Tanganyika  
11 February 1953

Mr. Walter S. Rogers  
Institute of Current World Affairs  
522 Fifth Avenue  
New York 36, New York

Dear Mr. Rogers:

The economic problems of Masai District of Tanganyika are neither complex nor vague. When the visitor turns south from the green, forested and moist slopes of Meru and Kilimanjaro - during the long dry season - he sees and feels the causes of the hardships of the steppes. There is a persistent wind, sometimes dust-laden, dry enough to parch a washed shirt in twenty minutes, even if it is hung in the shade.



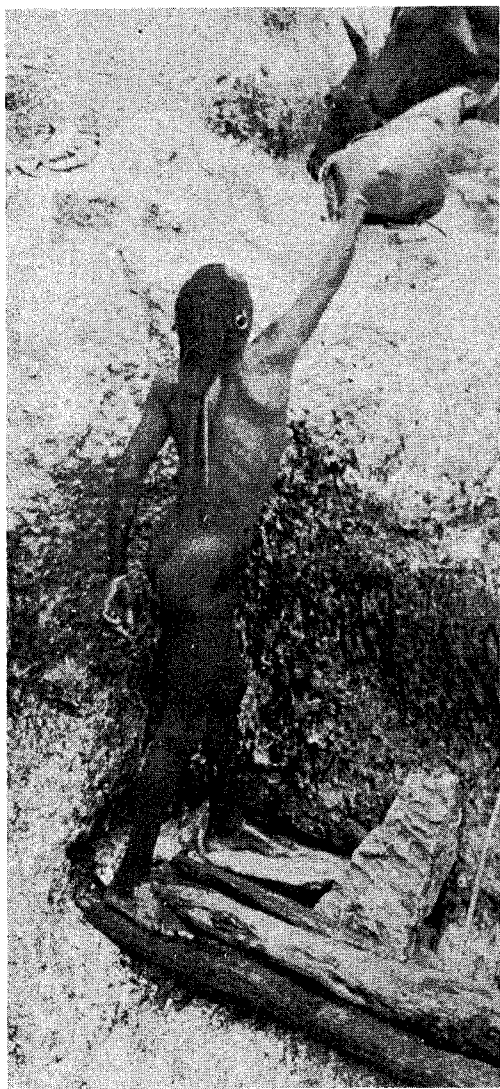
In daytime the wind courses the mirage, contorting every distant object and making the horizon squirm like a stoned adder. At night it beats against tent walls, less furnace-like but still bone dry, a minor wail chorused through the sparse brush and scattered eroded outcrops. At midday the sun of the steppes bears downward to shrink the soil until it reticulates, the crevices carrying the dryness deep into the subsoil. Scattered bright clouds pass overhead, seasonably parsimonious, always fickle, yielding as little as eight inches of rain in a year, and maybe three of the eight in a single night.<sup>1</sup>

Men and cattle live in this stretch of five hundred miles, two men and forty-five cattle to the square mile, their numbers traditionally pruned through the dry-heat sparcity of grassland and water. A wealth of game animals, gerenuk, oryx, and impala, whose ranging power combined with small need for water enables them to thrive, constantly reminds the traveller that this land resents most specifically the intrusion of man and the animals he has degraded to domesticity. For the Masai and his cattle, and for the few Wanderobo hunters, interest for half the year centers on clouds, wells, hidden rock pools, water casks and bottles. Remembering Dr. Gould's book of the Antarctic entitled "Cold," a tale of the Masai steppe as I saw it last October could only be named - "Thirst."

The people who have managed to live in and survive the yearly dehydration cycle

1. Tanganyika Notes and Records, December, 1948, No. 26, p. 52.

of this wild country deserve a close look. The men are tall for an East African tribe, many being over six feet, and the women on the average are also tall and thin boned. Their skin tends to be a little lighter in color than the Bantu types, and features are chiselled in caucasoid mold, attesting the non-negroid origin of the tribe. Hands and fingers are longer. Except for the very young who wish to be admitted to government schools, all males have their ears perforated. The lobes are first stretched with wood plugs and later with little copper weights, which hang like double fishing sinkers, at the bottom of each ear. The Moran, or warrior age-grade men, also wear

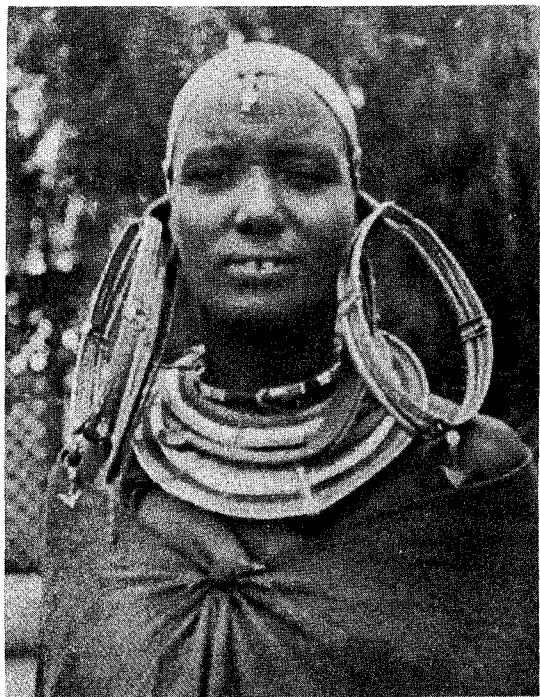


various large bead-work ear rings, passed through a hole in the upper cartilage of each ear, and their normally long hair (eased out with animal substitute if too short and woolly due to part Bantu ancestry) is moulded into a coiffure and swept back into conical leather bound pigtails. Iron, copper and bead-work necklaces are also worn, most often tight around the neck. The women, too, wear jewelry, in such bulk and weight that it hampers every movement. Huge collars of bead-work, like the cloth collars of Elizabethan London, spread out from the neck as far as shoulder-width. Solidly wound spirals of wire encircle the arms, sometimes covering only the wrist, but often amounting to an almost complete metal sleeve. Calves and ankles are similarly covered, and female ears are fully ornamented in metal and bead-work.

Clothing for the men consists of a blanket, or an ochre-stained sheet, draped as a tartan or toga. The women wear a more elaborate swathing of hides, laced with beadwork and reinforced so that a baby can be tucked inside the back. The men, if of Moran age grade, are seldom seen without their long bladed stabbing spear, the stubby handle connecting the blade and the trailing iron shaft being of ebony or of brown grain wood, depending upon whether the owner is a senior or younger moran. A red sheathed sword, and often a short round headed club are worn at the waist. Older men and boys not yet Moran carry staffs, light throwing spears, or sometimes bows and arrows. The large hide shields, in compliance with peace regulations, are now carried only on ceremonial occasions, and when near civilization the tips of spears are muzzled with a short leather sheath fluffed with feathers barber-clipped into a five inch ball, a ceremonial emblem of peace, visible from a great distance.

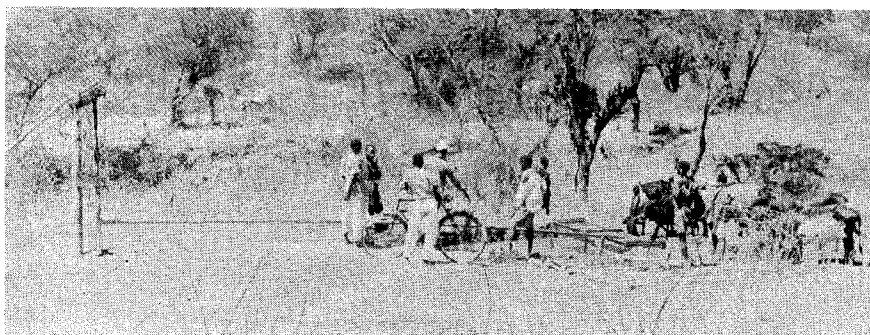
The people are never far from their herds and, if choice ruled, blood, milk, beef, or goat meat would be their only foods. Only when dryness or the death of cattle demands do they turn to grain foods, and the meat of game animals is also a second choice food. Sometimes they plant grain near their wet season bomas, but more generally they buy posho (finely ground corn) from the few local shops. Which returns us to the immediate problems of Masailand, which are the problems of dry season water supply.

In and briefly following the wet season, roughly from March to June, a large though by no means generous expanse of grazing is available, with a much wider spread of waterholes, pools, and intermittent stream waters. If the rains have broken evenly, as they are said to do only once in seven years, nearly all of the District - barring areas infested with East Coast Fever and tsetse fly - will provide some sort of grazing.



As the waters dry up, however, though grass continues to stand and grow throughout wide areas, the herds must concentrate around the few sources of permanent water, which by tribal tradition - the sort of tradition that is evolved out of tragic history - will have been spared throughout the wet season. These sources consist of the Ruvu River, with a part of its banks denied by the tsetse fly and East Coast Fever, a few wells sunk in lime fields, a few springs and mountainside rock pools, and the few boreholes sunk by the Government. This trek to permanent water is grim with memories, old and recent, of large herds crowded around tiny bits of water, of night vigils with shouting and drum beating to keep thirsty elephant from wallowing the trace pools of dry stream bed, of the gradual tightening of flesh against the bones of cattle and men as the last dry bits of grass are cropped.

Once near their allotted permanent water, the Maasai reoccupy old bomas or build new ones, encircling huts and cattle space with a wall of heaped thorns. The bomas are generally five miles from the water, so that on alternate days, when the cattle are to receive their one drink in forty-eight hours, they can move slowly towards the water, then drink and return, grazing all the way along a long oval route. On the off day they graze outward from the boma, away from the water, and return for the night without drinking. Water for domestic purposes is carried in gourds and old oil drums by the women and donkeys to the boma. Dusty cattle paths radiate from the water source, and extend outside the ten mile circle of bomas, recognizable from the air as a daisy pattern if the water source is completely surrounded by grassland. When the source is a river or mountain-

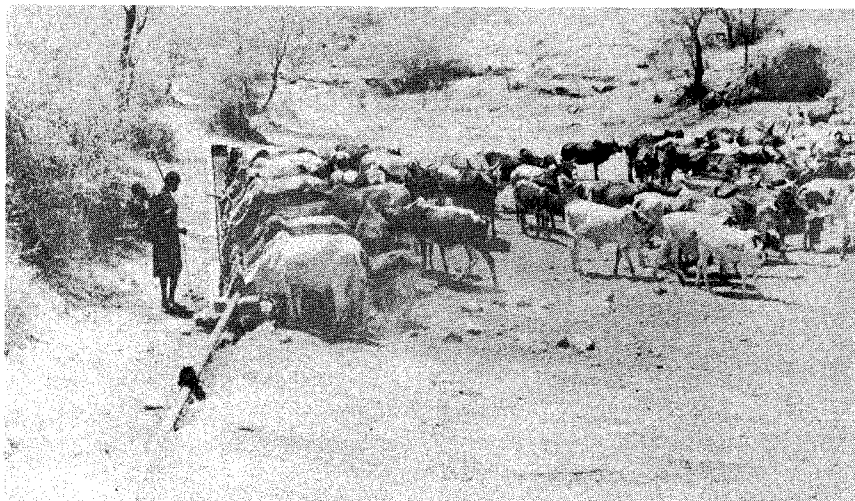


side spring the pattern becomes a hedgehog or a fan. Permanent water is not always "permanent" and at some wells the cattle-watering has to be confined to an hour or so during the morning; after which depleted water must be given some twenty hours to ooze back into the bottom.

The sparse and irregular scattering of the pinpoints of moisture on the District map and the intense concentration of cattle despite the policy of sparing such areas during the damp months, results in serious overuse of these particular plots of grassland. Dessication now in progress, due to what can only be assessed as an overpopulation of cattle, is expected to result in a lowering of the water table and ruination

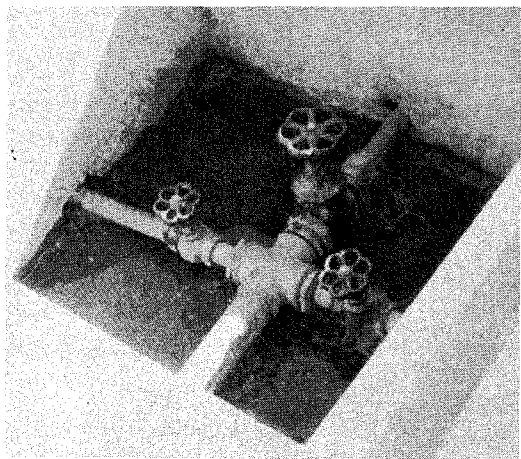
of some of the water sources.

I saw many of the permanent water points last dry season, including the Ruvi River, a number of active mountainside springs with their piping and reservoir improvements, some natural pockets on stony hillsides, residual puddles of wet-season ponds and drying streams, an underground cave well "constructed especially by God", and the major wells dug into fields of lime. The last were the most spectacular, and next to good surface water the most favored by the Masai, who are chary of watering sites with breakable pipes and fallible metal pumps.



The wells at Naberera and Ngasumet, most primitively scenic of all water sources, were being used to capacity at the time I camped nearby. They were originally dug as cylindrical cuts in chalky lime by a tribe (now unknown) which lived in the area before the Masai. Instead of devising rope hoists,

or hand-lifting which was arduous and would require a seven to twelve man bucket ladder from the depths, the Masai cut ramps to bring the cattle nearer the water level. A trough would be built or inlet into the wall of each ramp, to water as many as twenty cattle drinking side by side. One end of the trough would be almost directly alongside the well hole, so that the leather buckets could be poured in by



the top man in the bucket chain. The bucket chain would consist of two or more moran, standing on a series of steps spaced at seven foot intervals leading up from the water, with the lowest scouring the leather buckets full, the highest pouring each one into the near end of the trough, and any in between bending, flexing, heaving to keep the trough full. If the line had more than two men, extra buckets would be used, the one just dumped being thrown back down, so that a quantity of water was always ascending, gracefully and smoothly handed from one finely muscled arm to another. In comparison, all bucket brigades I have seen at fires and on shipboard, and the impromptu athletic competition when chain-lifting flour bags from beached assault craft were

awkward and uncoordinated. After the first few bags of a particular relay, during which there would be a musical quickening of splashing, dripping and slapping sounds, the four gallon leather sacks would be scooped, lifted, dumped and slapped back down in even rhythm without a tremor of muscle or a single unsure movement. As with any heavy team labor there was a general impulse to put the heavy exhalations to use; and



a chanty - universal by-product of heavy, repetitive human labor - soon rises above the splashing. With a background of wooden cowbells, the sounds of cattle crowding and drinking, the wells made a symphony of carnal preoccupation with labor and thirst. The pastoral hazards of the season seemed forgotten in the realization that man, like his cattle before they were tamed, is most alive when his body strains and his lungs bellow.



Further north at Iendenai, in the shadow of a steep hill, almost a cliffside, an easier method of watering is provided. The hilltop catches rain water, a rare growth of vegetation on top sponges it, and a spring runs continuously from the hillside below. A large (approx. 4 inches) pipe leads down from a reservoir to a long concrete trough, and

water can be doled out by trough-fulls to cattle and goats. The flow is by gravity, and the sturdy rive is more trusted by the Masai than the more noisy and complex machinery of motor or manual pumps.



South at Kibaya there is a stream bed with water obtainable by shallow digging in dirt and sand, and a spring yielding 9,000<sup>1</sup> gallons per day. At Kijungu, forty-seven miles eastward, some hundreds of cattle are supported by the merest trickle of water coming from a spring into a pipe and reservoir system. At Kijungu there was a four way system of pipes and valves to apportion water to a domestic tap, and to separate troughs for Masai and Somali livestock. It was here that my illusions regarding the warlike, dignified Masai were shaken by the sight of a moran - his spear dangling decoratively in his hand - being shaken and cuffed by a Swahili clerk. The moran had refused to open the domestic tap for a queue of women because the reservoir held only two inches for his cattle. After the scene was concluded, and the women got the water, I sat on the edge of the troughs, empty at the time, and heard from a bearded, straight haired Somali that a big rhino was dying near the roadside three miles away, that a herd of elephant moved around a near hill every morning, and that the Masai were thieving scoundrels who wanted all the water for themselves. Even in Masailand there is a touch of the racial malaise of East Africa.

In searching for remedies or means of alleviation, the British administration has considered the few possibilities and acted on some of them. The introduction

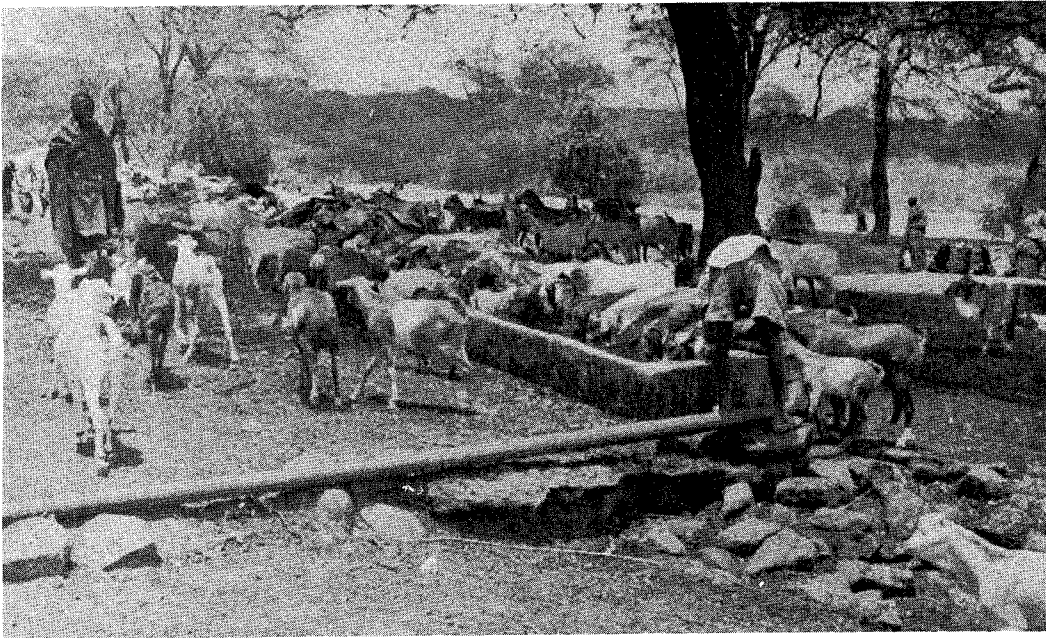
1. At my visit the yield was much reduced, unless the official figure is based on a long term measurement.

of farming and more intensive ranching, to free much of the grazing area from present overuse, is not feasible in much of the District. While permanent water for cattle could be provided by boreholes and surface developments, the irrigation necessary to produce improved growths of grass cannot. The need for more grass is greater than the need for more water. Farming smaller plots of land, possibly irrigated, could be worked out in a few small localities, but would involve the difficult and perhaps nearly impossible social chore of converting a traditionally pastoral people, whose hearts are broken when away from their herds, to a life of sedentary agriculture. Rather than attempt either of these methods, the British administration has followed a policy of gradual, piecemeal betterment of the distribution of permanent watering points and improvement of the quality of the herds. Veterinary services have included safeguards against cattle disease and an attempt to persuade the Masai to thin their herds to increase milk yield and beef quality per head of grazing stock. These two sides of the veterinary program obviously conflict, and the veterinary officers I know have complained that the natives cannot accept the idea of quality herds; they want more and more cattle, each male Masai reckoning his personal wealth in plain numerical ownership.

There has been a steady program of water development. In addition to the improvements already described a twenty mile furrow has been dug from the Ngare Nanyuki River to reclaim for grazing a huge acreage of land in the north of the District; four dams to retain waters into the dry months (the largest at Meserani, having a maximum capacity of 243,000,000 gallons), and a number of boreholes have been engineered. The Isengita Borehole, yielding 5,000 gallons daily, was drilled in 1940, and from 1948 to 1953 seventeen more boreholes were sunk, eleven of which were successful. Yield of the eleven ranged from 250 to 1,050 gallons per hour (some of the yields being very saline). Their depths ranged from 70 feet to 449 feet with the average close to 250 - all considerably deeper than required in the volcanic areas of Meru and Kilimanjaro, just north of Masailand. The ultimate aim is to have boreholes placed fifteen miles apart all over the District, providing ready water throughout all seasons in all grazing areas. The veterinary officers do not wholly approve, for the clear reason that this would lay the entire district open to year-round grazing, tempting the Masai to increase their herds and extend the overgrazing and dessication outward from around the present permanent water.

The realities of poor rainfall, poor land, people who refuse to be changed, and an administration which recognizes and accepts tribal prejudices are the factors now involved in a problem which formerly solved itself through famine, drought and pestilence. The Masai are outstanding in their adherence to tribal ways, and their tribal land is exceptionally arid and unfertile. Other tribes have similar if less enduring prejudices, and the rest of East Africa, by Western standards, is also poorly watered. The dilemma in variant forms extends through most of Tanganyika. If the tribe itself in its nomad livelihood has found the best means of survival in an expanse of semi-desert, and if, as is often stated, the difficulties of Masailand, though "neither complex nor vague," are impossible to repair, the Masai themselves are little worried. Content to survive, glad to be left alone, they have not yet acquired the habit - so prevalent among other tribes - of crying for government help at every turn. At this moment, because the rains are a month away after an unusually scorching dry season, droves of cattle are dying of starvation and thirst on the

steppe. This the nomads will accept as part of a price always payable for their



particular brand of freedom; and when the rains finally break the Masai will be happier than we know how to be.

Sincerely,

*John B. George*  
John B. George

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Photographs:

- Page 1. A "three man" well at Ngasumet.
- Page 2. Close-up of top man at the well.
- Page 3. Top. Masai girl.  
Bottom. Government borehole showing simple pump and trough near Kibaya.
- Page 4. Top. Cattle trough, Kibaya spring.  
Bottom. Valves, Kijungu, to apportion water between Masai and Somali.
- Page 5. Top. Spring reservoir, Kibaya.  
Bottom. Same, showing diminished volume.
- Page 7. Trough being filled, Lendenai.