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Some Notes on Land Tenure on Kilimanjaro and the Vihamba of the Wachagga

By P. H. Johnston

"They love their land because it is their own."—HALLECK

SINCE Mr. A. W. M. Griffith wrote his most valuable monograph on land tenure in Moshi District a number of changes have occurred, particularly in relation to Kihamba land, which may justify this endeavour to note, briefly, the present position of Chagga land tenure on Kilimanjaro.

SHAMBA AND KIHAMBA

The Chagga tribe has two types of land tenure, one kihamba land, the other shamba land. As to the latter the position is clear. Shamba land lies on the lower slopes of Kilimanjaro and is utilized by the Chagga mainly for maize growing and is held on a year to year basis for temporary purposes and conveys no prescriptive right to the land to the user thereof: so that in theory in each year the Chagga obtains his chief's permission to cultivate shamba land and this permission may or may not be granted. Where the shortage of kihamba land is acute, shamba land is turned into kihamba land and a Chagga who may have cultivated a particular shamba for many years may find that his shamba land has been given away for kihamba tenure; in which case he must seek other shamba land to cultivate. If a Chagga wishes to turn his shamba into a kihamba for himself, or (as often occurs) for his son, then he must apply to his chief for permission.

KIHAMBA LAND

The kihamba is the home of the Chagga, where he builds his house and plants his bananas. In a crowded area, such as Uru, kihamba land stretches from the edge of the forest reserve almost to the boundaries of Moshi Township, so that in Uru there is very little shamba land, while in a less populated area such as Usseri there is empty land below the forest edge and a vast expanse of available shamba land towards the plains. Within the kihamba land belt the Chagga grows his coffee and although sometimes he will refer to his coffee "shamba", to differentiate the land which he owns where his coffee is planted from the land which he owns upon which he resides and where his banana trees are planted, the coffee "shamba" is held as a kihamba and is regarded by the Chagga as are all vihamba as the owners' permanent freehold property.

DIVISION OF KIHAMBA LAND

Originally among the twenty Chagga chiefdoms (as they exist to-day) the land suitable for occupation and residential purposes was divided up by the chiefs as vihamba for their subjects either individually or to clans; in many an appeal case to-day the claim is put forward that the kihamba is claimant's *tangu asili*, that is, was given originally to the claimant's clan when the land was first granted by a past chief for kihamba tenure.

Every Chagga used to own one kihamba for each wife and every kihamba had its own house for the wife who worked its land; so that to-day the only son of a rich old man with six or more vihamba may inherit far more land than he can personally cultivate while the several sons of a poor old man with one kihamba may, in the more land-starved areas, find that they have to seek from their chief a new kihamba in the lower lands, formerly shamba land, or move into another chiefdom to obtain a kihamba in the higher land beloved of the Chagga. The granting of vihamba is within the patronage of the chief, and there are few areas even to-day where an influential young man cannot still obtain a good kihamba when he wants it, but even the influential and rich young man will soon be unable to do so in the more crowded chiefdoms.

THE GRANTING OF VIHAMBA

The applicant for a kihamba may go direct to his chief, sometimes after consulting the local clan elders; most often he will first consult the headman of the area in which he hopes to obtain a kihamba. If he is successful in his application he will be granted his kihamba by his chief who personally, or through his chief's agent or court elders or through one of his headmen or sub-headmen, will enter the applicant into his kihamba: when he is entered thereon his new neighbours will be present to show the boundaries of their vihamba.

PAYMENT OF 'UPATA'

In most chiefdoms of Kilimanjaro to this day, the Chagga granted a kihamba will give his chief *upata*, a cow, or, if he is a poor man, a goat or beer, which is not always payable at once, if the person concerned is in straightened circumstances, although his relatives will usually help him out as the payment of *upata* is confirmation of the grant of a kihamba. A very poor man nowadays will, in all probability, not be called upon to pay his chief any *upata* at all.

Similarly the new kihamba owner will be expected to pay *upata* of beer to the headman of the *mtaa* in which he is to reside: this will normally be paid and drunk on the day that he is entered into his land.

ESTABLISHMENT OF A KIHAMBA

The average size of a new kihamba granted to-day is about one hundred square yards (instead of three acres twenty years ago) scarcely sufficient, when planted up, for the maintenance of a family: the new kihamba owner will take

three years to establish his bananas and not till then will he usually build his permanent house and make provision for his kihamba-held stock which averages three to four head of cattle and ten goats in the lower lands and two head of cattle and four goats in the higher lands. Few Chagga retain more than this in their vihamba and every rich Chagga leases out his surplus stock to friends and relatives or to poor men who own no stock themselves.

ESTABLISHMENT OF BANANAS

The new kihamba owner first sets out to establish the staple banana, first planting the quick-growing species *mrarao* or, in the lower lands, the hardy *mkonasi*, both of which he later reserves for use in beer making and cattle fodder and, in times of shortage only, for food. Later he plants up *mshare*, the favourite species for eating and more palatable than the hardier types. At the same time he plants also *ndishi* or *mririgoe* bananas, used for beer making and particularly for eating when cooked with meat or beans.

BANANAS AND ELEUSINE

The bananas grown in his kihamba provide the Chagga with his staple foodstuff, his cattle fodder, his thatching material and an essential ingredient for his beer: for beer plays a more important part in the customary life of the Chagga than amongst most tribes. The growing of *mbege* (eleusine) required for making banana-beer, during the long rains in eastern Kilimanjaro, and by irrigation after the long rains in western Kilimanjaro, is an important matter for the Chagga. There is little space available for *mbege* growing; most kihamba land, some grasslands, some waste land and some shamba land are fully utilized, so the Chagga cannot produce his full requirements of *mbege* and imported large quantities in peace-time.

Efforts to increase production in kihamba land have caused damage to bananas through careless irrigation and erosion to a sufficient degree to cause the prohibition of the planting of irrigated *mbege* to be recommended; but every Chagga on a kihamba regards the planting of *mbege* as an essential part of his production requirements.

THE WOMAN'S PLACE

While the Chagga man does most of the hard work in breaking new kihamba land and in house-building and all work connected with furrows, it is the Chagga woman who has the hardest time on the kihamba. She collects the grass for cattle fodder from the plains, the two weekly loads of firewood from the forest or plains: she cultivates the bananas, the eleusine, the coffee and the shamba land as well. She cuts local grass and weeds in kihamba land for feeding cattle; she does the marketing, the cooking and the general house-

hold chores. She finds time, somehow, to raise a family. It is largely the women who have maintained the vihamba of the Chagga askari absent on active service.

Although during the war the Chagga man has worked hard, in peace-time he was not overburdened with work once his kihamba was established, but the Chagga woman has always had to work hard and war-time has only increased the number of her daily tasks.

TO PURCHASE A KIHAMBA

A Chagga desiring a kihamba may seek to buy one and, if the vendor is of his own chiefdom with a spare kihamba for sale, he may normally arrange to purchase the kihamba without difficulty. If a Chagga wishes to purchase a kihamba in a chiefdom other than his own he normally must obtain the permission of the chief of that chiefdom.

The price of a kihamba varies. For an uncultivated one it is still possible to obtain the traditional price of a cow and a goat. For a cultivated kihamba with good standing coffee and bananas the price varies considerably; up to Shs. 1,400/- has been paid in Kilema for a kihamba of three acres with coffee, bananas and a stone house, while in Kirua Vunjo the price of a similar kihamba without a house varies from Shs. 400/- to Shs. 600/- and even Shs. 1,000/-. Prices naturally range highest in the most land-starved chiefdoms.

WATER FURROWS

It takes a Chagga three years to establish a kihamba and if he wants to be able to rely on his neighbours' assistance in time of need, he must welcome them to a house-warming party when he "enters in" on the completion of his house. If he wants, as he must, to obtain water from the local furrow, he must join the local Furrow Board; thereafter he will have to obey the instructions of his furrow elders and take his turn in repairing and cleaning his furrow. Should he fail to obey such instructions he will be liable to pay a fine of several barrels of beer, to be shared by his fellow furrow-users, or be forbidden the use of the furrow should he fail to pay. The furrow plays a vital part in the life of the kihamba-land dwellers, irrigating bananas and *mbege* and supplying household needs; and it is remarkable that, with a big and complicated furrow system in the kihamba land, so well are matters run by the furrow elders that the number of cases arising out of disputes over water rights are exceedingly few. A furrow or furrow rights frequently belong to a particular individual by inheritance or to a clan, and then the furrow users have to pay an annual rental in beer, but this is readily paid and few disputes arise; nowadays, however, the payment of *masiro* for the use of furrow water is rare.

DISPOSSESSION OF VIHAMBA

Once a Chagga obtains a kihamba by inheritance, sale or gift it remains the property of himself and his heirs. When his chief has granted him a kihamba and subsequently discovers that the wrong land has been given, he will not be able to remove the grantee. In fact a kihamba owner can only be removed from his land in rare circumstances—

- (i) should he be banished ;
- (ii) should he move into another chiefdom, when his kihamba, if it is not clan land, will revert to the *Utawala* (Native Authority);
- (iii) should he leave his country for many years without having his kihamba occupied ;
- (iv) should his land be required for public purposes.

Even under (i) and (iii) should the dispossessed Chagga return and claim back his kihamba the native courts will usually allow his claim albeit making him pay *jasho* to the occupier to be removed, or arrange for him to obtain a new kihamba elsewhere. Similarly under (iv) the Native Authority would have to give compensation if needs be and another kihamba elsewhere, but in the case of (ii) he would be entitled to no *jasho* or compensation.

It is a notable and pleasing feature that the Chagga have often readily agreed to give up kihamba land (to which normally they cling as tightly as they can) when it is required for such public purposes as the building of a school or hospital or other Native Authority building; and they have not infrequently done so when land has been needed for the Kilimanjaro Native Co-operative Union buildings; the dispossessed may ask for land in lieu but generally for no more.

ABSENTEES

Virtually no aliens occupy kihamba land but, as the Chagga extend their kihamba land lower down the slopes of Kilimanjaro, they will begin to resent the aliens there whom chiefs in the past allowed to settle. A number of vihamba are held by absentees as the chiefs do not readily use their powers to acquire unused land; the power exists but it is being contested in the courts as Griffith feared would be the case: it is notable, however, that Chagga permanently employed outside Moshi District, or even those employed within the district but outside their own chiefdoms, invariably take great care that their vihamba are occupied and cultivated by their wives, when possible, or by relatives; and no case for the dispossession of an absentee who took this action would ever be upheld. This shows that the Chagga are well aware of the right of dispossession and so take the necessary steps to safeguard themselves.

LEASEHOLD VIHAMBA

Many Chagga lease vihamba and are paid *masiro* (rent), a first payment of a goat or other live-stock and then, periodically, beer or an invitation to a feast; but, strangely, the *masiro* payment is often not enforced and it is probable that many a claimant for the return of a kihamba leased for many years fails in his case through lack of proof which the payment of *masiro* would have provided. A large proportion of the native court cases over vihamba arise out of disputes concerning vihamba alleged to have been leased.

Griffith feared the rise of a landlord class and this is certainly coming into existence, particularly with the leasing of desirable plots on roadsides by the owners thereof to prospective Chagga shopkeepers; and certainly, caused largely by the growing shortage of kihamba land, Chagga lessors are more and more taking court action to evict lessees where the lessees are not very favourable to the lessors. Griffith's suggestion that in Uru a leased right was virtually a permanent one would seem disproved in a recent court action there in which the lessee admitted the lessor's right to the rented kihamba and merely claimed (and obtained) the three years' right to reside and use the leased kihamba, a period granted by customary law to enable the outgoing tenant to plant up a new kihamba and build his house thereon.

The high price of coffee, enhancing the value of vihamba land under coffee, has encouraged landlordism during the war and it is notable that in leasing vihamba these days the lessor usually stipulates that coffee shall not be planted in the leased kihamba and sues for action if this clause is broken. This would make it appear that the owner of a leased kihamba fears the right conveyed to the occupier by a valuable crop, planted up on a leased kihamba, to at least considerable compensation on dispossession and typifies, to some extent, the difference between the European and the Chagga understanding of leasehold.

INHERITANCE

A considerable number of civil cases over vihamba also arise in inheritance suits. Normally if a Chagga has one wife and two sons and leaves only one kihamba this will be inherited by the younger son. If he has three sons and four vihamba the third son will not inherit a kihamba. If a Chagga has three wives and two children by each wife and each wife cultivates one kihamba, then the youngest son by each wife will inherit a kihamba, as the inheritance of the children by each wife is quite separate, though the eldest son by the first wife is usually heir to vihamba of another wife who leaves no son. But a father often sub-divides a large kihamba to enable each of his sons, if possible, to inherit a kihamba of his own; or if a father owns several vihamba, he often grants one or more of them to his sons when they get married; but he will not normally give the kihamba of one wife to his son

by another wife although he may sub-divide one wife's kihamba to help a son by another wife to obtain a kihamba. In Vunjo sons by one wife share vihamba if their inheritance is not sufficient for each son to inherit a separate kihamba.

Despite the inheritance rights of the youngest son, the eldest son by the first wife becomes head of the family on the death of the Chagga father. The eldest son is in a better position to maintain himself and to establish a new kihamba for himself than his younger brothers. He is usually responsible for the proper division of his father's land and will himself be the next inheritor of a kihamba after his youngest brother; and should, for instance, his father leave four vihamba and three sons, he will invariably inherit two of the vihamba. The eldest and youngest sons are privileged heirs in contrast to the middle or *mrina* sons.

There is little change in the system of Chagga inheritance since Griffith noted it save that a Chagga may now sell his sons' birthright or will his land to other than his true heir; and in most native courts his sons would not be able to upset his action. The will of the deceased, whether uttered or written, is respected and his clan elders take care that it is not altered. In the past where there was no son to inherit and (as was usual) the eldest brother by the same parents became heir, he would inherit the widows of deceased; to-day this occurs only when the widow agrees; and if she has son(s) by her late husband, her inheritor will not be able to turn her out of her kihamba during her lifetime; where to reside, unless she remarries or is without a son, is the customary right of every widow. If the widow previously childless bears a son to her inheritor, that son will inherit the kihamba of her deceased husband, on which she has continued to live.

COMPLETION OF SALE

When a kihamba is actually sold the bargain is generally clinched on the spot, the vendor either cutting some leaves of a standing banana tree and giving them to the purchaser or taking some leaves in his hand, without cutting them, and placing them into the hands of the purchaser; this is invariably done in the presence of witnesses when the neighbours come to see that the vendor shows the correct boundaries of his kihamba.

MORTGAGE

A kihamba is frequently mortgaged—invariably between Chagga of the same chiefdom—and a native court will often sell the kihamba of a defeated party to give effect to its judgment or will order the defeated party to meet his obligations by mortgaging his crops. Rather than lose his kihamba a Chagga will often mortgage his coffee crop for several years.

KIHAMBA RESERVES

Vihamba vary in size from three-quarters of an acre to thirty acres or more, but there are very few vihamba left that are still over, say, ten acres without having been sub-divided. Although the kihamba is the land on which the Chagga lives, builds his house and plants his bananas and keeps his stall-fed cattle, it is not always cultivated *in toto*. Most Chagga like to keep a reserve of land and particularly a piece of *mbuga* from which he may cut grass for his cattle or graze them there. There is also a certain amount of *mbuga* in kihamba land which belongs to a particular clan and which may not be cultivated, but which is communal for grazing and grass cutting purposes to the members of his clan owning the neighbouring vihamba, and which was used in the past mainly as a clan meeting place.

BOUNDARIES

Nonetheless, the general effect of kihamba land from Kibongoto to Usseri is one of almost continuously cultivated land, kihamba contiguous to kihamba. This has naturally resulted in very many boundary disputes: the Chagga generally plants up his boundary with the local *masale* (*Dracaena*) hedge and any planting of *masale*, often the only evidence of a boundary, beyond the extent of a kihamba will generally cause a court action to arise very quickly.

That the Chagga does not delineate his boundaries with more care is surprising since he always clings to the smallest vestige of right to a kihamba which he can adduce.

Often while inspecting a kihamba the boundaries of which are under dispute, not one but several *masale* hedges are to be seen and a few old stones buried at points in the kihamba that bear little relation to the hedge or hedges shown. Nor is the position clarified by the frequency with which the Chagga sub-divides his kihamba with *masale* hedges for what is now no very apparent reason at all, but was originally to demarcate diverse types of cultivation within the kihamba.

KIHAMBA REGISTRATION

Griffith from his observations upon kihamba tenure advocated the registration of vihamba ownership and the issue of deeds. The increasing difficulty in obtaining suitable kihamba land is a main cause of the increased litigation over vihamba: Chagga with some slight and vague vestige of a claim readily claim a kihamba in the courts and occupiers with very little claim to vihamba fight hard in the courts to avoid dispossession. Therefore, it should be clear to the honest owner of vihamba that his interests will be best served by the registration in his local native court of his rights to his land, but repeated efforts have recently failed to persuade the Chagga Council to enforce registration rules. The opposition of the people is due mainly to their suspicions of

the investigation that any general registration would involve and to the feeling that their vihamba are their own freehold anyway and that no registration is therefore required. The Chagga would like the security of a title to their vihamba but not the publication of their degree of wealth that would come to light; the general good to the people as a whole of kihamba registration is coming slowly to be recognized and it is likely that rules will be brought in within a few years and, although a glut of court cases over land ownership will result temporarily, in the long run not only will the Chagga gain greater security for himself but the burden of land cases in the courts should be reduced.

COFFEE VIHAMBA

Griffith suggested that when a chief granted a kihamba to an applicant specifically for coffee growing the grant should be in the form of a lease between the lessee and the Native Authority. To-day this is no longer possible, however beneficial it might have been had it been introduced fifteen years ago. Land granted in kihamba land for coffee in the past is now regarded as part of the owner's kihamba property and there are few areas with sufficient space in suitable land now left for vihamba to be granted for coffee only: indeed, as far as can be found, such grants were only made at the time when coffee growing was first being encouraged on a large scale on Kilimanjaro. The future expansion of the coffee industry on the mountain lies not in increased acreage but in improved cultural methods, which could readily double the present average annual crop of three thousand tons of parchment coffee, all grown in kihamba land.

POSITION OF CHIEF

The shortage of available kihamba land in many chiefdoms tends to make somewhat invidious the position of the chief who grants vihamba and in his court settles disputes over vihamba; for in many of the increasing number of disputes over vihamba the issue frequently rests on whether the present chief (or one of his predecessors) did grant the disputed kihamba to a particular party and, if he did so, whether the grant was a legal one.

Where a chief is careless in the disposing of vacant vihamba—that is to say when he fails to ensure that the kihamba he gives away is really vacant and/or that his agent properly enters (*kukabidhi*) the recipient of the kihamba, considerable trouble and much litigation is caused and the courts are still dealing with cases in a Vunjo Chiefdom where a chief, deposed over ten years ago, mismanaged the granting of kihamba land while he ruled.

BENEFICIAL OCCUPATION AND MIGRATION

A kihamba was originally granted for beneficial use and occupation and, though not very often used, the chief has always had the power to compel the surrender of superfluous vihamba albeit it is unlikely that action has at any

time been taken on these grounds against a powerful clan. To-day when a chief does grant a vacant kihamba for these reasons to an applicant, the appellate court will generally support the action while the *Baraza Kuu*—sitting as a court of first instance to hear a claim against a chief, will usually find to the contrary. The very large number of vihamba leased for many years and leased in the days before land shortage would tend to show that the Chagga always realized this right of the chief and maintained their rights through admitting tenants to their land where they could not occupy it beneficially themselves: the old Rombo custom of the father leaving his son to occupy his kihamba and moving off elsewhere himself has certainly extended. It is common practice in most of Hayi and Rombo, though not in perhaps the somewhat more enlightened Vunjo.

If a kihamba owner moves into another chiefdom his kihamba in the first instance will revert to the chief and he will be unable to sell or lease it, or even to give it to a relative, other than when a father hands over a kihamba to his son and then migrates, although with the agreement of the chiefs concerned a Chagga can own vihamba in separate chiefdoms.

It is hoped that the Chagga Council will soon bring in rules to control the sale of vihamba and to ensure, if possible, that landless men obtain the first opportunity to purchase vihamba offered. The war has greatly increased the wealth of the Chagga and it is necessary now to forestall the land speculator.

ARABLE LAND

Griffith noted that ownership of arable shamba land was becoming recognized and cited the Chiefdom of Uru. If this was so then, it is certainly not so now when the pressing need for new kihamba land has caused many shambas to be converted into vihamba for landless men. The erstwhile shamba user (*not* owner) may resent the loss he suffers but the courts will give him no support for his claims of ownership. In the Old Moshi Chiefdom some Chagga have long lived in the lowland south of the Arusha-Taveta Road, in the neighbourhood of the Rau River, where, with irrigation possible, they have been able to establish their vihamba with flourishing bananas; and this is not the only chiefdom with the higher kihamba land divided from later and lower kihamba land by grassland and shamba land. It is the inadequacy of the water supplies on the lower slopes that has prevented the earlier expansion of kihamba land, but the Chagga have developed a banana which does not require irrigation and, particularly in Rombo, are establishing vihamba in lower, drier and poorer land although they still lack sufficient windbreaks there to protect their bananas from the hot dry winds. Griffith saw the bracken land above and the fly bush below as the boundaries to kihamba land, but the bracken land below the forest edge has in many parts, particularly in Mashati and Keni-Mriti, been successfully converted to kihamba land and the clearing

involved in cultivation and building should, in itself, solve the fly problem, which in most areas is not very great, if sufficient Chagga are determined to set up vihamba together in the lower areas.

INFLUENCE OF WAR SHAMBAS

The wartime desire for greater food production has caused the Chagga to expand very greatly their annual acreage under maize and beans in the lower shamba land and this, combined with poor rains adversely affecting the banana crops, has encouraged the Chagga to eat more maize; and it is likely that maize flour has come to stay as an integral part of the Chagga's diet. This may be of some assistance, together with the more drought-resisting type of banana, in overcoming the old objections to residence in the lower land, which were mainly due to the inability to grow bananas there well, in addition to the prevalence of fever and the shortage of water. It may be noted here that a major reason for the reduced banana crop of the Chagga in recent years has been the over-planting of coffee with bananas and in some places the actual displacement of bananas by coffee.

GRASSLAND

The expansion of kihamba land with its inevitable enclosures raises acutely the problem of the grasslands which used to surround kihamba land (with a little above and much below) and the extension of maize shambas in the lower land has added to the Chagga's difficulties in obtaining, within reasonable distance of his home, a sufficient supply of grass for his stall-fed cattle.

The Chagga is a great meat eater and despite the large number of Chagga butchers on the mountainside no Chagga would readily give up maintaining his own small stock of stall-fed cattle.

In the plains of Rombo the establishment of cattle *bomas*, as anticipated by Griffith, has eased the position, but throughout the Chagga country one of the biggest tasks of the women is carrying up from the lowlands, once or twice weekly, the heavy loads of cut grass for the cattle in the stalls: but the more closely the lower lands are cultivated, as inevitably they must be to satisfy a growing population, greater still will become the problem of cattle fodder and the only solution would appear to be the production in kihamba land of more and better cattle fodder and the planting up of better grasses in the available grasslands. A few Chagga have already grown cattle fodder in kihamba land with success but the majority still have to learn to do so. Others have unwisely elected to sacrifice their valuable manure by exchanging it with European farmers for grass.

At present the main supply of cattle fodder comes from banana stems which supply also the water requirements of the stall fed cattle and the cattle manure is returned to the bananas rather than to the coffee. The Chagga

could greatly increase his coffee yields by mulching coffee with banana stems but there would be little left of the banana stem supply essential for the cattle were he to do so.

CHAGGA NEEDS

The Chagga tribe is continuing to increase rapidly and the Chagga are naturally extremely land-conscious and rightly fear the coming status of landless men. Just as the enclosures in sixteenth century England produced a similar unhappy class of landless men so will the Chagga of the near future suffer, landless, unless a long-term far-sighted policy is adopted now. The eyes of the Chagga are to-day on Custodian farms (Mweka in Kibosho formed a complete *mtaa* before it was alienated by the Germans); they are also on any alienated farms offered for sale and they are anxiously watching Government's policy with regard to the lands south of the Arusha-Taveta Road (bordered on the west by Boma-la-Ngombe and the Ngare-Nairobi and Sanya Juu Road and on the east by the Kenya border) and of which Griffith wrote, "while admitting the right of the Government to control the administration of this land in the interests of the people generally, it is difficult to discover evidence of that proprietorship which Government is often credited with possessing", and he strongly urged the reservation of this area for future expansion; it is in a part of this area that plans are now being prepared for the required expansion, together with which further plans are required for the establishment of small industries and crafts which the intelligent Chagga is well capable of developing on his mountainside.

FUTURE PLANS

Proposals have been made for the co-operative or communal farming of a big area of lower land to provide the food requirements of the growing population on the mountain. But the heart of the Chagga is in the kihamba and the growing tendency from clan (and not as Griffith suggested from tribal) to individual ownership has encouraged a sense of proprietorship among kihamba owners and a desire for proprietorship amongst those who are landless. The result is that the Chagga view with considerable suspicion any plan for their expansion with the development of the lower lands which does not provide for kihamba tenure, indeed the old right of chiefs "to ensure that the rights of individuals were always liable to alteration when the needs of the community as expressed by the will of the chief demanded it", is now contested, successfully. The sense of ownership could scarcely be increased and the larger kihamba owners now form to some extent a rather reactionary bloc in the Chagga political world since they fear and resent any proposals which may affect that security of tenure which they have built up between the two wars.

CONCLUSION

The growing population and the shortage of available kihamba land are an urgent and increasing problem, shortly to be enhanced greatly with the return of the askari, mostly young and many landless, a problem which can only be overcome to meet the needs of the Chagga of the next generations by making available for vihamba tenure land both on the mountainside and in the lower lands below, together with the development of the latent water resources of Kilimanjaro. For, "where necessity pinches, boldness is prudence".

Appendix

CASE LAW AND KIHAMBA LAND

"Many get into a dispute well that cannot get out well."

A. W. M. Griffith feared "a code of land laws based on precedents which are entirely out of date" and hoped that the native courts would continue to settle land suits and that their judgments would continue as in the past and be guided by equity as much as by strict native customary law when dealing with disputes over land. The findings listed below are of interest and it will be noted that not only is there no uniformity in the decisions reached in the three Chagga areas of Hayi, Vunjo and Rombo, but also in each of the areas themselves. The judgments reached are not binding precedents except, to some extent, in the courts of first instance where the cases originated, in the District Commissioner's Appeal Court where the court is aware of a relevant precedent and similarly in the appellate courts above: only rarely does the Chagga Appeal Court feel itself bound by a precedent and rather hears its appeals independent of precedent albeit in all probability coming to the same decision as that reached previously. The Chagga Council Appeal Court and court of first instance has developed a growing sense of the time-barred case and usually deals firmly with any attempt to resuscitate an old case already decided when it is resurrected in a new guise.

Land cases average about twenty per cent of all cases heard in the Chagga native courts, the land-starved areas in Hayi and Vunjo not unnaturally producing the most; and a high proportion of land cases are taken on appeal to the appellate courts.

It will be observed that it is growing more difficult for a Native Authority to dispossess a kihamba owner for lack of beneficial occupation, an undoubted right of chiefs in days gone by.

A surprising feature of many land cases is the frequency with which the contesting parties are both elderly and both the possessors of a large number of vihamba.

The Chagga Appeal Court, it is noted, has no hesitation in allowing appeals from lower courts, but its judgments in appeals on land cases are often less wise than its judgments in such cases when sitting as a court of first instance.

(A) RIGHTS OF WOMEN

Courts of Origin	Case No.	Year	Findings
Uru (Hayi) ...	75 ...	1941 ...	Held that a woman may not inherit a kihamba from her husband in order to give it to another person.
Machame (Hayi) ...	185 ...	1940 ...	Held that a woman must be compensated by her stepson with another kihamba if he occupies the one on which she used to live with her husband.

(A) RIGHTS OF WOMEN—*contd.*

Courts of Origin	Case No.	Year	Findings
Mamba (Vunjo) ... (Taken to Governor's Appeal Board.)	39	1944	Held that a woman has the right to reside in her late husband's kihamba and that if she is inherited by a stepson her right is enhanced.
Uru (Hayi) ...	35	1941	Held that in absence of male heirs, daughters of deceased share his kihamba equally.

(B) TRIAL BY OATHS

Mkuu (Rombo) ... (Taken to D.C.'s Appeal Court.)	28	1941	Both parties agreeing held that the ownership be allowed to be decided by appellant taking prescribed tribal oath, if he does so the kihamba to be his.
Marangu (Vunjo) ... (Taken to P.C.'s Appeal Court.)	56	1941	Appellant withdraws appeal before Provincial Commissioner on respondent undertaking to take prescribed oath on disputed kihamba and to lick the earth there, if he does so appellant agrees to forego all claims.
Marangu (Vunjo) ... (Taken to P.C.'s Appeal Court.)	27	1945	Appellant agrees to forego all claims if respondent takes tribal oaths as in Case No. 56 of 1941 above. Respondent declines, case goes forward and appellant unable to prove his claim.

NOTE.—An important boundary dispute between Keni-Mriti and Mkuu in 1930 was settled when the Chief of Mkuu agreed to abide by the Chief of Keni-Mriti taking oath that if he did not have right to the disputed land he would die within a year. He did not die and the land went without further dispute to Keni-Mriti.

(C) INHERITANCE

Machame (Hayi) ...	218	1940	} Held that the youngest brother has the right to the kihamba on which he was born.
Kibosho (Hayi) ...	129	1940	
Uru (Hayi) ... (Taken to D.C.'s Appeal Court.)	24	1944	
Mwika (Vunjo) ... (Taken to P.C.'s Appeal Court.)	10	1940	Held that a son inherits his mother's kihamba but not his stepmother's.
Kilema (Vunjo) ...	26	1943	Held that a father can sell his son's birthright.
			NOTE.—But it would be very unlikely that a Chagga would sell a kihamba which contained the burial ground of his ancestors.
Marangu (Vunjo) ...	3	1943	A father decides that his only son by his second wife shall be cared for on his death by his second son by his first wife. In due course the former son dies childless and the second son by the first wife sues the eldest son for the inheritance of the deceased's kihamba.

Held that a father can arrange for his own inheritance but not for the inheritance of his heirs' heirs. The second son therefore lost his case.

(C) INHERITANCE—*contd.*

Courts of Origin	Case No.	Year	Findings
Machame (Hayi) ...	235 ...	1940 ...	Held that a son can redeem his father's kihamba given to another in payment of a debt.
Old Moshi (Hayi) ...	22 ...	1941 ...	
" " ...	51 ...	1940 ...	
" " ...	105 ...	1939 ...	
Kilema (Vunjo) ...	85 ...	1941 ...	
Mkuu (Rombo) ...	46 ...	1940 ...	Held that a Chagga cannot take a kihamba not being utilized by his brother even though he could occupy it beneficially himself.
Chagga Council ... (Taken to D.C.'s Appeal Court.)	34 ...	1943 ...	Respondent agrees that as head of the family when his father died it was his responsibility to enter his young brothers in due course into their inherited vihamba.
Marangu (Vunjo) ...	41 ...	1941 ...	Held that when a father left only one kihamba and two sons the younger brother must divide it with the elder.
Mwika (Vunjo) ...	134 ...	1939 ...	Held that when a father left only two vihamba and four sons the eldest and youngest must divide one and the two middle sons the other.

NOTE.—These two cases demonstrate a custom which appears peculiar to Vunjo and it is presumed that in each case the sons were young when the father died and the vihamba large enough for division and probably the father intended them to be divided. For it is probable that in Mwika there is plenty of available kihamba land.

Kirua-Vunjo (Vunjo) ... (Taken to D.C.'s Appeal Court.)	68 ...	1945 ...	Held that where the elder son could not prove that his father had not sub-divided a kihamba, neither his younger brother nor one of his half-brothers could be forced to divide his kihamba with him.
Mkuu (Rombo) ...	25 ...	1944 ...	Held that the evidence that the mother of the claimant was buried in the disputed kihamba sufficed to prove that she was married to his father and that the father owned the kihamba to which the claimant therefore was rightful heir.
Mamba (Vunjo) ...	37 ...	1944 ...	Held, there being no evidence of rent paid, that where the father of the claimant of a kihamba had turned three successive occupiers off without any court case arising the presumption was that he had a right thereto. His son accordingly inherited the kihamba.
Mamba (Vunjo) ...	11 ...	1941 ...	Held that where a man dies without heirs he who buries him may inherit his kihamba.

(D) RIGHTS OF CHIEFS AND NATIVE AUTHORITIES

Uru (Hayi) ...	6 ...	1941 ...	Held that a chief may allocate shamba land as vihamba even though a cultivator may have used the particular land as his shamba for many years.
Chagga Council ... (Taken to P.C.'s Appeal Court.)	59 ...	1944 ...	
Uru (Hayi) ... (Taken to Governor's Appeal Board.)	91 ...	1943 ...	NOTE.—The Chagga Appeal Court, in the second case cited, strangely found to the contrary.

(D) RIGHTS OF CHIEFS AND NATIVE AUTHORITIES—*contd.*

Courts of Origin	Case No.	Year	Findings
Marangu (Vunjo) ...	2 ...	1941 ...	Held that a claimant cannot regain a kihamba taken away from him by the chief twenty years ago because it was not then being occupied beneficially, because he should have stated his need for the kihamba at the time of dispossession.
Kilema (Vunjo) ... (Taken to Governor's Appeal Board.)	96 ...	1943 ...	A chief grants a kihamba to A and subsequently grants an unused portion thereof to B. Held that the whole kihamba belongs to A (Chagga and District Commissioner's Appeal Courts found to the contrary).
<i>But</i>			
Olele (Rombo) ...	31 ...	1940 ...	Held that a person given an uncultivated portion of another's kihamba may retain it.
Chagga Council ... (Taken to D.C.'s Appeal Court.)	10 ...	1945 ...	Held that a Native Authority may sell a kihamba to meet the dues of a judgment-debtor.
Chagga Council ... (Taken to D.C.'s Appeal Court.)	28 ...	1944 ...	Held that a Native Authority may acquire kihamba land for public purposes.
Mbokom (Hayi) D.C.'s Appeal Case	37 ...	1940 ...	Held that a chief cannot sue the occupier of the kihamba he claims but must sue his deposed brother who gave the occupier the land when he was chief.
P.C.'s Appeal Case	22 ...	1941 ...	Not the chief personally but the Native Authority then sues the deposed chief not for the kihamba claimed in Case No. 37 of 1940 but the next kihamba to it. Held that a Native Authority can hold kihamba land.
Mbokom (Hayi) ... (Taken to P.C.'s Appeal Court.)	44 ...	1943 ...	The Native Authority then sues for the kihamba claimed in Case No. 37 of 1940. Held that the deposed chief had the right to grant the disputed kihamba to its present occupier and that he would not have done so had not the occupier had a right to it.
Chagga Council ... (Taken to P.C.'s Appeal Court.)	4 ...	1943 ...	Held that a chief cannot alter the grant of a kihamba once it is made even when the grant is made in error.
Kilema (Vunjo) (Taken to D.C.'s Appeal Court.)	18 ...	1943 ...	Held that where it was not proved that a kihamba owner had moved permanently out of his chieftom the Native Authority could not take possession of the kihamba and grant it to another.
Chagga Council ... (Taken to P.C.'s Appeal Court.)	20 ...	1944 ...	Held (i) That a chief has no right to grant as a kihamba open land which has been the traditional meeting place of a locality; and (ii) That a chief has no right to order a man off a kihamba which he has granted to him but which he has delayed to cultivate, and to grant it to a previous occupier who had used it as a shamba only.
Chagga Council ... (Taken to P.C.'s Appeal Court.)	3 ...	1943 ...	Held by Provincial Commissioner (upsetting judgments of both lower courts) that the chief cannot take away a kihamba because it was not being occupied beneficially.

(D) RIGHTS OF CHIEFS AND NATIVE AUTHORITIES—*contd.*

Courts of Origin	Case No.	Year	Findings
Kilema (Vunjo) ... (Taken to P.C.'s Appeal Court.)	... 19 ...	1944 ...	Held by Provincial Commissioner (upsetting judgment of the lower courts) that a conviction for selling a kihamba without permission could not be upheld on the grounds that no offence was disclosed. NOTE.—Had it been proved that the vendor was moving out of the chiefdom the result would probably have been different. Rules to regularize sales of vihamba are now being considered.
Machame (Hayi) ... (Taken to Governor's Appeal Board.)	... 212 ...	1943 ...	Held that the sale by the Native Authority of a kihamba to meet four years' taxes due (which was not proved) would have been illegal anyway.
Chagga Council ... (Taken to P.C.'s Appeal Court.)	... 43 ...	1944 ...	Held that where a Chagga moves to another chiefdom he cannot dispose of his kihamba in the chiefdom from which he is moving and the vihamba reverts to the Native Authority. NOTE.—Where both chiefs agree when requested a Chagga <i>can</i> possess a kihamba in two chiefdoms and it is unlikely that the above finding would be upheld in any Vunjo court. In the first case cited the loser disposed of his kihamba to his brother and heir before he left so that had he died before he left his brother would have obtained the kihamba. In this case also it transpired that the chief retained a small but valuable coffee kihamba for himself; this he was advised to grant to a landless man.
Chagga Council ... (Taken to D.C.'s Appeal Court.)	... 22 ...	1944 ...	
Uru (Hayi) ...	... 23, 30 ...	1940/39...	
Mwika (Vunjo) ... (Taken to P.C.'s Appeal Court.)	... 22 ...	1940 ...	Held that the grantee of a kihamba had no right to dispose of it to a third party since he was given the land by his chief to cultivate when it was bush and that if he relinquished it, it should have reverted to the chief with compensation payable for improvements made. NOTE.—A remarkable finding which is hard to understand. Both Chagga Council and Provincial Commissioner's courts upheld the appeals to them. It would appear that the chief's clan resented the passing of a kihamba from its own hands.
Chagga Council ... (Taken to D.C.'s Appeal Court.)	... 17 ...	1943 ...	Held that a chief cannot dispossess a kihamba owner for failure to pay tax on the house thereon.
Marangu (Vunjo) ...	... 35 ...	1941 ...	
Mashati (Rombo) (Taken to D.C.'s Appeal Court.)	... 39 ...	1941 ...	Held that where a chief did not grant the disputed land as a kihamba, the payment of tax for the house thereon by the occupier gave him no prescriptive right to the kihamba.
Olele (Rombo) ...	... 22 ...	1940 ...	Held by the Olele court itself that chiefs do not lease vihamba. If they enter a person into a kihamba, then the kihamba is that person's.
Kibosho (Hayi) ...	... 91 ...	1940 ...	Chief sues successfully in his own court for four vihamba! (Quashed on revision.)

(E) TIME LIMITATION ON SUITS

Courts of Origin	Case No.	Year	Findings
Machame (Hayi) ...	15 ...	1941 ...	Held that the claims made were so ancient that they could not be entertained, even where there was some evidence that the kihamba was held in leasehold.
Kirua Vunjo (Vunjo) ...	139 ...	1940 ...	
Mbokom (Hayi) ...	14 ...	1939 ...	
Kilima (Vunjo) ...	13 ...	1941 ...	
Marangu (Vunjo) ...	23 ...	1940 ...	
Kibosho (Hayi) ...	98 ...	1943 ...	NOTE.—Long occupation of a kihamba, if the right thereto is unquestioned, now gives the occupier a prescriptive right thereto which equity upholds. Frequently an appeal fails since, the onus being on claimant, he cannot prove his ancient claim anyway.
(Taken to P.C.'s Appeal Court.)			
Kibosho (Hayi) ...	149 ...	1943 ...	
(Taken to D.C.'s Appeal Court.)			
Uru (Hayi) ...	6 ...	1945 ...	Ancient claim to a kihamba is entertained and upheld.
(Taken to D.C.'s Appeal Court.)			
<i>But</i>			
Kirua Rombo (Rombo) ...	63 ...	1940 ...	
Machame (Hayi) ...	39 ...	1945 ...	
(Taken to D.C.'s Appeal Court.)			

(F) MISCELLANEOUS

Mbokom (Hayi) ...	54 ...	1944 ...	Held that the lessor shall pay the lessee compensation upon eviction for coffee planted. Lessee had been told by lessor not to plant coffee but the latter took no further action.
(Taken to D.C.'s Appeal Court.)			
Uru (Hayi) ...	100 ...	1941 ...	Held that a lessor may regain his leased kihamba because his lessee had planted coffee thereon without permission.
Machame (Hayi) ...	197 ...	1940 ...	Held that a dispossessed person may return to his old kihamba if he subsequently finds it to be unoccupied.
Mashati (Rombo) ...	20 ...	1943 ...	Held that where the occupier of a kihamba is forced by his chief to leave and move into another chiefdom, his right to his kihamba is not extinguished when the chief subsequently allocates the kihamba to another.
(Taken to D.C.'s Appeal Court.)			
<i>But</i>			
Mashati (Rombo) ...	— ...	1944 ...	Held that a kihamba owner who moved of his own freewill into another chiefdom could not claim back his old Kihamba years later.
(Taken to P.C.'s Appeal Court.)			NOTE.—In the first case the kihamba owner moved out of his own freewill but left his mother in the kihamba and she was ordered out. Had the case gone further on appeal it is likely that an appeal against the judgment cited would have been successful.
Kibosho (Hayi) ...	27 ...	1944 ...	Kibosho court held that claims of both parties to a kihamba could not be proved and ordered both to undertake a trial year's cultivation, the kihamba to go to the most successful. Chagga Council held one side had made out its case.
(Taken to P.C.'s Appeal Court.)			District Commissioner found that kihamba through being left uncultivated belonged to neither party but had reverted to the Native Authority.
			Provincial Commissioner found that Kibosho court should have called more evidence, quashed the proceedings and ordered a new trial.
			NOTE.—An unusual land case with four courts giving different findings.

(F) MISCELLANEOUS—*contd.*

Courts of Origin	Case No.	Year	Findings
Mengwe (Rombo)	... 17 ...	1941 ...	Held that bananas planted by a kihamba owner outside the boundaries of his kihamba must be uprooted.
NOTE.—Banana trees are the sign of the kihamba and may not be planted for instance in shambas other than a few planted to mark boundaries.			
Mkuu (Rombo) (Taken to Governor's Appeal Board.)	... 78 ...	1943 ...	Held that customary compensation only shall be paid for improvements when a kihamba occupier is entitled to compensation on dis-possession.
Mashati (Rombo) (Taken to P.C.'s Appeal Court.)	... 10 ...	1943 ...	
Keni-Mriti (Rombo) (Taken to D.C.'s Appeal Court.)	... 71 ...	1943 ...	Held that a kihamba unused for many years can be regained by the owner, but the owner failed to prove his right thereto.
Marangu (Vunjo) (Taken to D.C.'s Appeal Court.)	... 70 ...	1941 ...	Held that a father cannot take back a kihamba which he has given to his son.
Mwika (Vunjo) (Taken to D.C.'s Appeal Court.)	... 10 ...	1943 ...	Held that where it was proved that claimant once owned the disputed kihamba the onus was on the occupier to prove that he had the ownership thereof although there was no evidence of his paying rent to the claimant.
Chagga Council ... (Taken to D.C.'s Appeal Court.)	... 10 ...	1944 ...	Held that although claimant had no right to the disputed kihamba he be paid compensation for improvements since both the owner and the chief were aware of his cultivating it and took no action till the kihamba was established.
Machame (Havi) (Taken to D.C.'s Appeal Court.)	... 50 ...	1945 ...	Held that an <i>mbuga</i> communal to a clan may not be cultivated by any member of that clan.
Kilema (Vunjo) (Taken to D.C.'s Appeal Court.)	... 135 ...	1944 ...	Held that where a kihamba was granted by a chief and the applicant was not properly entered thereon, the neighbours not being present to show their boundaries, then the applicant has no claim against his neighbours if they can show that their boundaries extended into the area granted to him by his chief.
Old Moshi (Havi) (Taken to D.C.'s Appeal Court.)	... 61 ...	1945 ...	Held that a Chagga, who has no son, may by an oath taken before witnesses, choose his own heir from among his distant kinsmen.

Vernacular Names for some of the better-known Mammals in the Central Province, Tanganyika Territory

By G. H. Swynnerton

MANY OF MY SAFARIS take me to the remoter parts of the Central and Western Provinces, far from pubs and clubs and tiresome telegrams, to places which are rarely visited by Europeans for reasons of inaccessibility. I can well imagine that many people would find these unknown parts extremely boring and, indeed, I am often asked what I do in my spare time when the day's work is over. My answer is that I rarely have a spare minute when I am on safari. There are always traps to be set, skins to be prepared and notes to be written up on things that have been observed during the day. This paper is the result of many so-called "leisure" hours after the official work is rounded off, hours often spent round the camp fire in the evening. It is at such times as these that one gleans much interesting information about animals and the customs of the local natives, for a camp fire has a loosening effect on tongues and the presence of "Bwana Nyama" is often temporarily forgotten.

I went about this task of collecting names of animals in the wrong way, placing too much faith in the axiom that Swahili would get me everywhere. In zoology, Swahili is of little use since the Waswahili are an urban people and have little to do with wild-life and indeed have few names for the animals of the bush and plains. By giving a verbal description of, and the Kiswahili word for, an animal I advanced up to a certain point and collected local names for many of the larger and better-known mammals. But I soon came on a stumbling block, for whereas whole groups of animals are lumped together under one name in Kiswahili, other tribes have a separate name for every species of the group. Two examples are sufficient to demonstrate the narrowness of Kiswahili: as every one knows there are many colours, shapes and sizes of rats and mice in Tanganyika. With few exceptions these are all referred to as *panya* in Kiswahili. Again, there are at least seven genera of mongooses, all of which are lumped together as *nguchiro* by the Waswahili, whereas most genera are given a distinct name by up-country tribes.

I proceeded to collect and preserve specimens of as many of the smaller mammals as possible and, armed with these and with a selection from the departmental collection, I travelled around and showed them to representatives of as many tribes as possible. It was grand to see how interested the Africans became when shown a skin which had been stuffed to represent in a slight degree the living animal. An immediate improvement was noticeable and I was enabled thus to fill many gaps in my lists. That there are still some spaces left blank is regretted but I feel that the time has now arrived when I should publish my results in the hopes of drawing additional names from readers. I do not claim that the following lists are one hundred per cent

accurate. They are not, and I will be indebted to anyone who will point out errors. I am particularly doubtful about some of the Masai and Kindiga names.

In the accompanying table twenty-two tribes and sub-tribes are represented which live in and on the borders of the Central Province, to which has been added Kiswahili as the possible *lingua franca* of the future. In deciding what animals to include I have limited my lists (a) to those animals for which I have a definite record of occurrence within the Central Province, and (b) to those for which I have been able to collect at least six vernacular names. Such well known animals as the topi and situtunga do not occur in the area under consideration. The gerenuk, *Lithocranius walleri* (Brooke) (*E'nainjât* in Masai) occurs in Masailand right up to and possibly just across the Kondoa boundary in the region of Kikori. The suni or pygmy antelope, *Nesotragus moschatus*, von Dueben (*gof* or *gôof* in Sandawe), has been recorded by Jackson (1930) from the Swagaswaga area to the north of Sandawe in Kondoa District. These last two species are not included in the accompanying table as I have been unable to collect more than a few vernacular names for each.

Of the tribes mentioned below the majority are of Bantu origin and to denote the language of such tribes the prefix *ki-* is added to the root of the tribal name: thus the language of the Swahili is Kiswahili. For the remaining tribes, which are not of Bantu origin, the prefix "ki-" is an anomaly and is dropped (though sometimes used in speech), the root of the tribal name only being given. In the language of the Fiume, Asi, and Burungi diphthongs are rare, the vowels being pronounced separately. To denote this I have inserted an apostrophe to denote a distinct break between adjacent vowels, as in the word *dama'imo*. (Is this equivalent to the glottal stop in Arabic?) Soft gutturals are represented by *kh*, hard gutturals by *gh*. The Sandawe and Kindiga (sometimes incorrectly referred to as Tindiga) employ clicks similar to those used by the Zulus. These clicks are represented by the conventional *c*, *gq*, *q*, and *x* used in writing the Zulu language. The nasal vowel is represented by (*n*) placed after the vowel letter. In most words the stress is on the penultimate syllable but where this is not so, the accented syllable is indicated by an accent, as in the word *tékele*. Where the consonants *ng* (written thus) occur in a word, the *g* is hard as in "finger"; when they are written *ng'* the *g* is soft as in "singer".

In certain instances I have borrowed names from other authors. Where this has been done I have indicated the fact by placing the author's initials after the borrowed word. Thus, "(CFMS)" is placed after words borrowed from Swynnerton (1936), and "(AL)" from various works by Loveridge, "(D)" from Johnson's (1939) *Swahili—English Dictionary*, "(CM)" from Copley and Mayer (1934), "(RH)" from Roosevelt and Heller (1915), "(JHB)" from the Jagdhandbuch (1912), "(CHS)" from Stigand (1913).

It is hoped that this paper will be of use to officials and non-officials and in schools, and that it will afford an insight into the difficulties experienced by natives when being "dealt with" by Europeans. I give as an example of the

misunderstanding which occurs through ignorance of the local language the case of a well-known Government official, all keyed up for shooting duck (*bata* in Kiswahili) and armed with his 12-bore and few remaining and very precious "Number Four" cartridges, who was very irate with his Mgogo guide when, after a tiring walk through thorn-bush, was eventually shown a very fine Impala ram (*mbata* in Chigogo). A point which has struck me forcibly while collecting these names is that I have had to rely in most instances on the old men for my information since the younger generations did not appear to know their own tribal names for many of the animals living around them. This bears out what Moreau (1940) found when collecting the names of birds.

I am indebted to Dr. C. H. N. Jackson for reading through the draft of this paper and for making certain corrections and suggestions which I have incorporated. He has kindly allowed me to use certain words collected by himself, such words being followed by "(CHNJ)".

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ENGLISH NAME	SCIENTIFIC NAME	KISWAHLI	FIOME (Goroo)	ASI	BURUNGI	SANDAWE
Elephant Shrews, Spectacled	<i>Elephantulus</i> spp.	...	Gerudwa'i	Kwa'inimo	Do'éa	Talla
Elephant Shrews, Four-toed	<i>Petodromus</i> spp.	...	Yoho	Kwa'inimo	Kwa'inimo	Nangisé
Mole, Golden	<i>Chlorotalpa</i> spp.	...	Kuti	Nkutunoo	Kutia	Tukwo
Hedgehog	<i>Atelerix pringi</i> (Wag.)	...	Umal	Umal	Umal	Kamasé, Du'o
Shrews and Musk Shrews	<i>Crocidura</i> spp. and <i>Suncus</i> spp.	...	Dwa'i	Kunambari	Kunambari	Ningiso
Bats	All genera and species	...	Apelimo	Kurukuru	Kurukuru	Tari, kurukuri
Bush Baby	<i>Galago senegalensis</i> (E. Geoff.)	...	Erkonki	Danga'i	Anku	Gabe
Guenon, Grey or Vervet	<i>Cercopithecus aethiops</i> (L.)	...	Autu	A'utumoo	Autu	Qaku
Baboons, Yellow and Olive	<i>Papio cynocephalus</i> (L.) and <i>P. doguera</i> (Puch.)	Nyani	Poham	Pahamu	Pamo	Xoxa
Badger, Honey, or Ratel	<i>Mellivora capensis</i> (Schreb.)	...	Kalambatu	Diriba	Diriba	Zirba
Polecat, Striped	<i>Ictonyx striatus</i> (Perry)	...	Cheche (D)	Twelala'i	...	Ningi
Dog, Domestic	<i>Canis familiaris</i> L.	...	Mbwa	Gwehera	Gwehera	Kaka
Dog, Wild	<i>Lycan pictus</i> (Temm.)	...	Tuer	Tokoraino	Takura'i	Gweché
Fox, Bat-eared	<i>Otocyon megalotis</i> (Desm.)	...	?	Kurukurano	...	Buguli
Jackals	<i>Thos adustus</i> (Sund.) and <i>T. mesomelas</i> (Schreb.)	Bweha	Nsa	Monio	Mondo	Monio, Monzoo
Givet	<i>Civettictis civetta</i> (Schreb.)	...	Gutui	Lunga'i	Nima	Nima
Genets	<i>Genetta genetta</i> (L.) and <i>G. tigrina</i> (Schreb.)	Kanu	Idumuru	Impaki	Impakia	Tandé
Mongoose, Marsh	<i>Atilax paludinosus</i> (G. Cuv.)	Nguchiro	...	...	...	Ma (n)soma- (n)so
Mongoose, Dwarf	<i>Helogale</i> sp.	Nguchiro	Tshuhle	Chwahanarimo	Chohorari	Tswama
Mongoose, Large Grey	<i>Harpates</i> sp.	Nguchiro	...	Yugho	...	Kaglia
Mongoose, White-tailed	<i>Ichneumia albicauda</i> (G. Cuv.)	Nguchiro	Gheratlimo	Tsapu	Chapu	Gaa(n)
Mongoose, Banded	<i>Mungos mungo</i> (Gmel.)	Nguchiro	...	Ghorogloramo	Ghurughuru	Ghara
Mongoose, Black-tip-tail, Slender	<i>Myonax</i> sp.	Nguchiro	...	Njuali	...	Longos, kilihani
Aard-wolf	<i>Proteles cristatus</i> (Sparr.)	Fisi mdogo, fisi wa mkole	...	...	...	T'ékele cundu
Hyena, Spotted	<i>Crocuta crocuta</i> (Erxl.)	Fisi, kunguwa	Bahá	Bahá	Baimo	T'ékele
Hyena, Striped	<i>Hyena hyena</i> (L.)	Fisi, shundwa (D)	Geheri	Simbalalimo	Simbiko	T'ékele tota
Cheetah	<i>Acinonyx jubatus</i> (Schreb.)	Duma	Eliwi	Du'uma	Poso	Hababua
Caracal	<i>Caracal caracal</i> (Schreb.)	Simbamangu	Sorari	Iruana	Mitanga	Miangá
Cat, House	<i>Felis catus</i> L.	Paka	Mau	Nya'u	Nya'u	Nangwe
Cat, Wild	<i>Felis lybica</i> Forster	Kimburu, paka pori	Na'amo	Ye'ita	J'erare	Paka
Serval, Large-spotted	<i>Leptailurus serval</i> (Schreb.)	Kizonga, ngawa (D)	Awí	Kiambaká	Klabakwa	Dzori
Leopard	<i>Panthera pardus</i> (L.)	Chui	Du'uma	Du'uma	Du'uma	Teka
Lion	<i>Panthera leo</i> (L.)	Simba	Diram	Dirau	Dido	Xatsuu

ENGLISH NAME	SCIENTIFIC NAME	KIRANGI	MASAI	CHICOGU	KICHE	(Ndeburo)
Elephant Shrews, Spectacled	<i>Elephantulus</i> spp.	Mpulu	Nderoni	Mulu	...	Nonda
Elephant Shrews, Four-toed	<i>Petrodromus</i> spp.	Senge	Nderoni	Sanje	Dodoga	Njagali
Mole, Golden	<i>Chlorotalpa</i> spp.	Ikuta	Likurumuu	Futo	Futo	Fukho
Hedgehog	<i>Atelerix prateri</i> (Wag.)	Kinyesuke	...	Sejese	Chisi	Akhasenje
Shrews, and Musk Shrews	<i>Crocidura</i> spp. and <i>Suncus</i> spp.	Mpingi	Nderoni	Nzunkanziru	Nyunganziru	Njunga-ninsira
Bats	All genera and species	Kikurukuro	Sarabalanji	Ibudibudi	Kibudibudi	Ibudibudi
Bush Baby	<i>Galago senegalensis</i> (E. Geoff.)	Dangi	Manogong'o	Ndele	Iweje	Kiamdere
Gibbon, Grey or Vervet	<i>Ceropithecus aethiops</i> (L.)	Tumbili	Ndere	Njedengwa	Igedege	Khadabwe
Baboon, Yellow and Olive	<i>Papio cynocephalus</i> (L.) and <i>P. doguera</i> (Puch.)	Nchwe	-O'i durul, ol ing'ana (CFMS)	Ipuua	Iuyabu	Mhuma
Badger, Honey or Ratel	<i>Mellivora capensis</i> (Schreb.)	Nyere	-O'likinyanaishi	Muhiru	Limbako	Iyajeje
Polcat, Striped	<i>Ictonyx striatus</i> (Perry)	Kinyenge	...	Maluenje	Kimaluengwe	Akhama-lukwiri
Dog, Domestic	<i>Canis familiaris</i> L.	Kuri	Ol dyaa	Ibwa	Ibwa	Mbwa
Dog, Wild	<i>Lycan pictus</i> (Temm.)	Muji	Laborkidong	Iminzi	Ngwami	Mbawa
Fox, Bat-eared	<i>Otocyon megalotis</i> (Desm.)	Igwave	O-styal (CHS)	Nchenjeje	Nchenge	Akhama-nchenjeje
Jackals	<i>Thos adustus</i> (Sund.) and <i>T. mesomelas</i> (Schreb.)	Mniju	En derashi	Nhyewe	Gwichewe, likew. (CHNJ)	Nchewe
Civet	<i>Civettatus civetta</i> (Schreb.)	Nchungo	Ndolugo	Fungo	Ifungo	Fungo
Genets	<i>Genetta genetta</i> (L.) and <i>G. tigrina</i> (Schreb.)	Nkanu	Simingoor	Nyiriri	Iodzi	Nwihira
Mongoose, Marsh	<i>Atilax paludinosus</i> (G. Cuv.)	...	...	Marukwiri	...	Munego
Mongoose, Dwarf	<i>Haplogale</i> sp.	...	...	Musira	Kimsira	Khasira
Mongoose, Large Grey	<i>Herpestes</i> sp.	...	Ol chuki	Machinyemba	...	Nyakwera
Mongoose, White-tailed	<i>Ichneumia albicauda</i> (G. Cuv.)	...	O'likijasi	Nyakwera, nashi	Sekera	Njojo
Mongoose, Banded	<i>Mungos mungo</i> (Gmel.)	...	O'likinyanaishi	Ng halasanga	Lumilumi	...
Mongoose, Black-tip-tail, slender	<i>Myonax</i> sp.	...	Ol chuki	Mloli	Kinololi	Ahama-lukwiri
Aard-wolf	<i>Proteles cristatus</i> (Sparr.)	...	...	Mbislukuanga	...	Kafisi-lukunga
Hyaena, Spotted	<i>Crocuta crocuta</i> (Brxl.)	...	Ol nyojine	Mbsi, kimbiwi, iwelawela	Lifi	Isakhaunkha
Hyaena, Striped	<i>Hyena hyaena</i> (L.)	...	Ol otomu	Mbsi	Badimahamba	Mlisi
Cheetah	<i>Acinonyx jubatus</i> (Schreb.)	...	Lugwalukeri	Duma	Nsakanka	Duma
Caracal	<i>Caracal caracal</i> (Schreb.)	...	...	Kasimba-nangwe	Kasikiri	Khasimba-nangwe
Cat, House	<i>Felis catus</i> L.	...	Ewulele	Nyau	Iryau	Nyau
Cat, Wild	<i>Felis lybica</i> Forster	...	Ewulele	Fuji	Ipaka	Makha
Serval, Large-spotted	<i>Lepailurus serval</i> (Schreb.)	...	En garasi	Nzuri	Nzuri	Ibaduma-hamba
Leopard	<i>Panthera pardus</i> (L.)	...	...	Suwi	Duma	Nsui
Lion	<i>Panthera leo</i> (L.)	...	Ol owali ker, ol ogwaru mara (CHS)	Simba	Nyalupala	Nyarupala
		...	Ol ngatunyi, ol owaru kio (CFMS), ol-lo-i-nasi (CHS)	...	...	...

ENGLISH NAME	SCIENTIFIC NAME	KIKIMBU (Itumba)	KINYAMWEZI (Kikurumo)	KIYANZI (Jiwe-la-Singa)	TATURU (Bwadija: Itigi)	TATURU (Bwadija: Sibiti)
Elephant Shrews, Spectacled	<i>Elephantulus</i> spp.	...	...	...	...	Murjang'ira
Elephant Shrews, Four-toed	<i>Petrodromus</i> spp.	...	...	...	...	Murjang'ira
Mole, Golden	<i>Chlorotalpa</i> spp.	...	...	...	...	Kukunurir
Hedgehog	<i>Atheris pruneri</i> (Wag.)	...	...	...	...	Hushichant
Shrews and Musk Shrews	<i>Crocidura</i> spp. and <i>Suncus</i> spp.	...	...	...	...	Murjang'ira
Bats	All genera and species	...	...	...	...	Rogas gho
Bush Baby	<i>Galego senegalensis</i> (E. Geoff.)	...	...	...	...	Mbulu
Guinea, Grey or Vervet	<i>Cercopithecus aethiops</i> (L.)	...	...	...	...	Lebeunk
Baboons, Yellow and Olive	<i>Papio cynocephalus</i> (L.) and <i>P. doguera</i> (Puch.)	...	...	...	...	Ghindiant
Badger, Honey, or Batel	<i>Mellivora capensis</i> (Schreb.)	...	...	...	...	Tuji
Polecat, Striped	<i>Idonyx striatus</i> (Perry)	...	...	...	...	Bujigir
Dog, Domestic	<i>Canis familiaris</i> L.	...	...	...	...	Gured
Dog, Wild	<i>Lycan pictus</i> (Temm.)	...	...	...	...	Suyanda
Fox, Bat-eared	<i>Otocyon megalotis</i> (Desm.)	...	...	...	...	Blisjand
Jackals	<i>Thos adustus</i> (Sund.) and <i>T. mesomelas</i> (Schreb.)	...	...	...	...	Furayud
Civet	<i>Civettictis civetta</i> (Schreb.)	...	...	...	...	Gihira
Genets	<i>Genetta genetta</i> (L.) and <i>G. tigrina</i> (Schreb.)	...	...	...	...	Hamakaru-buruga
Mongoose, Marsh	<i>Atelax paludinosus</i> (G. Cuv.)	...	...	...	...	Biong'yanda
Mongoose, Dwarf	<i>Helogale</i> sp.	...	...	...	...	Lerejenir
Mongoose, Large Grey	<i>Herpestes</i> sp.	...	...	...	...	Bububulani
Mongoose, White-tailed	<i>Ichneumia albicauda</i> (G. Cuv.)	...	...	...	...	Lerejenir
Mongoose, Banded	<i>Mungos mungo</i> (Gmel.)	...	...	...	...	Meshtimura, urageu
Mongoose, Black-tip-tail, Slender	<i>Myonax</i> sp.	...	...	...	...	Gwetcherur
Aard-wolf	<i>Proteles cristatus</i> (Sparr.)	...	...	...	...	Habir
Hyena, Spotted	<i>Crocuta crocuta</i> (Erxl.)	...	...	...	...	Habir surg
Hyena, Striped	<i>Hyena hyaena</i> (L.)	...	...	...	...	Darut
Cheetah	<i>Acinonyx jubatus</i> (Schreb.)	...	...	...	...	Ngwu
Caracal	<i>Caracal caracal</i> (Schreb.)	...	...	...	...	Nyau
Cat, House	<i>Felis catus</i> L.	...	...	...	...	Urish
Cat, Wild	<i>Felis lybica</i> Forster	...	...	...	...	Urogula
Serval, Large-spotted	<i>Leptailurus serval</i> (Schreb.)	...	...	...	...	Marit
Leopard	<i>Panthera pardus</i> (L.)	...	...	...	...	Ng'ida
Lion	<i>Panthera leo</i> (L.)	...	...	...	...	Ng'ida

ENGLISH NAME	SCIENTIFIC NAME	KINYISANZU	KINDIGA	KISUKUMA
Elephant Shrews, Spectacled	<i>Elephantulus</i> spp.	Mitunguki	Yondo	Bulu (CFMS)
Elephant Shrews, Four-toed	<i>Petodromus</i> spp.	Doroka	Yondo	Nkezi
Mole, Golden	<i>Chlorotalpa</i> spp.	N'kuro		Ifuko
Hedgehog	<i>Atelerix prateri</i> (Wag.)	Kilianangu		Kilongomikilwa
Shrews and Musk Shrews	<i>Crocidura</i> spp. and <i>Suncus</i> spp.	Dzunga		Nyanakiranzira
Bats	All genera and species	Mitaii		Tunge
Bush Baby	<i>Galago senegalensis</i> (E. Geoff.)	Mdabi		Kabundi
Guenon, Grey or Vervet	<i>Ceropithecus aethiops</i> (L.)	Ntumbili		Nhumbili
Baboons, Yellow and Olive	<i>Papio cynocephalus</i> (L.) and <i>P. doguera</i> (Puch.)	Mpuna		Guku
Badger, Honey, or Ratel	<i>Mellivora capensis</i> (Schreb.)	Nyagere		Nyagere
Polecat, Striped	<i>Idonyx striatus</i> (Perry)	Kindi		Kanenge
Dog, Domestic	<i>Canis familiaris</i> L.	Mbwá	Qaanu	Mva
Dog, Wild	<i>Lycan pictus</i> (Temm.)	Mbugi	Mbugita	Mhugi
Fox, Bat-eared	<i>Otocyon megalotis</i> (Desm.)	Bitiri	Mbogeko	Pundugu, puruwe
Jackals	<i>Thos adustus</i> (Sund.) and <i>T. mesomelas</i> (Schreb.)	Murura	Kwetea	Kidivi, nyamhuwa
Civet	<i>Civettictis civetta</i> (Schreb.)	Ntungo	Cibá	Ntungo
Genets	<i>Genetta genetta</i> (L.) and <i>G. tigrina</i> (Schreb.)	Nyiri	Kwuguda	Nyili
Mongoose, Marsh	<i>Atelax paludinosus</i> (G. Cuv.)	Nkola	Dumpunia	Fwina
Mongoose, Dwarf	<i>Helogale</i> sp.	Dzoo	Cakwea	Kishoramwanzi
Mongoose, Large Grey	<i>Herpestes</i> sp.		Kangaa	Nyereji
Mongoose, White-tailed	<i>Ichneumia albicauda</i> (G. Cuv.)	Ihagala	Qanagaa	Kalasa
Mongoose, Banded	<i>Mungos mungo</i> (Gmel.)	Nkala	Cankaa	Ng'hala
Mongoose, Black-tip-tail, Slender	<i>Myonax</i> sp....	Lonzi	Watsi-oa	
Aard-wolf	<i>Proteles cristatus</i> (Sparr.)	Mpitumung	Ha'imanga	Mbitimulu
Hyaena, Spotted	<i>Crocuta crocuta</i> (Erxl.)	Mpiti	Tafadzai	Mbiti
Hyaena, Striped	<i>Hyaena hyaena</i> (L.)	Mudzumi	Udzameako	Italagu (CFMS)
Cheetah	<i>Acinonyx jubatus</i> (Schreb.)	Kimbagu	Andasha	Nzoli
Caracal	<i>Caracal caracal</i> (Schreb.)	Nangu	Ce(n)ee(n)deako	Nkami
Cat, House	<i>Felis catus</i> L.	Nyau	Unduea	Nyamu, Jangu
Cat, Wild	<i>Felis lybica</i> Forster	Ntughu	Ce(n)ee(n)deako	Kimburu
Serval, Large-spotted	<i>Lepailurus serval</i> (Schreb.)	Njuri	Janjal	Nzori
Leopard	<i>Panthera pardus</i> (L.)	Thui	Rufai	Subi, suf
Lion	<i>Panthera leo</i> (L.)	Dimba	Rufai, sesemeya	Shimba

ENGLISH NAME	SCIENTIFIC NAME	KISWAHILI	FIOME (Goroka)	ASI	BURUNGU	SAWA
Ant-bear, or Aard-vark	<i>Orycteropus afer</i> (Pallas)	...	Fila	Filu	Fili	Gqena
Ground Pangolin, or Sealy Ante-eater	<i>Smutsia temminckii</i> (Smuts)	...	Udanjiliri	Anakafa	Nkwaso	Kurukaka
Hare, Cape	<i>Lepus capensis</i> L.	...	Kwa'a	Kwa'i	Kwe'i	La'e
Hare, Red Rock	<i>Pronolagus crassicaudatus</i> (I. Geoff.)	? Kitungule (D)	...	Oroboo	...	Kwe'e
Blesmol	<i>Heliophobus argenteocinctus</i> Ptrs.	Fuko	Kuti	Nkutumoo	Kutia	Tukwo
Cane-rat, Large	<i>Thryonomys swinderianus</i> (Temm.)	Ndezi	...	...	...	Kanasa
Porcupines	<i>Hystrix</i> spp.	Nungu	Santi	Sapatl	Sabatya	Kinle
Squirrels	<i>Paraxerus</i> spp.	Kindi, kidiri	Nyeghud	...	Tingtingo	Kilikiliko
Spring-haas	<i>Pedetes cafer</i> (Pallas)	Kamendegere	...	He'enani	He'esanya	Dira
Dormouse	<i>Graphiurus</i> spp.	Panya miti	...	Susukulu	Sinsoghe'o	Pungupungu
Grass Rat, Unstriped	<i>Arviculthis abyssinicus</i> (Rüpp.)	Panya	Gerau	Ngusumoo	Chia'atemo	Buri
Grass Rat, Striped	<i>Lemniscomys</i> spp.	Panya	Geramha'i	Mendaa	Nvagala	Moloto
Mouse, Pygmy	<i>Mus balatus</i> (Thos.)	Panya	Dua'i	Sukuranda'i	Mang'kalele	Cono
House Rat, Black	<i>Rattus rattus</i> (L.)	Panya	Gerau	Ngusuu	Ngusuu	Akuku
House Rat, Brown	<i>Rattus norvegicus</i> (Berk.)	Panya	Gerau	Ngusuu	...	...
Rat, Sharuba	<i>Rattus coucha</i> (A. Smith)	Panya	Gerau	Ngusuu	...	...
Mouse, Pouched...	<i>Saccostomus campestris</i> (Ptrs.)	Panya	Gerau	Kurumpu'umo...	Matinde	Mebe'e
Rat, Tree	<i>Thalomys</i> sp.	Panya	Gerau	Nkutumoo	Nlorimo	Agungu
Mouse, Fat	<i>Sitomys</i> sp.	Panya	Gerau	Susukulu	...	Nanale
Gerbils, Small	<i>Gerbillus</i> sp.	Panya	Gerau	Haisobasá	Nlorimo	Bankwa, nioli
Gerbils, Large	<i>Tatera</i> spp.	Panya	Gerau	Nyuri	Machunchi	...
Hyrax, Grey	<i>Heterohyrax syriacus</i> (Schreb.)	Pimbi	Gerau	Dila'i	Dilai	Bumbi
Hyrax, Tree	<i>Denatohyrax</i> sp.	Pelele	Kwea'ani	Kuni	Kuna	Cwena
Elephant	<i>Loxodonta africana</i> (Blum.)	Tembo, ndovu	Dau	Waha'imo	...	Senxa cwena
Hippopotamus	<i>Hippopotamus amphibius</i> L.	Kiboko, komondo (D)	Hauwe	Da'u	Dau	Cwaa
Wart Hog	<i>Phacochoerus aethiopicus</i> (Fall.)	Ngiri	Afukurumo	Maklwi	Makho, taramondo	Makhunko
Bush Pig	<i>Phacochoerus porcus</i> (L.)	Ngruwe	Bainimo	Afurimoo	Afurimo	Xaa(n)
Giraffe	<i>Giraffe camelopardalis</i> (L.)	Twiga	Tsamasi	Binimo	Binimo	K'ento
Cattle, Domestic	<i>Bos taurus</i> L.	Ng'ombe	Khlee	Chamasimoo	Chamasu	Tsamasu
Buffalo	<i>Syncerus caffer</i> (Sparr.)	Nyati, mbogo	Sere'a	Khlee	Khlee	Mumbu
Goat, Domestic	<i>Capra hircus</i> L.	Mbuzi	Lee	Sere'a	Sadya'emo	Ceu
Sheep, Domestic	<i>Ovis aries</i> L.	Kondoo	Beqhe	Laga'i	Ara	Khlaa
				Be'i	Bea	Nzalo

ENGLISH NAME	SCIENTIFIC NAME	KIRANGI	MASAI	CHIGOGO	KIHEHE	KISANGU (Ndaburo)
Ant-bear, or Aard-vark	<i>Orpatorcus afer</i> (Pallas)	...	Naishirdama	Nyamuhanga	Nyamuhanga	Muhanga
Ground Pangolin, or Scaly Ant-eater	<i>Smutsia temminckii</i> (Smuts)	...	Ndabwe	Nyamung'umi	Nkakakuona	Nkhakha-kuonwa
Hare, Cape	<i>Lepus capensis</i> L.	...	Ingitojoo	Sungula	Kisungula	Kwang'ando
Hare, Red Rock	<i>Pronolagus crassicaudatus</i> (I. Geoff.)	...	...	...	...	Akhandagawa
Blesmol	<i>Helipholius argenteocinctus</i> Ptrs.	Ikuta	Likurumu	Futo	Futo	Fukhoo
Canerak, Large	<i>Thryonomys swinderianus</i> (Temm.)	Ngete	...	Ndetzi	Ndetzi	Nsenji
Porcupines	<i>Hystrix</i> spp.	Nungu	O'yavai	Nungu	Itungu	Nyamunungu
Squirrels	<i>Paraxerus</i> spp.	Kirankumi	...	Ng'hang'hi, ndang, nhandamiti	Kimdangi	Nhandala-napichi
Spring-haas	<i>Pedetes cafer</i> (Pallas.)	Chivi	Esro	Ng'hidzi, nchizi	...	Khalukhani
Dormouse	<i>Graphiurus</i> spp.	Mpukumuti	Nderoni	Nchirafum-budza	Mderi (AL)	Akhadere-khachidzi
Grass Rat, Unstriped	<i>Arvicanthia abyssinicus</i> (Rüpp)	Itudya	Nderoni	Fudi	Mbewa	Khang'anana Mbewa
Grass Rat, Striped	<i>Lemniscomys</i> sp.	Nyala	...	...	...	...
Mouse, Pygmy	<i>Mus bellus</i> (Thos.)	Nyunga	Nderoni sambu	Nyagala	Nyagala	Khanyagala
House Rat, Black	<i>Rattus rattus</i> L.	Puku	...	Chimhanga	Chimhanga	Khadowe
House Rat, Brown	<i>Rattus norvegicus</i> (Berk.)	Puku	Nderoni	Ngule	Mbewa	Nkhoswe
Rat, Shamba	<i>Rattus coucha</i> (A. Smith)	Funde	...	Mbewa	Mbewa	Nkhoswe
Mouse, Pouched...	<i>Scootomys campestris</i> (Ptrs.)	...	Nderoni	Funde	Funde	Ibewa
Rat, Tree	<i>Thallomys</i> sp.	...	...	Idzuru, ngulu	...	Igulu
Mouse, Fat	<i>Sitomys</i> sp.	Turintoo	...	Nhandalamiti	Nhandalamiti	Ngombwe
Gerbils, Small	<i>Gerbillus</i> spp.	Nyuri	Nderoni	Njida	Mbuku	Mhuku
Gerbils, Large	<i>Tatera</i> spp.	Dilai	...	Mbadya	Kbadya	...
Hyrax, Grey	<i>Heterohyrax syriacus</i> (Schreb.)	Mpimbi	...	Ng'hulumwaga	Mbanya	Ngombwe
Hyrax, Tree	<i>Dendrohyrax</i> sp.	Mperere	Ekijunju	Mhimbi	Pimbi	Mhimbi
Elephant	<i>Loxodonta africana</i> (Blum.)	Njou	...	...	...	Mherere
Hippopotamus	<i>Hippopotamus amphibius</i> L.	Ntoromondo	Ol chángito sabuk (CHMS), Ol tome	Nhembo	Ndembo (CHNJ)	Jungwa
Wart Hog	<i>Phacochoerus aethiopicus</i> (Pall.)	Ngere	Ol makau	Ntomondo	Ntomondo, Nwondo (CHNJ)	Mfu, Ntomondo
Bush Pig	<i>Potamochoerus porcus</i> (L.)	Nkamba	Ol bitir	Njili	Ngiri	Njiri
Giraffe	<i>Giraffa camelopardalis</i> (L.)	Ntwia	Ol bitir	Ngubi	Ngubi	Igubi
Cattle, Domestic	<i>Bos taurus</i> L.	Ng'ombe	Ol meat, ol-ado-kiragata (CHS) Engiten	Nwhiga	Ndunduru	Nwhiga
Buffalo	<i>Syncerus caffer</i> (Sparr.)	Mboo	...	Ng'ombe	...	Ng'ombe
Goat, Domestic	<i>Capra hircus</i> L.	Mburi	Ol esogwán (CHS)	Mbogo	Mbogo	Ibogo
Sheep, Domestic	<i>Ovis aries</i> L.	Mundi	En gine	Mhene	Mene	Mhene
			En ger	Ng'holo	Ng'olo	Nkholo

Ant-bear, or Aard-vark	Oryzomys afer (Pallas) ...							
Ground Pangolin, or Scaly Anteater	<i>Sminia temminckii</i> (Smuts)	...	...	...	...	Kakakuona	Ngakakuona	Rinjiliga
Hare, Cape	<i>Lepus capensis</i> L.	...	...	...	...	Kalulu	Kawung'ando...	Ujunjur
Hare, Red Rock	<i>Pronolagus crassicaudatus</i> (I. Geoff.)	...	...	...	...	Mpumbulu	Kapumbulu	Ujunjur
Blesmol	<i>Hatipobius argenteocineretus</i> Ptrs.	...	...	...	...	Nkutoo	Iitkoo	Kutkunnuir
Canezat, Large	<i>Tityonoma swinderianus</i> (Temm.)	...	...	...	...	Sengu	Isenzi	...
Porcupines	<i>Hystrix</i> spp.	...	...	...	...	Ntungi	Nunguli	Husbichand
Squirrels	<i>Paraceras</i> spp.	...	...	...	...	Kalumpelembe	Mperembe	...
Spring-haas	<i>Podetes cafer</i> (Pallas)	...	...	...	...	Nembe	Kamendegere...	Urabasang'eng
Dormouse	<i>Gryphurus</i> sp.	...	...	...	...	Kakimporogoto	Limporogoto	...
Grass Rat, Unstriped	<i>Aricizanthia abyssinicus</i> (Rupp.)	...	...	...	...	Nkwaa	Fudi, nkwa...	Murjang'ira
Grass Rat, Striped	<i>Lemniacomys</i> sp.	...	...	...	...	Kawala	Kadulu	Urogul
Mouse, Pyemy	<i>Mus baltus</i> (Thos.)...	...	...	...	...	Kitule	Tule	Unaweringa
House Rat, Black	<i>Rattus rattus</i> (L.)	...	...	...	...	Ikwija	Iqsoo	Murjang'ira
House Rat, Brown	<i>Rattus norvegicus</i> (Berk.)	...	...	...	...	Mukinki	Iwewa	...
Rat, Shamba	<i>Rattus coucha</i> (A. Smith)	...	...	...	...	Mbewa	Ipuke	...
Mouse, Pouched...	<i>Saccostomus campestris</i> (Ptrs.)	...	...	...	...	Mputu	Kurumwaga	...
Rat, Tree	<i>Thallomys</i> sp.	...	...	...	...	Nsaa	Kiduramalindo	Murjang'eda get ...
Mouse, Fat	<i>Steatomys</i> sp.	...	...	...	...	Nsolomoki	Lipanga	Utish
Gerbils, Small	<i>Gerbillus</i> spp.	...	...	...	...	Lipwipiwi	Ipimbi	Ulanguhijend
Gerbils, Large	<i>Tatera</i> spp. ...	...	...	...	...	Mzimbi	Mpelele	...
Hyrax, Grey	<i>Heterohyrax zeyriacus</i> (Schreb.)	...	...	...	...	Mpelele	Muti, nzovu	Bisit
Hyrax, Tree	<i>Dendrohyrax</i> sp.	...	...	...	...	Njogu	Ntomombo	Urum
Elephant	<i>Loxodonta africana</i> (Blum.)	...	...	...	...	Ntomombo	Igiri	Bichend
Hippopotamus	<i>Hippopotamus amphibius</i> L.	...	...	...	...	Ngiri	Igulwe, mumba	Ngitiminyant
Wart Hog	<i>Phacochoerus aethiopicus</i> (Fall.)	...	...	...	...	Igulwe	Ikwiga	Ga'id
Bush Pig	<i>Palomochorus porcus</i> (L.)	...	...	...	...	Ntwiga	Ngombe	Dir (s.), Duk (pl.)...
Giraffe	<i>Giraffa camelopardalis</i> (L.)	...	...	...	...	Ngombe	Mbogo	Mwast
Cattle, Domestic	<i>Bos taurus</i> L.	...	...	...	...	Mbuli	Mhuri	Mbold
Buffalo	<i>Syncerus coffer</i> (Sparr.)	...	...	...	...	Nkolo	Ng'holo	Gistland
Goat, Domestic	<i>Capra hircus</i> L.	...	...	...	...	...	...	...
Sheep, Domestic	<i>Ovis aries</i> L.	...	...	...	...	...	...	...

ENGLISH NAME	SCIENTIFIC NAME	TATURU (Barabara: Mang'ati)	KINYATURU (Uvuyangany)	KINYATURU (Wahi)	KINYIRAMBA	KINYAMBI
Ant-bear, or Aard-vark	<i>Orycteropus afer</i> (Pallas)	...	...	Ngaya	Ngaya	Ngaa
Ground Pangolin, or Scaly Ant-eater	<i>Smutsia temminckii</i> (Smuts)	...	...	Kukaka	Kurukaka	Nkuru
Hare, Cape	<i>Lepus capensis</i> L.	...	...	Mnyangaa	Mp'hunda	Mwinyan-garu
Hare, Red Rock	<i>Pronolagus rupestris</i> (L. Geoff.)	...	...	Tusi	Ilambi	Tisi
Blesmol	<i>Heliphiobius argenteocinctus</i> (Temm.)	...	...	Pukwi, kukwe	Pukwe	Nkuto
Canerat, Large	<i>Thryonomys swinderianus</i> (Temm.)	...	...	...	Nsenzi	Nsenzi
Porcupines	<i>Hystrix</i> spp.	...	...	Nungu	Nungu	Nungu
Squirrels	<i>Paraxerus</i> spp.	...	...	Sindi	Mdabi	Kimpumpu
Spring-haas	<i>Pedetes cafer</i> (Pallas)	...	...	Jibu	Jin	Jiu
Dormouse	<i>Graphiurus</i> sp.	...	...	Murjang edish	Kimpumpu	Kintungu
Grass Rat, Unstriped	<i>Africanus abyssinicus</i> (Rüpp.)	...	...	Murjang	Nkungu	Nkungu
Grass Rat, Striped	<i>Lemniscomys</i> sp.	...	...	Murjang esem	Kuse	Kui
Mouse, Pygmy	<i>Mus bellus</i> (Thos.)	...	...	Murjang ederor	Turu	Turu
House Rat, Black	<i>Rattus rattus</i> (L.)	...	...	Murjang etuu	Nkokho	Minkini
House Rat, Brown	<i>Rattus norvegicus</i> (Berk.)	...	...	Murjang	Nkokho	Gurigue
Rat, Shamba	<i>Rattus coucha</i> (A. Smith)	...	...	...	Singi	Mbelele
Mouse, Pouched...	<i>Saccostomus campestris</i> (Pters.)	...	...	...	Mbevé	...
Rat, Tree	<i>Thalomys</i> sp.	...	...	...	Mpukumuti	...
Mouse, Fat	<i>Sitomys</i> sp.	...	...	Murjang ita	Tulu	Munsa
Gerbils, Small	<i>Gerbillus</i> spp.	...	...	...	Lebwa	Nduri
Gerbils, Large	<i>Tatera</i> spp.	...	...	...	Mpanya	Nangala
Hyrax, Grey	<i>Heterohyrax syriacus</i> (Schreb.)	...	...	...	Pimbi	Pimbi
Hyrax, Tree	<i>Dendrohyrax</i> sp.	...	...	...	...	...
Elephant	<i>Loxodonta africana</i> (Blum.)	...	...	Gwalaungwala, dimid	...	...
Hippopotamus	<i>Hippopotamus amphibius</i> L.	...	...	Bisht	Njou	Njou
Wart Hog	<i>Phacochoerus aethiopicus</i> (Pall.)	...	...	Udom	Tomondo	Nguo
Bush Pig	<i>Potamochoerus porcus</i> (L.)	...	...	Beland	Ngi	Ngiri
Giraffe	<i>Giraffa camelopardalis</i> (L.)	...	...	Ukurumed	Nguma	Nguruma
Cattle, Domestic	<i>Bos taurus</i> L.	...	...	Gaid	Ntira, ntigwa...	Ntwiga
Buffalo	<i>Syncerus caffer</i> (Sparr.)	...	...	Muwast	Mbogho	Mbogho
Goat, Domestic	<i>Capra hircus</i> L.	...	...	Mbold (s.), Nog (pl.)	Mburi	Mburi

ENGLISH NAME	SCIENTIFIC NAME	KISWAHILI	FIOME (Goroo)	ASI	BURUNGI	SANDAWE
Hartebeest, Coke's	...	...	...	Gwera'ahi	...	Kondi
Hartebeest, Lichtenstein's	...	Kongoni	...	...	...	Kondi
Wildbeest	...	Konzi, kongoni	...	...	...	Gwarawai
Duiker, Red Forest	...	Nyumbu	...	Nkátika	...	Bus
Duiker, Bush	...	Funo	...	Ilintimo	...	Erontia
Klipspringer	...	Nya, kiduku (D)	...	? Gwerahe	...	Gumand
Oribi	...	Mbuzi mawe, ngurunguru	...	Tsakani	...	Chakania
Steinbok	...	Taya	...	...	...	...
Dikdik	...	Dondoro (CFMS)	...	Gwerahe	...	Gwerela
Waterbuck	...	Dikdik, suguya (CFMS)	...	Wisu	...	Sika
Reedbuck	...	Kuro, ndogoro	...	Ietiakumo	...	Kunpa
Impala	...	Tohe	...	Tsefetu	...	Klaghati
Gazelle, Thomson's ("Tommy")	...	Swala mwekundu	...	Klaghati	...	Klaghatá
Gazelle, Grant's	...	Lala (CFMS), kinokera... (D)	...	? Jerá	...	Sosonga
Sable Antelope	...	Swala (D)	...	? Sasodi	...	Gongosá (CFMS)
Roan Antelope	...	Palahala, mbarapi	...	...	...	...
Oryx	...	Korongo	...	Tsa'umo	...	Xonxe
Kudu, Greater	...	Choroo	...	Deshgudi	...	Ba'uru
Kudu, Lesser	...	Tandala mlogo, kungu... (CFMS)	...	Dama'umo	...	Mane'o
Eland	...	Pofu, mbungu (D)	...	Dama'umo	...	Dama'imo
Bushbuck	...	Mbawala, pongo	...	Eletemo	...	Mbawal'ya
Rhinoceros, Black	...	Faru, pea (D)	...	Dofa	...	Dofa
Ass, Domestic	...	Punda	...	Dogwal	...	Daghwé
Zebra, Burchell's	...	Punda milia	...	Daketi	...	Doro

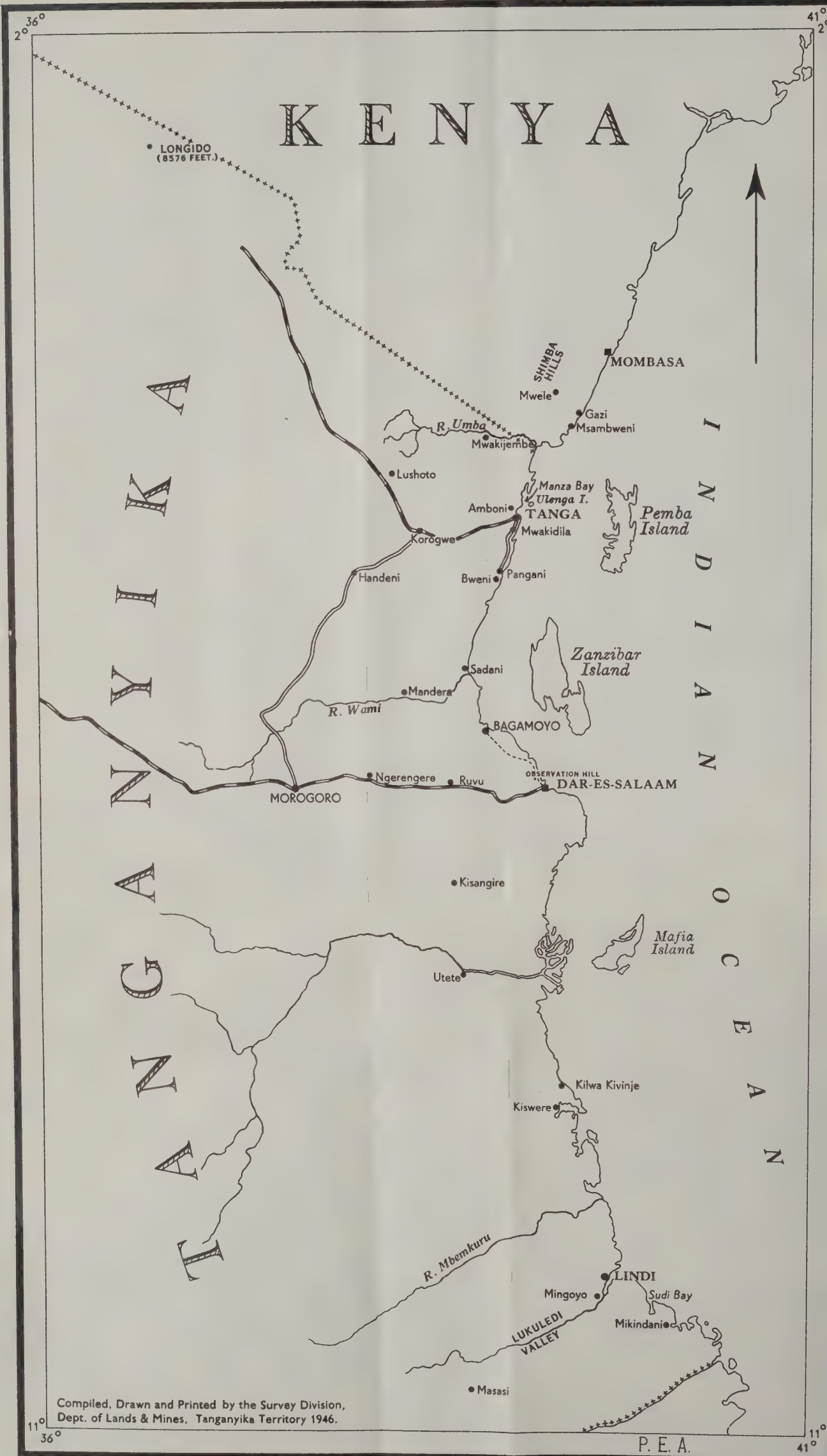
ENGLISH NAME	SCIENTIFIC NAME	KIRURU	MABAI	CHUSOGG	MBARE	(Ndaburo)
Hartebeest, Coke's	<i>Alcelaphus buselaphus</i> (Pallas)	...	...	Ol gondi	Mpunzu	...
Hartebeest, Lichtenstein's	<i>Alcelaphus lichtensteini</i> (Pfrs.)	...	...	...	Mpunzu	Punju
Wildebeest	<i>Connochaetes taurinus</i> (Burch.)	...	...	Ol lengat	Nyumbu	Inyumbu
Dukker, Red Forest	<i>Cephalophus haresti</i> Thos.	...	...	Erongo	Ndang'hu	...
Dukker, Bush	<i>Sylviscapra grimmia</i> (L.)	...	...	E'mbutuwin	Haluzi	Khaduzi' nyaluzi, Nhyabji
Klipspringer	<i>Oreotragus oreotragus</i> (Zimm.)	...	...	Enginesofito, en-ghe ol-doinvo (CHS)	Ngurunguru	Ngurunguru
Oribi	<i>Ourebia ourebi</i> (Zimm.)	...	...	...	...	...
Steinbok	<i>Raphicerus campestris</i> (Thun.)	...	...	Ol bwassas	Nhemanyika	Kitemanyika, mbadanzu (CHNJ)
Dikdik	<i>Rhynchotragus kiriki</i> (Gün.)	...	Vudu	Engomani (RH)	Nzimba, kazimba	Kitimba
Waterbuck	<i>Kobus defassa</i> (Rüpp.) and <i>K. ellipsipterimus</i> (Oe.)	...	Mbututu	Ol emaingo (JHB), ol kipulege (CHS)	Nq'hulo, ngagawala	Nkulo
Reedbuck	<i>Redunca redunca</i> (Pall.)	...	Mbefe.	Erongo (CFMS)	Ndohe	Ndhe
Impala	<i>Aepyceros melanopus</i> (Licht.)	...	Tamadi	En darokwe, ol ololubo (CFMS)	Mbata	Mbata
Gazelle, Thomson's ("Tommy")	<i>Gazella thomsoni</i> Gün.	...	? Njera	Ol oili (CHS)	Nzera	...
Gazelle, Grant's	<i>Gazella granti</i> Brooke	...	Njera	Engollin, ol wargas (RH)	Nzera	...
Sable Antelope	<i>Hippotragus niger</i> (Harris)	...	...	Mpalapala, chomba (S)	Mpalapala	Mpalapala
Roan Antelope	<i>Hippotragus equinus</i> (Des.)	...	Chauru	...	Nkolongo	Nkolongo
Oryx	<i>Oryx beise</i> (Rüpp.)	...	Muhimbuli	Ol kimasorok	Nyoganyoga, imbogologo	...
Kudu, Greater	<i>Strepsiceros strepsiceros</i> (Pall.)	...	Sikro	Ol malo	Sichiro	Nhandala (CHNJ)
Kudu, Lesser	<i>Strepsiceros imberbis</i> Blyth	...	Sawada	O'sirám	Sawada	Nsabana
Eland	<i>Taurotragus oryx</i> (Pall.)	...	Myoku	O'sirwa	Ng hongolo, ntongolo	Nhongolo
Bushbuck	<i>Tragelaphus scriptus</i> (Pall.)	...	Mhavala	Embwá, sara (CFMS), el munzu (RH)	Mbuala	Mato
Rhinoceros, Black	<i>Diceros bicornis</i> (L.)	...	Mpera	Ermunye, ol changito sabuk (CFMS)	Mhera	Mhera
Ass, Domestic	<i>Equus asinus</i> L.	...	Ndakwi	O'singriya	Ndogowe	Ndogowi
Zebra, Burchell's	<i>Equus burchelli</i> (Gray)	...	Njai	Ol otogo	Nhyenje	Nsenjere

ENGLISH NAME	SCIENTIFIC NAME	KIKIMBU (Itumba)	KINYAMWEZI (Kirurumo)	KIYANZI (Jive-la-Singa)	TATURU (Blanjira: Itigi)	TATURU (Bwadja: Sibiti)
Hartebeest, Coke's	... <i>Alcelaphus buselaphus</i> (Pallas)	...	...	...	...	... Robea'ut
Hartebeest, Lichtenstein's	... <i>Alcelaphus lichtensteini</i> (Pters.)	... Punjn	... Kagowegowe	... Punzu	... Nyangaki	...
Wildebeest	... <i>Connochades taurinus</i> (Burch.)	... Mbusi	... Mbusi	... Mbusi	... Nghat	... Nghat
Duiker, Red Forest	... <i>Cephalophus harveyi</i> Thos.	...	...	...	...	...
Duiker, Bush	... <i>Sylvicapra grimmia</i> (L.)	... Nsya	... Kasya	... Nsya	... Ngarangawi	... Balisanjir
Klipspringer	... <i>Oreotragus oreotragus</i> (Zimm.)	... Ngurunguru	... Ngurunguru	... Ngurunguru	...	... Nogajerur
Oribi	... <i>Ourebia ourebi</i> (Zimm.)	... Mpundusya	... Kapundusya, Kimara'unga, Kalala	...	...	... Masaurijant
Steinbok	... <i>Raphicervus campestris</i> (Thun.)	... Kasala	... Nsala	...	... Sherejand	... Nabyur
Dikdik	... <i>Rhynchotragus kirkii</i> (Gün.)	... Kajimba	... Kasunya	... Kajimba	... Nyanyur	... Mnyapajant
Waterbuck	... <i>Kobus defassa</i> (Rüpp.) and <i>K. ellipsiprymus</i> (Oe.)	... Nsabada	... Ndoi, kilonda mongo	...	...	...
Reedbuck	... <i>Redunca redivua</i> (Pall.)	... Nengi	... Monge, kilondanzila	... Monge	...	... Balisanjir
Impala	... <i>Aepyceros melampus</i> (Licht.)	... Mhata	... Nswala	... Nswala	... Darwet	... Darawirga
Gazelle, Thomson's ("Tommy")	... <i>Gazella thomsonii</i> Gün.	...	... Lala	...	...	... Sheshura
Gazelle, Grant's	... <i>Gazella granti</i> Brooke	...	... Kisi (CFMS)	...	... Shashuda	... Mayanda
Sable Antelope	... <i>Hippotragus niger</i> (Harris)	...	... Mpapala, kang'ombekiri (3)	... Mpapala, chom ba (♂)	...	...
Roan Antelope	... <i>Hippotragus equinus</i> (Dea.)	... Nkolongo	... Nkolongo	... Nkolongo	... Huleshigtut	... Desligt
Oryx	... <i>Oryx beisa</i> (Rüpp.)	...	...	...	...	...
Kudu, Greater	... <i>Strepsiceros strepsiceros</i> (Pall.)	... Ntandaia	... Tandala	... Sikiro	... Soramnyeda	... Soranned
Kudu, Lesser	... <i>Strepsiceros imberbis</i> Blyth	...	... Tupala	... Sabana	... Soramnyeda	...
Eland	... <i>Taurotragus oryx</i> (Pall.)	... Ntongoro	... Nimba	... Tongolo	... Siyolda	... Siyulda
Bushbuck	... <i>Tragelaphus scriptus</i> (Pall.)	... Mpato	... Mpango	... Mpango	...	... Ndotukir
Rhinoceros, Black	... <i>Diceros bicornis</i> (L.)	... Mpera	... Mera	... Mpela	... Oburjera	... Obujir
Ass, Domestic	... <i>Equus asinus</i> L.	... Ndogowe	... Iyowe	... Idogowe	... Digira	... Digir
Zebra, Burchell's	... <i>Equus burchelli</i> (Gray)	... Nsengere	... Ndulu	... Duru	... Singiyeda	... Singiyir

Hartebeest, Coke's	...	...	Alcelaphus buselaphus (Pallas)	...	...	Roba'od	...	...	...	Punzu	...	Muzia
Hartebeest, Lichtenstein's	...	...	Alcelaphus lichtensteini (Ptrs.)	...	...	...	...	...	...	Muzia	...	...
Wildebess	...	...	Connochaetes taurinus (Burch.)	...	...	Nghat	...	...	...	Mbusi	...	Pusi
Dulker, Red Forest	...	...	Cephalophus harveyi Thos.	...	...	Ndopget	...	...	...	Ng'aa	?	Nkuro
Dulker, Bush	...	...	Sylvicapra grimmia (L.)	...	...	Mboldalaghan	...	...	...	Bududu	...	Mya
Klipspringer	...	...	Oreotragus oreotragus (Zimm.)	...	...	Sargwenjud	...	...	...	Nguunguu	...	Nghunghut
Oribi	...	...	Ourebia ourebi (Zimm.)	...	...	Masaauvriant.	...	...	...	Pundu	...	Ngonilalo
Steinbok	...	...	Raphicerus campestris (Thun.)	...	...	Nabiyordarer	...	...	...	Ng'aa	...	Mwampaa
Dikdik	...	...	Rhychoctragus kirikii (Gün.)	...	...	Udaghuughus	...	...	...	Muuya	...	Mughuya
Waterbuck	...	...	Kobus defassa (Rüpp.) and K. ellipsiprymnus (G.)	...	...	Dialdadu	...	...	...	Kuro	...	Ngiri
Reedbuck	...	...	Redunca redunca (Pall.)	...	...	Ndopget	...	...	...	Murang	...	Susunga
Impala	...	...	Aepyceros melanurus (Licht.)	...	...	Daraweduk	...	...	...	Mpaa	...	Mpaa
Gazelle, Thomson's ("Tommy")	...	...	Gazella thomsonii Gün	...	...	Sheshung	...	...	...	Sasunga	...	Nkuro
Gazelle, Grant's	...	...	Gazella granti Brooke	...	...	Mayand	...	...	...	Gonilo (CHNI)	...	Mziya
Sable Antelope	...	...	Hippotragus niger (Harris)	...	...	...	...	...	...	...	...	...
Rean Antelope	...	...	Hippotragus equinus (Des.)	...	...	Udeahghut	...	...	...	Siri	...	Nkolongo
Oryx	...	...	Oryx beisa (Rüpp.)	...	...	...	...	...	...	...	...	...
Kudu, Greater	...	...	Strepsiceros strepsiceros (Pall.)	...	...	Soramaded	...	...	...	Nikio	...	Nikio
Kudu, Lesser	...	...	Strepsiceros inermis Blyth	...	...	...	...	...	...	...	...	...
Eland	...	...	Taurotragus oryx (Pall.)	...	...	Stwuld	...	...	...	Poku	...	Mpoku
Bushbuck	...	...	Tragelaphus scriptus (Pall.)	...	...	Ilindamod	...	...	...	Pongo	...	Pongo
Rhinoceros, Black	...	...	Diceros bicornis (L.)	...	...	Hoburjed	...	...	...	Pembe	...	Pembe
Ass Domestic	...	...	Equus asinus L.	...	...	Diged	...	...	...	Ndogwe	...	Ndogwe
Zebra, Burchell's	...	...	Equus burchelli (Gray)	...	...	Singyed	...	...	...	Nduu	...	Nduu

ENGLISH NAME	SCIENTIFIC NAME	KINYISANZU	KINGIDA	KISUKUMA
Hartebeest, Coke's	...	...	...	Konzi, Ng'oshi
Hartebeest, Lichtenstein's	<i>Alcelaphus buselaphus</i> (Pallas.)	Muja	...	...
Wildebeest	...	...	...	Ng'oshi
...	<i>Alcelaphus lichtensteini</i> (Pters.)	...	...	...
Duiker, Red Forest	...	...	...	Mbushi
...	<i>Connochades taurinus</i> (Burch.)	Mbubi	Bizoago	...
Duiker, Bush	...	...	...	...
...	<i>Cephalophus harveyi</i> Thos.	Zumbuda	Mongoako	...
Klipspringer	...	...	...	Shaa
...	<i>Sylvicapra grimmia</i> (L.)	Nsaa	Fwefweako	...
Oribi	...	...	...	Gulugulu
...	<i>Oreotragus oreotragus</i> (Zimm.)	Ngurunguru	Qamago	...
Steinbok	...	...	...	Mhundwi (CFM's)
...	<i>Ourebia ourebi</i> (Zimm.)	Mpundu	Fwleako	...
Dikdik	...	...	...	Sala
Waterbuck	...	...	...	Subuya
...	<i>Raphicerus campestris</i> (Thun.)	Ngonilelo	Ceceako	...
...	<i>Rhynchotragus kirkii</i> (Gün.)	Ihuuyuga	Gewedako	...
...	<i>Kobus defassa</i> (Rüpp.) and <i>K. ellipsiprymnus</i> (OG.)	Nkuro	Makangiro	...
Reedbuck	...	...	...	Ng'hulo
...	<i>Redunca redunca</i> (Pall.)	Njaa	Njaago	Nja
Impala	...	...	...	Mhala
...	<i>Aepyceros melampus</i> (Licht.)	Mpala	Pupnako	...
Gazelle, Thomson's ("Tommy")	...	...	...	Lala
...	<i>Gazella thomsonii</i> Gün.	Lala	Lalako	Mbiza
Gazelle, Grant's	...	...	...	Palahala (CFMS)
...	<i>Gazella granti</i> Brooke	...	...	Ng'horongo (CFMS)
Sable Antelope	...	...	...	...
...	<i>Hippotragus nyiwer</i> (Harris)	...	...	...
Roan Antelope	...	...	...	...
...	<i>Hippotragus equinus</i> (Des.)	Nkolongo	...	...
Oryx	...	...	...	...
...	<i>Oryx beisa</i> (Rüpp.)	...	...	...
Kudu, Greater	...	...	...	Nhandala
...	<i>Strepsiceros strepsiceros</i> (Pall.)	Ithigiri	Simlimbi	...
Kudu, Lesser	...	...	...	...
...	<i>Strepsiceros imberbis</i> Blyth	Nkiri	Cingauako	...
Eland	...	...	...	Mboku
...	<i>Taurotragus oryx</i> (Pall.)	Mpoku	Komatii	Mhongo
Bushbuck	...	...	...	Mhela
...	<i>Tragelaphus scriptus</i> (Pall.)	Pongo	Ndofetako	...
Rhinoceros, Black	...	...	...	Klagate
...	<i>Diceros bicornis</i> L.	Mpembele	...	Nzobe
Ass, Domestic	...	...	...	Nadiya
...	<i>Equus asinus</i> L.	Ndogwe	...	Ndulu
...	...	Ndruu	...	...

EAST AFRICAN CAMPAIGN 1914-1919.



The East African Campaign—1914 to 1919

By G. W. Hatchell

AN APPEAL for records of the Campaign which appeared in the Editorial column of *Notes and Records*, No. 8, of December 1939, tempts me to set down some account of the business, as I saw it, between 1916 and 1919. Unfortunately conditions in those days did not allow of keeping a detailed diary and I must rely on memory for much of the following.

It may be well, as a preliminary, to say that in January 1916 the position was that the German and British Forces were facing each other across the border between Kenya and German East Africa, and were engaged in aggressive patrolling in search of information. On the British side the information required was necessary to the campaign, under the leadership of General Smuts, which was then in preparation: a campaign which involved a general advance into German territory.

The scene of my own activities was on the coast,* between Gazi and the border. Patrols were conducted from bases at Msambweni on the Coast and Mwele at the southern end of the Shimba Hills. These posts were manned by units of the Indian Expeditionary Force, to which were attached sections of the Intelligence Force under command of Captain Ainsworth Dickson, formerly District Commissioner at Vanga. His force, which was known as Dickson's Scouts, consisted of six Europeans and a number of unarmed African scouts and, while it may not have attained the celebrity of other irregular corps, was nonetheless not unknown in its own particular "stamping ground". The men of H.M. Navy knew it well and its members recollect with gratitude the kindness afforded to them whenever they had the good fortune to go aboard one of H.M. ships. Mention should be made here of Wavell's Arab Rifles, another irregular corps which for some time garrisoned Mwele and carried out offensive patrols into enemy territory. Captain Wavell was a well-known Mombasa resident who had raised the corps from amongst the Hadramut Arab residents of the town.

During the early months of 1916 border patrolling continued with some intensity until April, when the Msambweni Force advanced, in strength, on its own particular bug-bear, the Boma at Mwakijembe, just south of the Umba River and the headquarters of a certain Bwana Leko (von Lekow—not to be confused with Colonel von Lettow Vorbeck, the Commander of the German Forces). Bwana Leko had been particularly aggressive and it was a force under his command which had penetrated to within a few miles of Mwele where, in a subsequent engagement, Captain Wavell was killed. The force

*See map at p. 39 which has been specially prepared for this article by the Chief Surveyor.

which finally put paid to Bwana Leko's activities consisted of the 5th (Indian) Light Infantry and a section of Dickson's Scouts. The burning of Mwaki-jembe coincided with a general retirement of all German forces from the border and with General Smuts' first big move around Longido. The border thus being clear, the Scouts returned to Mombasa, where they embarked on the transport *Barjora*, a vessel which has since been seen on this coast on many occasions, when she substituted for the *Dumra*.

The Scouts had by this time been strengthened by the recruitment of one hundred armed Africans and thereafter became a self-contained force with one hundred Kavirondo porters, carrying its own rations and supplies. The whole outfit was transported by the *Barjora* to a point on the coast just north of Tanga where, in the grey of an early June morning, it embarked in the ship's boats for a landing on Ulenga Island. The landing was supported by H.M.S. *Talbot*, H.M.S. *Severn* and the whalers *Charron* and *Styx*: a somewhat ominous choice of names one felt! Much to everybody's relief the landing was unopposed and the Scouts settled down to the task of obtaining as much information as possible about Tanga and the surrounding country in preparation for the arrival of the main Force. In due course all was ready and the Army, not repeating its earlier mistake by attempting to take Tanga from the sea, landed at Manza Bay and advanced on the town from the north-west. Various minor fracas occurred and the British force, which consisted of the 101st Bombay Grenadiers, Wild's Rifles and other Indian units, finally reached Amboni in time to save the bridge from demolition. It was here that we first met a well known Swiss resident who caused some amusement when, in reply to a question as to his diet in recent months, remarked that he had got on very well on "Muhogo na Fleisch und Fleisch na Muhogo".

Next morning, the 8th July 1916, the force entered Tanga, which had already been occupied by a party from H.M.S. *Severn*. My own activities on that day were somewhat more entertaining for I was told off to conduct a party of the Grenadiers to a point on the Tanga-Pangani Road with the object of intercepting any of the Tanga Germans who might try, to escape southward. On reaching the road at Mwakidila we put up a couple of Germans from their breakfast who fled, hatless, into the bush, hotly pursued by excited Grenadiers, who, remembering October 1914, when at the first Tanga landing they had suffered severely, were anxious to get their own back. The coffee and boiled eggs left by the fugitives provided a welcome breakfast. An examination of the position revealed that we had had the good fortune to capture a large quantity of baggage, the one pony in Tanga and a bag of despatches from von Lettow to the Governor of German East Africa (Governor Schnee). Amongst the booty was a big volume of postage stamps from the Tanga Post Office. It was here I first encountered that peculiar musty smell which seemed to cling to all German kit and gear, the source of which I was never able to identify.

Later in the day we entered Tanga, to find the force settling down and the Provost Marshal busily engaged in preventing looting by the local inhabitants. One Indian gentleman was caught removing a full length mirror from a house and later wished that he had left it alone, for the Provost Marshal's methods were rough and ready.

Tanga being in our hands, the next objective was Pangani and the Scouts, together with their porters and their rations, were embarked on H.M. monitor *Severn*, then under command of Captain Fullerton, who was later to be Admiral on the East Coast. Embarkation was accomplished by way of the quarter deck which, owing to the construction of the monitor, was the only place where this could be carried out, and the astonishment of the ship's company on seeing their ragged passengers was changed to something like dismay when one of the porters deposited a goat, which he had made somewhere, on the sacred quarter-deck, where it proceeded to act as goats do.

We arrived off Pangani that evening and lay off all night in a heavy swell and next morning crossed the bar, on which we bumped heavily. A few Germans remained on the Bweni heights, on the south bank of the river, but made off before we could land and Pangani was ours.

At this time there were a number of small parties of Germans who had made their getaway from the Tanga line scattered along the coast and inland as far as the Korogwe-Morogoro road and, from Pangani, patrols were sent out to intercept them. Numbers, however, reached points further south and there seemed reason to suppose that they would concentrate at or near Mandera. It was accordingly decided to land a force at Sadani and the Scouts once more embarked on one of H.M. ships, this time the gunboat *Thistle*, and proceeded to Sandani, where the marines from H.M.S. *Talbot* had effected a landing on the previous day, the 23rd July 1916. Next day the 2nd West India Regiment arrived, to be followed, shortly afterwards, by an Indian unit, and the force advanced along the coast, crossing the Wami River near its mouth. The crossing was opposed and a spirited little engagement took place involving one or two casualties. The force then struck inland with the object of cutting off the Tanga line stragglers but the difficult country delayed it and the enemy succeeded in escaping in the direction of Ngerengere.

While this was going on the Navy decided to have a show of their own and to capture Bagamoyo. It was known that one of the guns from the German cruiser *Koenigsberg* had been mounted for the defence of the port, and on the 15th August 1916 the Navy opened operations with a bombardment in which they were aided by the kite balloon from the balloon ship *Manica*. The landing which succeeded the bombardment was opposed in some strength and although the *Koenigsberg* gun gave little trouble, having been badly sited behind a bank which prevented its being depressed sufficiently to fire on the landing craft, an automatic gun on the northern side of the town caused considerable annoyance until it was destroyed by a direct hit from one of the ship's guns. The Marines and sailors landed on the beach below the Boma

and during the operation the Captain of Marines from H.M.S. *Talbot* was shot when going forward to accept surrender after a white flag had been displayed. The Marines, enraged by this act of treachery, advanced with the bayonet and took severe toll of the enemy throughout the afternoon in all parts of the town.

With the fall of Bagamoyo preparations were commenced for the advance on Dar es Salaam. Maps were inaccurate and little was known about the intervening country. A considerable amount of reconnaissance was thus necessary: the more so in that the force which it was intended should go to Dar es Salaam was a considerable one and included wheeled vehicles and a naval field gun. After a few days preparations were complete and on the last day of August the force, which consisted of Indian and African troops, the British Loyal North Lancashire Regiment and a Naval Brigade, all under command of Colonel Jourdain of the Lancs., got under way. Progress was slow owing to the nature of the country and the number of sandy river beds which greatly impeded the naval gun and the wheeled transport. The force was accompanied by a wireless apparatus run off a motor cycle engine, somewhat of a novelty in those days. The sound of the engine greatly disturbed the donkey transport and whenever the engine was started up the donkeys all joined in with loud and prolonged "hee-haws". During the march the force halted to rest at a deserted village and here it was that one of the sailors observed a bee-hive in a tree. Thinking, no doubt, that honey would be a pleasant addition to his ration of bully and biscuits, he proceeded to rob the hive. The infuriated bees retaliated and within a few minutes the whole force was in flight. I sought refuge in a bushy lemon tree and escaped unscathed and had a grandstand view of the rout. Order was at last restored but not before some brilliant brain, working on the assumption that bees dislike smoke, had fired the grass. The exploding of small arm ammunition, caught in the fire, did nothing to diminish the confusion.

As the force came within striking distance of Dar es Salaam it divided, one section following the coast and the other the hill road three or four miles inland. On the 3rd September the latter had a grandstand view of the naval bombardment of what is now known as "Observation Hill", when the miserable objective was plastered for over an hour by four 12-inch guns and upwards of 40 of 6-inch and smaller calibres. The cause of this "hate" was a coconut tree trunk which had been mounted on the wheels of an agricultural machine and which was mistaken, as intended by the enemy, for a gun. Later that day Dar es Salaam was in sight and from the hills the spire and tower of the Catholic and Lutheran churches could be seen. Next morning the force entered Dar es Salaam without opposition. The hill road section of the force entered the town by way of Bagamoyo Street and the old market and so out on to the harbour front. The Scouts slept that night on the verandah of what is now the Standard Bank of South

Africa. The enemy had retired in the direction of Kisangire and it was at this place that a sharp encounter took place which resulted in one of the scouts being awarded the Military Cross. The Dar es Salaam "Landstrum" had retreated to Ruvu a few days earlier and were there captured by a small force which had been sent out from Bagamoyo for the purpose.

Preparations were then commenced for the occupation of the southern ports and the Scouts once more embarked on the *Barjora* for Mikindani. On this expedition they were accompanied by Bishop Weston of Zanzibar with his well organized carrier corps, by a volunteer force known as the Mafia African Constabulary and by the Zanzibar Rifles. The Constabulary consisted of elderly Nubians who had seen service anywhere in Africa during the past half century. Most of them had two rows of medal ribbons and not a few had taken part in the Ashanti Campaign. The Zanzibar Rifles was another volunteer force—nothing to do with the King's African Rifles—under the command of Lieutenant Deakin. This force had distinguished itself in operations at Tanga, in association with the Navy, in the early part of 1915. Mikindani, Sudi Bay and Lindi were occupied after little opposition and Kilwa fell to another force about the same time. Thus all the ports were in our hands and could be used to feed the main advance of General Smuts which was taking place on the Korogwe-Morogoro-Utete line. It was at Sudi that the tally books of the cargo of the blockade runner *Marie*, which had made Sudi Bay, discharged her cargo and got away to Batavia, fell into our hands. The variety of the cargo—from 4-inch shells to batteries of howitzers, from Westphalian hams to cases of jam, and from face powder to scent, to say nothing of medical supplies—was astonishing, and its safe arrival must have prolonged the campaign for many months. At Lindi the enemy had mined the streets and the harbour, but we were fortunate enough to locate these before any damage was done. The street mines were ingenious and consisted of a carbon dioxide cylinder, such as is seen in any soda-water factory. This had been filled with explosive and the breach portion of a rifle screwed in to its top. The breach was then loaded with a cartridge, the mine buried and a trip string attached to the trigger for the undoing of the unwary.

A holding force of one hundred Indian troops remained in Lindi, assisted by a guard ship, but the enemy was not far away, at Mingoyo a few miles up the river, where he had a considerable force with a *Koenigsberg* gun. This was in August/September 1916. About this time it became the custom for the guard ship to go up the river once a week and carry out a "hate" against the enemy position. On one occasion the sloop *Rinaldo* performed the exercise and it is doubtful if she ever exceeded the speed with which she returned down river after she had been straddled by two 4.1 shells, which constituted the enemy's reply to her abuse. As the days passed the Lindi garrison began to feel the need for some diversion and it was decided to have a "crack" at the enemy stronghold. Almost the whole force was

sent overland to Mingoyo and to be supported by H.M. whaler *Echo* with her 18-pounder. The force reached the flats below the enemy position, which was on rising ground, and a battle ensued during which the enemy counter-attacked and the force returned to Lindi somewhat crestfallen but the better for the exercise.

About this time Major Orde-Browne arrived in Lindi to take over the political side of affairs from my amateur hands—I had been trying to keep some sort of civil administration going amongst the townspeople—and I was called to Dar es Salaam to work in the office of the Brigadier i/c Lines of Communication. During my stay there some excitement was caused by reports of a large enemy force advancing on the town. Dar es Salaam had by this time become the main base of operations and the idea of its being attacked was unthinkable. I was sent out with a small force to investigate, only to find that the enemy boiled down to two Europeans and twenty porters in search of telegraph wire, of which von Lettow was in dire need. During October 1916 the Scouts occupied Kiswere, from which port it was possible to keep an eye on the rear of the German force in the Kilwa hinterland and to discover its probable future movements. The force eventually made off along the Mbemkuru River towards Masasi and I returned to Lindi in time to see the arrival of General O'Grady with a strong force of King's African Rifles, 5th Royal Fusiliers and other troops. He lacked, however, a gun and it was some time before one became available. Meantime the Germans had extended the range of their Mingoyo defences and had occupied the buildings on a sisal estate known as "Schaefer's Farm", which was situated within a few miles of Lindi on the other side of Kitulo Hill which rises at the back of the town. The gun having arrived, the General launched his attack and himself proceeded to the top of Kitulo to direct operations. Unfortunately an accident occurred which resulted in the muzzle of the gun being split and splayed out and the show had to be called off. The officer in charge of the gun was not to be defeated and proceeded to saw off the splayed-out portion of the barrel with a hack-saw. It is related that when it was suggested to him that this might reduce the range of the gun he replied: "We'll cock her up a bit and she will be all right". As soon as a new gun became available the attack on Schaefer's was renewed and the enemy retired to Mingoyo. The language of the Fusiliers when advancing to the attack through over-grown sisal was something of an education in blasphemy.

General O'Grady then prepared seriously to drive the enemy up the Lukuledi valley. A strong force was assembled and a plan of campaign involving two encircling columns—the pincer movement of which we have heard so much in recent years—was prepared. In the face of this threat the enemy retired up the valley taking his gun with him, but not before he had put up a spirited rearguard action. During these operations I was attached to the Brigadier in person. He was a man who was quite fearless and so keen on attack that he might as soon be found in the front line busily sniping

with a rifle borrowed from an askari as at his headquarters. He believed in personal contact with the battle and to be attached to him was something of an adventure. During one of our excursions we came across a pile of abandoned 4.1 shells and, quite ignorant about the ways of these implements of war, I was terrified by the nonchalant manner in which the General turned them upside down, let them drop with a thud and generally handled them. However, no explosion occurred and a day or two later I returned to Dar es Salaam to join the Political Service under Major J. O. W. Hope.

In those days the Civil Administration was somewhat of a rule-of-thumb affair and we made our laws as we went along, but gradually some sort of order was evolved, civil courts were set up and the collection of taxes commenced. The Political Mess was a lively affair with its home in the upper floor of the National Bank of India and under the able management of "Banki" Legat, and the catering was of a very high order. Amongst the "Politicals" who came and went there were some whom readers of this journal may remember, such as George Bell, Hignell, Cadiz, Fuller Maitland, "Bagamoyo" Bell and Ward, and, later, Sir Theodore Morison, who afterwards became Chief Political Officer. Meantime the Civil Administrator, Sir Horace Byatt, had taken over control of the Northern Area and established himself at Lushoto and in 1918 I was sent to Handeni as an Assistant Political Officer and reverted to civil life.

Mention has been made of the ships of the Royal Navy, with which the Scouts came into contact, and it might not be out of place to record names of some of them, since by now most of them are no more. They included the battleship *Vengeance*, the cruisers *Hyacinth*, *Challenger*, *Astrea*, *Fox*, *Talbot* (Captain Lambert), *Pioneer* and *Pyramus*, the monitors *Severn* (Captain Fullerton) and *Mersey* (Captain Jones) the gun-boat *Thistle*, the sloop *Rinaldo* and the whalers *Charron* and *Styx*, *Pickle* (Commander Davis) and *Fly*, *Salamander* (Parkinson) and *Rattler*, *Echo* (Charlewood) and *Childers*, the armed cruiser *Himalaya* (Captain McKenzie) and the transports *Barjora*, *Ingoma*, *Wun Lung I* and *Wun Lung II*, and last but not least the *Tuna* (Captain Brown). Perhaps Mr. Giffard, who wrote for this Journal an article entitled "Ships which have Passed",* can remember a few more.

This account of the business would be incomplete were it to omit mention of the gallant work of the unarmed African scouts who penetrated far behind enemy lines and came back with much valuable information. Their loyalty and devotion cannot be better described than by the story of one of them who had entered Tanga on several occasions and penetrated into the gun positions and who in September 1939, by this time a decrepit old man, walked twenty miles into Tanga to bring me word of a party of Germans who were endeavouring to make their getaway in a dhow. The old man had not forgotten—nor I hope shall we forget him and his colleagues.

**Tanganyika Notes and Records*, No. 11, April 1941, page 32.

Adrien Atiman

By Himself

Translated and arranged by Col. L. B. Cane

ADRIEN ATIMAN, now about eighty years old and still at work in the Mission Dispensary at Karema, was when a young boy taken as a slave on the West Coast of Africa, rescued by White Fathers when the caravan was crossing the Sahara, educated by them in Algeria and later in medicine at the university in Malta, after which he was sent with some of their first pioneers to Tanganyika.

Since 1889 he has served as *médecin-catéchiste*, or medical missionary, at Karema, one of their oldest mission stations in Central Africa.

His autobiography may be of interest to others outside the Mission, especially the earlier portions describing his experiences when taken as a slave, his impressions of Algeria and Malta, his pilgrimage to Rome, visit to France, his long journey out to Tanganyika in 1888-9, and his later recollections of the German and Belgian occupations.

The original, written in three exercise books, has been translated by me from his excellent French, the earlier part fairly fully, but of the later years only extracts are here given.

When first seen his story was incomplete, with no additions during the past twenty years, but with some encouragement this old African has been induced to bring it up to date.

Adrien Atiman is the proud possessor of seven medals, described in his own words as follows:—

"In the summer of 1912, I received the decoration '*Pro Ecclesia et Pontifice*', a medal in the form of a cross.

In 1922, three Belgian Government medals of the war, 1914-1918, as doctor of the Belgian soldiers in Tanganyika Territory.

On 16th May 1935, the medal of George V, King of England, for his Jubilee, in 25th year of his reign.

In 1938, the medal of Ste. Liège, Bene Merente.

On 4th May 1944, the bronze medal of Tanganyika Territory, for services rendered in Tanganyika.* On one side of the medal is the head of King George VI, and on the other the Giraffe of Tanganyika Territory. This medal has a yellow ribbon which passes round the neck, and the medal hangs on the chest."

*Certificate of Honour and Badge.—*Ed.*

AUTOBIOGRAPHY OF ADRIEN ATIMAN

BOYHOOD AND SLAVERY

I am a native of Toundourina, to the west of the town of Toumbouctou, on the river Niger.

I scarcely knew my parents, and never learnt their origin, but remember that I lived with my mother in a large hut covered with dried grass.



Toundourina is a larger and more populous village than most of those in Ufipa and Kawende, with many mud-built houses. From it ones sees on the Niger many large sailing boats painted with tar.

In the midst of the village is a mosque, large but little frequented. I never went with my parents there, but remember entering it as a child out of curiosity.

I think that my father Joudda was a fisherman, and my mother Tandoumoussa worked for the Chief of the place, who was probably a Toureg. I amused myself with fishing in the river. My chief food was rice, with some fish. I do not remember seeing any maize or millet.

Of my native language I remember but a few words, only "Coro" meaning lion, "Boro" man, "Elham" meat, "Bri" bone, and "Kunduhari" beer.

I do not know why I was torn away from my parents. One day, after a feast of mutton roasted on a big fire, with some white men, whom I believe to have been Touregs, I was taken by my father to another village, where I stayed several weeks. Later I returned to my own village, but after about a month I was taken away again to the other village. After several days, whilst I was playing on the banks of the Niger, I was taken off and hidden behind some large sacks made of palm leaves full of flour.

A Toureg then came in, seized me by the arms, and carried me away on a camel at full gallop. I never saw my parents or my own country again, though I have never forgotten them.

I was taken to a big Toureg camp in a green plain, like a prairie. The Toureg who had stolen me away took me I think to his Chief, and after several weeks I was taken to the town of Toumbouctou where was the white man whom I had so often seen in our village.

I remained shut up in an earthen hut with white plastered walls and wooden doors.

The headman for whom my mother worked came twice, and was given some salt and cowrie shells, after which I never saw him again.

I could speak to no one there, and do not know what they fed me on. Through cracks in the door I could see people passing by—this was my only amusement.

Then I was taken to the gateway of Toumbouctou, where a big caravan was preparing to leave for Mitlile, and I was sold to an Arab.

Providence looked after me, for I was not badly treated and was seldom ill, or hungry or thirsty.

After travelling for perhaps a month the caravan reached a town in the Sahara, where it was reviewed by an old Arab. After this I was sold to another Arab, who was going to Mitlile.

Once when there was no water we drank camel urine and the milk of a camel. When food ran short several camels were killed for meat.

The Arab who had bought me as a slave was kind to me, and arranged for me to ride on a camel whilst the other slaves had to walk. It was whilst crossing the Sahara that I learnt Arabic.

On arrival at another town in the Sahara Desert I first saw bread baked upon cinders, and ate dried and powdered locusts, and also my first dates.

From there, with a new master, I was taken to Mitlile, where after several days I was ransomed by the Reverend Father Deguery, accompanied by Brother Delaunay.

One of the Sisters of St. Joseph of Cluny, whose brother was a priest in Algeria with the White Fathers, had paid the price of my release, and asked to look after me. This Sister Spiridion looked after me until my departure for Tanganyika in 1888.

Father Deguery had bought me in 1876. He was the first master to provide clothes for me.

I found five other children who had been ransomed by Father Deguery. One became a cook in Carthage, and had been given the name Boro by Cardinal Lavigerie, instead of his Arab name.

Another, Golio, died in Tunisia, where they put up a tombstone for him. He had helped the Abbé Lalouette in painting the Carthage Museum. Others were Moudou, who died at Thibar; Lokoro, who went to Sudan, and Gourdo, who was cook at the Procure in Rome in 1887 and 1888.

EDUCATION IN ALGERIA

About September or October, 1876, Father Deguery and Brother Delaunay, who later died in Tanganyika, took us to Algiers, where we stayed with the White Fathers, together with six other companions and Arab orphans.

Monseigneur Lavigerie bought for us red cloaks, and we were proud in our new clothes. In winter he bought us padded shoes to keep our feet from cold. These were the first shoes we had ever had.

Monseigneur Lavigerie liked Moudon, Golio, and myself more than the others. He made us sing and dance, and asked us to tell him our histories, which interested him very much. We often had our meals at his table. He ate very little, and I cannot remember ever having seen him eat cakes or sugar. He gave us religious instruction, and was always providing amusements for us, for which we loved him.

Monseigneur Grusmeyer, the secretary, we did not like. He did not seem to know how to smile, and never spoke except with authority.

With such teachers we were not slow to learn French, and when they founded the mission school of St. Eugene I and my companions were taught there.

When the first missionaries left for Tanganyika and Nyanza I was present at the farewell ceremony, but understood little of it.

When later Father Guillet was leaving for Tanganyika I saw him making his preparations, little thinking that one day I should follow him to Tanganyika.

After some time I was taken with others of my black comrades to Carthage, where the Father Superior admitted me as a catechumen according to the Roman ritual. I well remember this ceremony in the Chapel of St. Louis. We learnt there to take part in the church services.

Monseigneur Lavigerie was Administrator of Tunisia, and from time to time came to see us, and examined us to find if we knew enough to be baptized.

On our walks we were interested in the many ancient inscriptions and old curiosities.

MEDICAL TRAINING IN MALTA

In 1880 we were taken to Malta. There we were forbidden to speak French, Arabic, or Sudanese, until we had learnt Italian, in which language we were taught. There were many young Maltese with us.

We had two Maltese professors, one of whom was a priest and the other a doctor of medicine. We preferred the latter to the Abbé, who seemed to us too severe, although later he changed in his attitude.

In 1882 Cardinal Lavigerie returned to Malta from Rome, where he had been to receive the insignia of Cardinal.

He was received as a prince, and triumphal arches were put up.

He was met at the quay by the Archbishop of Malta, Monseigneur Caruana, with many clergy, and all the people of importance.

We ourselves, the children of the island's Black School, sang a song of welcome in Italian.

When the Cardinal entered the town of Valetta the enthusiasm was so great that his carriage was drawn along by men.

The next day he came to the Palazzo Leone (so called after two lions on its gateway), to conduct an examination to see who had learnt sufficiently well to be baptized.

The ceremony baptism took place in the Church of St. John the Baptist. After this we were confirmed by the Cardinal, and then returned to the Palazzo Rosso, where Cardinal Lavigerie, the Apostle to the black people, presided at our dinner. Next day we received our first communion.

During 1882 I continued my studies in botany, chemistry, algebra, etc. I got on well with Natural Science, but could understand little of algebra.

In October of that year the most advanced students, including myself, attended at the University as outside students, because that was less expensive.

We then began a course of anatomy at the university.

During my medical studies I was very keen to know the reasons for everything, and how to do things, and kept asking questions of the professors, especially the surgeon, Dr. Borg.

During my first few days in the dissecting room I was much impressed by all I saw, as also by the human body in front of the professor in the lecture theatre.

Our lectures in midwifery were at first especially difficult, because we had no contact with the other students, still less with the women. Also we had nothing to read except our notes that we were continually taking. I was,

however, able to obtain a French text-book of midwifery, and one in two volumes on surgery, which I bought with some money that had been sent me by the Sister who was my godmother. I was able to buy some books on medicine myself, as there was no money available for the school to supply them for us.

We had little beyond our note-books to refer to, and what we learnt was almost entirely due to our own efforts and application.

Poverty is not always an advantage, especially when one does not know how to do things, and without text-books has to rely solely upon what one hears.

However, at the end of our studies we were as good as the average of the Maltese students.

Every day except on Sundays we were taken to the University by a Father, and as soon as the classes were over he took us back to the Palazzo Rosso. Later we stayed at Iliema and finally at Casa Tarxen.

I often felt very lonely and thought of my future all alone, but the Fathers helped very much by their advice and prayers to form my character.

In the weekly examinations of the students in my class I was at first third or fourth, and later generally third, although the youngest.

I noted that the professors liked me, and that encouraged me.

I was never ill, and could not believe that one day I must die.

When a student died I thought he had only gone away for a time and would return. It was only in the theatre when I had to see and dissect a dead body that I learnt to believe really in death.

I think it was in 1887 that our residence was transferred from the Palazzo Rosso to Iliema. There I met Father Hirt, who later as Apostolic Vicar was to lead a caravan for the Missions on the Great Lakes. Also Father Chanterelle and the Brothers Gustave and Justin whom I was to meet again at Karema. As I was not yet able to go to the Missions I gave Father Hirt a musical instrument I had bought for 25 francs, for the entertainment of the black natives whom he was going to preach to.

The Institute was then transferred from Iliema to Casa Tarxen.

Shortly before leaving Iliema a young man was kicked by a horse on his iaw, and lost much blood from his carotid artery, which could not be controlled by ligatures. The only means of control was by digital pressure. Six of us black students took turns at this. During my turn the young man died. This affected me so much that for a fortnight the thought of his death followed me everywhere.

At night I was going to hide under the bed of the Father who slept in our dormitory. For thirty years this death haunted me.

From Casa Tarxen we went daily to the hospital and the medical side of the university. We never went to the Law or to the other Scientific branches there.

PILGRIMAGE TO ROME

In 1886 was the Jubilee of Pope Leon XIII, and throughout the year there were pilgrimages to Rome. The Bishop of Malta went with his clergy, and Cardinal Lavigerie led an African pilgrimage.

Father Carmoi with twelve negroes left Malta to join this African pilgrimage. It was there that I saw again Father Lechaptois who in 1891 became Apostolic Vicar in Tanganyika. He had come from Kabylie with twelve men from there.

At Pentecost Pope Leon XIII in the Cathedral of St. Peter's gave communion to 12 Europeans, 12 Kabyles and to 12 Negroes, of whom I was one. It was a day never to be forgotten.

Cardinal Lavigerie, speaking in Italian, told the Pope that he was having the negroes trained in medicine, to assist the missionaries in their work. This I have always remembered and often spoken of.

The African pilgrimage was photographed with Cardinal Lavigerie and his two bishops. I bought a photograph of the Pope for my godmother, and another for myself. On these was written that the purchaser had the papal indulgence up to the third degree, for himself and his family when at the point of death.

At Rome we visited the Basilica of St. Peter and St. Paul, outside the walls, and I drank the water from three fountains as a souvenir. We visited most of the churches, including that of Ste. Agnes and others.

Cardinal Lavigerie, with his missionaries and the twelve negroes who formed part of the African pilgrimage, had an audience with the Pope, speaking in Italian, which all the negroes understood.

The Pope asked the reason why Cardinal Lavigerie was teaching these twelve negroes. He replied that it was to help his missionaries as doctors and catechists. The Pope said that this was a very good idea, and I have often thought of this approval which he gave.

Leon XIII was truly imposing, tall and spare, one might say like the Prophet Samuel come to life again and replying to King Saul about the outcome of the war against the Philistines. His eyes were penetrating and full of life. One day when walking in the gardens of the Vatican we saw a young man whom we were told was the Pope's nephew.

At the first audience Cardinal Lavigerie, in presenting the members of his African pilgrimage, appealed for approval of a campaign against slavery. The Pope, seated upon his throne, surrounded by his Guard, listened attentively to the Cardinal's address. I was in the first row, beneath the

steps of the throne, so heard and saw everything well. The Pope then rose from his throne and addressed the crowd of pilgrims who filled the hall.

He spoke in French, after a short address by the Ambassador of France, but one could see that he did not speak it with a good accent. The Pope then gave instructions to Cardinal Lavigerie to preach a Crusade against the enslavement of the blacks in Africa.

At our last audience the Pope was carried in a chair, and gave to each pilgrim a medal bearing his portrait.

When we left Rome the principal of the Noble Guard accompanied us to the station.

We returned to Malta, very satisfied in having seen the Pope, the Basilica of St. Peter and the chief churches and notable places in Rome.

We resumed our classes. Three of the six who were studying medicine were intended to go away with a caravan of White Fathers to Equatorial Africa.

For two years we went every day to the hospital, but not to the female side, although those who followed us did.

The Sisters of the Hospital, both French and Italian, astonished us by their modesty. They never spoke to the students, except on very rare occasions and then only for a short time.

During my two years at the hospital there were not many operations: one amputation of a leg, one removal of a cancer of the breast, one strangulated hernia, that was all. There were also few accident cases, or diseases requiring the services of the consulting surgeons. The oculist, son of an old soldier of Napoleon II, did several operations for cataract, and gave us some idea of European eye work.

VISIT TO FRANCE

At the end of May 1888 three students were chosen to go with a caravan to Equatorial Africa: Charles Faragui, Joseph Gatchi, and myself (Adrien Atiman). The Father Superior of Malta, Father Carmoi, was in charge.

We all left for Algiers, where we found Father Deguery, the Superior General. Whilst there a telegram arrived from Zanzibar telling of the death of Monseigneur Charbonnier in May at Karema. Father Bridoux, the head of the school at Carthage, was selected to succeed him, and was called to Paris to receive his instructions from Cardinal Lavigerie.

The three "doctor-catechists" were also sent to Paris, to be present at the consecration of their Apostolic Vicar, and at the first sermon of the Anti-Slavery Crusade.

Cardinal Lavigerie was the bishop who consecrated him, the ceremony being in the Chapel of the Sisters of Sion. Monseigneur Bridoux' mother,

brothers, and sisters were present. The ceremony impressed me very much. A few days later Cardinal Lavigerie preached the Anti-Slavery Crusade in the church of St. Sulpice. At Montmartre Cardinal Richard preached, and a Bishop of the Eastern Church and the Papal Nuncio were present.

We visited many churches in Paris, notably Notre Dame and Montmartre. Paris is so large that we often lost ourselves.

Cardinal Lavigerie wished that whilst there we should learn to shoot with rifle and revolver, so that we could defend ourselves if necessary later. This was quite new to me, and we went for about ten days to an armoury.

After the consecration of Monseigneur Bridoux I went with him and his family to Cambrai, Arras, Lille, Lievin and Hasbrouck, and my two companions went to St. Laurent d'Olt. This I enjoyed very much, as it was the first time that I had seen the family life of true Christians.

In the north country there were many children, and when I went out hundreds of them came to stare at me. I was afraid of them, and went back to the house of the Apostolic Vicar.

At the little Seminary of Hasbrouck I was asked to tell my history. I stood in the professor's place, and with much timidity told my story.

In one village, whose name I do not know, a lady suggested that I should settle in France. She was neurasthenic, and begged me at all costs to tell her what she was suffering from.

When the time came for our departure Monseigneur Bridoux blessed his mother, brothers and sisters. I saw his mother, a big, strong woman, weep tears for her son whom she would never see again.

JOURNEY TO AFRICA

On 16th July 1888, we embarked at Marseilles for Zanzibar.

On the eve of our departure Cardinal Lavigerie sent a telegram to Father Deguery suggesting that I should continue my studies, because I was too young, but all the arrangements had been made, and the papers could not be made out again.

The missionaries going out were Monseigneur Bridoux; Father Auguste Carmoi for Tanganyika; Father Schynse and Brother Pierre Marie for Unyamwe; Father Guillemain for Zanzibar; Father Herrebaut and Brother Alexander for the Upper Congo; and three *médecins-catéchistes* to be divided between the Vicariates. These were Charles Faragui, Joseph Gatchi, and Adrien Atiman. Charles belonged to the tribe of Meka, or Mossi, a neighbouring tribe of the Bambara, with whom they are often at war; Joseph is a Haussa from Kana; and Adrien from Toundourma on the banks of the Niger, near the town of Toumbouctou.

The voyage was good as far as Port Said. We went ashore at Suakim, where I saw the first black priest, who had been trained by Italian

missionaries. We also went ashore at Jidda, the port for Mecca. At Massawah there was an Italian hospital ship in port.

Monseigneur the Apostolic Vicar went ashore to visit the mission.

From there we passed through the Strait of Bab el Mandeb.

For four days no passengers came on deck, so we had no communication with the missionaries in the second class, our three doctors being third class. On the third day the separation seemed to me too long, and I asked for news of the missionaries.

By holding on to ropes I made my way to Monseigneur the Apostolic Vicar, whom I found very ill with sea-sickness. He thanked me for my visit, and asked me to go back as I could do nothing for him.

At Aden much fish was taken on board, and put near our cabins. These had a strong smell, and did not improve his sea-sickness. I myself was not affected either by the sea or by the smell of the fish.

After we had disembarked at Mombasa I saw my first coconuts and bananas.

Some British officers who desired to go ashore were celebrating their departure up to night time. One of them asked where my wife was, and would not believe me when I told him I had not got one. He said a negro of my age must be married, but when I told him that I was with the Apostolic Vicar he considered that this was understandable.

During the voyage out from Marseilles we began to learn Kiswahili. Monseigneur the Apostolic Vicar was the honorary professor, as he knew more of this language than the missionaries.

At Zanzibar we visited the native hospital.

BY CARAVAN TO KAREMA

The caravan was quickly organized, and on 28th August we went to Sadani, instead of to Bagamoyo like the previous caravans.

Our caravan was led by Mr. Stocks, an old Protestant minister, who was married to a negress.

From Sadani we went to Mpwapwa, where we met a caravan of slaves, one of many we met on our journey. At Mpwapwa, Monseigneur Bridoux and his missionaries were welcomed by a German officer.

The slaves were almost walking corpses, weakened by smallpox and dysentery. When we went through their camp these most wretched slaves were shown to the missionaries, who baptized many of them, and especially the small children.

Amongst them was a girl of about 15, who had become dumb through her misery. Her master had attempted to revive her by putting her in a cold torrent, but this only increased her weakness. Our three doctors took her in hand, made her warm and looked after her, and she was then able to speak. She refused to be baptized, and as there was no time to prepare her better for this she was sent back to her master.

Another day we saw a man dying from smallpox. His tongue was already decomposing, and we could not get word out of him.

This unfortunate man we left in a dried-up stream where he had been put, and which would be his grave. Probably he would become the prey of vultures and wild beasts. Seeing him I appreciated the more my good fortune in having been ransomed and educated.

One morning we reached a camp that had been left that day by a caravan that we had passed. Here we saw a horrible spectacle.

About twenty persons had been abandoned there, and near each were several vultures waiting to devour them as soon as they died.

Many sick persons came to us on our journey, but we had scarcely sufficient medicines for the missionaries themselves.

Monseigneur Bridoux had a severe attack of fever. It is bad to have fever when living in a tent formed like a native hut, which becomes hot and has no circulation of air.

We knew nothing of quinine as a preventive, and first one and then another missionary went down with fever, but we had to go on, and the march increased the fever, especially of Monseigneur Bridoux.

Two days before arriving at Kipalapala mission post, near Tabora, the Father Superior Hautecoeur came to meet us, riding on his donkey.

In Ugogo, water was so scarce that the missionaries, with several askaris, and one or two of the *médecin-catéchists*, made several hours' journeys to buy water, paying a length of American cloth for a pail of water.

In the forest of Kundamukali we travelled for three to five days without seeing an inhabitant. We were told not to separate in that forest because of brigands, and not to risk losing sight of the road, which is only a small one.

In Ugogo, we bought ostrich eggs, one of which was enough for an omelette.

This country through which we had passed, and its people, were quite unlike those seen on the way from Toumbouctou to Algiers.

I was not favourably impressed with either the country or its inhabitants. Some of the Wagogo I saw had no clothes except a skin over their shoulders, and red paint on their faces. They were all circumcized, had their hair bound up like a rhinoceros horn, and carried spears. The Wagogo and Masai women have rings of iron wire in their ears, which stretch them right down to their shoulders. Also rings of the same metal around their feet. They are dressed in ox hides, which are made quite soft. They and the Masai have large herds of cattle, and the milk is good. The Masai differ from the other tribes that we met, being more Arab in type, but generally as black as the other tribes.

From Sadani to Tabora the missionaries had not been troubled for *hongo*, the tribute that had to be given to each chief for allowing a caravan to pass, but after there *hongo* had to be paid.

When Monseigneur Bridoux was very ill with fever some of Mr. Stocks' men carried him, and I followed him and these men, sometimes on a donkey and sometimes on foot. Mr. Stocks' native wife was accustomed to marches, and I never recall having seen her carried. Before we arrived at Uyuwi Mr. Stocks left us with his caravan. According to custom many rounds of rifle fire were shot.

We reached Kipalapala in November, and stayed there just over a month, before going on towards Ujiji about mid December.

There I met again Father Girault, the Pro-Vicar of Unyanyembe, who had come for Fathers Schynse and Chantemerle, and Brother Pierre.

They did not require a *médecin-catéchiste*, so the three of us continued our Tanganyika journey, with Father Carmoi for Tanganyika, and Father Herrebaut and Brother Alexander for Upper Congo.

Here Father Schynse made a trap with a gun, and killed a boar.

At Kipalapala we were all more or less down with fever. Emetics and purgatives formed the basis of our treatment. Our quinine was finished, and quinine here cost 1,000 francs a kilo. We knew nothing of its use as a preventative.

The old missionaries were on the whole more robust than the newcomers, and amongst the strongest of them were some who had lived twenty or thirty years in the country. Generally after two or three years they had haematuria (blackwater fever).

Towards the middle of December the negotiations with the Sultan Like were concluded, and Monseigneur Bridoux' caravan could proceed.

For this considerable payment had to be made.

We could not go direct to Karema as there was fighting along that road, so it was decided to go with a light caravan of seventy persons to Ujiji. I was glad to leave Kipalapala on account of the fever I had had there.

In Urambo more *hongo* for the right to pass through had to be given. The Arab who was acting as Minister also demanded, and was given, some purgative pills.

The rains were very heavy, and we often reached camp wet through.

There were many hyenas. Once they entered our tent, and we called out, thinking they were robbers, but dared not run out as it was raining so hard, and we all had more or less fever. Next day we found the box containing the tent pegs a hundred yards away, and the sling of one of the guns eaten.

Amongst our porters was a former black Brother of the Fathers of St. Esprit, called Julien, whom Father Hauteceur had tried to reconcile with his wife. He spoke French very well, and could play the harmonium. On Christmas Day, which we spent in the bush, Julien sang several canticles, and on New Year's Day he made a complimentary address in French to the missionaries.

We had with us a small herd of goats to provide fresh meat.

After Tabora we passed several caravans of slaves and of merchants carrying chiefly ivory. Some of the tusks required two porters each to carry.

When near the Malagarasi river Monseigneur Bridoux' donkey got stuck in a marsh. The current in the Malagarasi river was so strong that we lost some of our loads, and the leader of the caravan, whose name I do not know, lost one of his wives when crossing it.

We then reached Uvinza where there are salt springs.

Many of the donkeys were ill, and so some of the missionaries had none to ride.

When we were approaching Ujiji Monseigneur Bridoux sent a letter to Rumaliza, the most influential Arab, to announce his coming, this letter being taken by Julien. Several days before our arrival Julien returned with the reply from Rumaliza. It appeared that the Ujiji Arabs had planned to kill the missionaries, but Rumaliza had opposed this.

On the day that we entered Ujiji my donkey fell ill, and I had to borrow a gun and shoot it.

There we were met by two missionaries, with several Christians, and were lodged in an Arab house. Rumaliza visited us, and was given a present of a donkey and probably other things.

At the gate we saw Arabs getting ready for a voyage to Manyema to get slaves, ivory and parrots.

At the Festival of the Purification, on 2nd February 1889, we were at Kibanga, where we saw Father Coulbois, Pro-Vicar of Upper Congo, Father Moinet, and Brother Jerome, whom I now met again after eleven years. Also Brother Gustave, who had come to Malta in 1887 with Fathers Hirt and Chantemerle. At High Mass, Julien played the harmonium.

I remember little of Ujiji or Kibanga, as we only passed through these places.

Monseigneur Bridoux made all the appointments. Father Isaac Moinet, Superior of Mpala, left there to go to Kibanga, Father Guilleme was appointed Superior, and under him that post prospered spiritually and materially. The church at Mpala is his work, and after 1911 he became Apostolic Vicar of Nyassa.

The old Brother Jerome remained at Mpala, with the *médecin-catéchiste* Charles Faraghit, who several months later married the niece of the Chief of Manda, and so according to local custom their son would inherit the country of Manda.

After several days' rest Father Carmoi and myself embarked for Karema, where after three or four days heavy rain we arrived.

The pilot of our canoe, which was made from a tree trunk, was called Mubili, a very old man. This four days' journey in rain, over rough water, was very tiring.

We crossed the lake to the island of Kavala, and then passed the Lukuga river, the outlet from Lake Tanganyika, which carries its waters to the Congo.

Further down that coast we reached Mpala, where we found the Fathers Guilleme and Moncet.

The mission at Mpala was founded by Captain Storms, then belonging to the Société Internationale Africaine. Before this station had been taken over by the White Fathers in 1885 it had been burnt down by the natives. It is built upon a little hill, at the foot of which the river Lufuko runs. The plain there is very fertile.

Captain Joubert lived at the port with his wife, Agnes Wakataji, who had probably been ransomed by Mr. Jerome Becker, or by Mr. Rasmakers, captain of the gendarmerie, who had died at Karema in 1882. Madame Joubert was 16 years old, and enjoyed playing with girls of her own age.

Captain Joubert was now about 73 years old, and the father of seven children, two daughters and five sons. Of the latter two were priests, the Abbé Albert Joubert and the Abbé Jean Joubert. The Abbé Jean was born here, and ordained priest at Baudouinvillie.

Captain Joubert was an old captain of the Papal troops (Zouaves Pontificials), who after fighting for the Pope fought in 1870 for his country against the Germans. Later he put his sword at the service of Cardinal Lavigerie, for the protection of the White Fathers when they made their spiritual assault upon the Great Lakes.

He had several assistants, mostly like himself, former Zouaves Pontificials. After staying about three years he returned to Europe in 1885, but was attracted back to Equatorial Africa and came with a small caravan to Karema, to protect the ports of Karema and Mpala, and when necessary to fight the Arab slave dealers.

In 1919 he had been 33 years at Mpala without re-visiting France, or his birthplace Brittany.

KAREMA

At Karema we were met by Fathers Josset and Dromeaux, the former of whom I had known in Malta in 1881. He was the Superior of Karema, and the Administrator of the Vicariate.

Father Josset had had white hair before his ordination. The cares of the administration and the lack of security in the country had made him very nervous, but we got on very well together as at Malta.

Father Dromeaux had been a farrier sergeant in the war of 1870.

He was about six feet in height, rather dry, and with a strong constitution. He smoked native pipes, as used by the Wasumbwa, instead of European pipes.

The Mission station was the Fort Leopold, built by Captain Cambier. It is an old fort with a central house and a surrounding wall built of sun-dried bricks. The roof, like others in the district, is constructed of wood covered with reeds plastered with mud. It has four bastions, and loopholes through the outer walls.

The small house where the agents of the Société Internationale had lived was taken over by the missionaries. In this mission, formerly the fort, were 400 orphans, the boys and girls separated by a reed fence.

I was lodged in a room by the gateway of the fort. It was full of ticks and fleas.

In front of the mission is the village of freed slaves, built of sun-dried bricks around a large square. In this also were many cattle.

All the men and boys carry guns as this country is not safe, and there are many who rob by day as well as night, and occasionally kill. Thanks, however, to the number of guns possessed by the mission the natives have a

respect for it, and it has been slowly developing, and more and more people have been coming to live at Karema because of its restful security.

On the day after my arrival I began my medical service.

Cases of tropical ulcers, dysentery, fevers, and children with yaws and scabies were all lying together.

My medicines comprised 20 kilos of camphor, a little carbolic acid, and ipecacuanha. For instruments, a thermometer, an irrigator, and nothing else. There were very many ticks, which we swept up each morning, before they had finished their meals of blood for the day.

Each morning I visited the orphans and treated those who were ill. Persistent fevers were prevalent owing to lack of quinine. Since this cost 1,000 francs a kilo, it is obvious that it could not be given to everyone, and it took a year to obtain fresh supplies of medicines. Bandages were made from clothes used by the orphans. Although washed they looked more like khaki than white material.

I did not approve of treating the ulcers with camphor. With 40 francs that had been given to me by Sister Spiridon, my godmother, one kilo of iodoform was purchased, and when received in the following year the treatment of ulcers improved greatly, and many were healed.

In addition to medical treatment I gave religious instruction, taught in classes, and prepared the dying for baptism.

In the first month especially the women came more to see me than for treatment, but soon discovered that I had come there with other intentions.

MISSION METHODS

There was a certain Arab, Mohamed bin Ali, for whom Mousigneur Charbonnier had paid a debt of 10,000 francs, so far as I can remember, on condition that he became a Christian. There were also some Mohammedans along the coast for whom the mission paid their debts in hopes that they would become Christians. Ah, well! these folk came to the mission resolved to learn nothing, and especially Mohamed bin Ali, who said he was descended from the class of Arab Governors of the coast, and did his best to turn me away from the missionaries. He required my services for his intimate illnesses, and afterwards told me his visions, superstitions, and ideas.

But I took counsel with Father Josset in everything I said to this Arab.

There was another man on the coast called Kapongo, who was at times employed by the mission to make purchases at Tabora. Another called Kamberembere, a merchant like Kapongo, but more deceitful and hostile to the mission. He joined an elephant hunter and adventurer called Matimula

to revive the hostility against the mission in order to be given money, and especially cloths.

Before the arrival of Monseigneur Bridoux the mission post at Karema had been attacked by the Wabende, pushed on by Matimula, Kamberembere and perhaps Kapongo. Karema was put on a war footing to await attack. Father Josset, seeing that Matimula and his companions wanted especially some cloths gave them on condition that Matimula would cede his village to the mission. Some three years later, when pressed by Father Dupont, he gave over his village and fields.

When we were threatened with attack, Pierre Tambi, who was in charge of the magazine, collected a large store of wood and water for the missionaries, and positions were allotted to all in case of an attack.

When later Monseigneur Bridoux came to Karema he was welcomed with the firing of rifles, and dancing, and the orphans were given holidays.

He did the first baptisms, at a solemn ceremony. Each child was given some cloth, and for all there was an ox killed.

MARRIAGE

Father Josset had chosen for me one of the orphans, of the Warungwa tribe, and suggested that I should marry her, but he waited to consult Monseigneur Bridoux. Monseigneur Bridoux, however, proposed marrying me to a daughter of one of the smaller Chiefs of the Wabende, in order by such an alliance to be able to convert them more easily. Nothing was known of their manners and customs, but Father Josset told me that it would be necessary to purchase a wife.

It was only the slaves who married amongst themselves without payment of money for their wives.

I paid 100 francs, to which the mission added more than double that amount. Monseigneur Bridoux and Father Josset, with a large escort to emphasize their rank, went to Kafisya to make arrangements for the marriage, after others had gone on before to ask Mrundi, the Chief, for one of his daughters for a negro who had come to Karema from Europe.

Mrundi had offered the daughter of his predecessor Chata.

I accompanied Monseigneur Bridoux and Father Josset to conclude the arrangements. The reception was held in the house of Wampalisi, the principal wife of Mrundi. This was in the form of a beehive, with a passage about two metres across. Its furniture consisted of a bed hidden by matting, several stools, and mats on the floor.

Through a door at the back came a young girl dressed in coloured clothes, which in the dim light made her look grand.

I accepted her, and the price of purchase was paid.

Mrundi then asked for more cloths as father of the girl, although he was only her paternal uncle. He was given two fine cloths, worth more than 15 rupees. With what he had received with the purchase price of Wansahira her uncle Mrundi could clothe all his Court, and share the rest with her parents.

Several days later Mrundi gave notice that he was bringing Wansahira to the mission for the wedding.

The wedding was on 14th August 1889, at 10 o'clock in the morning.

When the bride arrived at the marsh near the mission, according to custom, I gave her four feet of white cloth. This payment corresponds with that which the Wabende call "for seeing the village of the bridegroom". Another cloth was given for entering the mission, corresponding to that required "for seeing the home of the bridegroom".

Then the bride entered the mission, in the midst of which was my house. Unfortunately I had a little fever, and was unable to follow all the native ritual at my marriage. I was told that if I attacked their religion their gods would be against us, and that they must not attack mine. We did not throw corn as the sign of consent together, as is the Kibende custom.

The mission killed an ox, and provided drink for the guests for three days. Throughout the day-time on these days the men danced.

According to custom, Wansahira, was accompanied by a young woman of her family, older than Wansahira, who returned after twelve days.

At first we could not talk together much, as Wansahira knew no Swahili, and I knew no Kibende. She knew only how to cook gruel and *ugali*. To make her feel at home the girls in the mission came there all day, and she took a liking to one called Mlezi, who taught her to cook.

On 5th September, we had a Catholic wedding ceremony, but she could understand nothing of that, and a few days later became homesick and returned to Kafisya. Mrundi, her father's nephew, brought her back to Karema.

For several days after this escapade I reasoned with her, and little by little she became accustomed to the life, and began to learn the catechism quickly. I kept on repeating it to her so often that in 1891 she was able to be admitted as a catechuman.

After that she seemed content, and her mother and others of her family paid her frequent visits.

On 23rd November 1892, my wife gave birth to a boy, who was baptized two days later by Father Dromeaux, in the name Joseph Adrien. For god-father he had Father Dupont, Superior of Karema, who had also the title of Bishop of Thibar.

At his birth I fired a *feu de joie* with my rifle.

During the summer of 1891 the people of Karema caught in their nets many fish said to have two heads. These they called Kipuma.

In 1890, Father Auguste Carmoi, died from haematuria (blackwater fever); in July 1891, Father Jean Marie Josset died from the same cause; and in November 1891, Father Emile Pruvost died after a fever lasting nearly a month, and was buried by Monseigneur Lechaptois.

By these deaths the staff of the Tanganyika Vicariate was reduced to Father Randabel, the Superior; Father Dromeaux; Brother Justin; and the epileptic Brother Gerard. Four missionaries only!

In February 1892, Father Dupont joined the Tanganyika Mission.

After Easter, Monseigneur Lechaptois and Father Rondavel went, with Brother Gerard, to found the station at Kala.

The people of Karema were very afraid of the Wabende, and to give them courage the older men were given rifles, and twenty men were selected as a guard. When Father Dupont went out in the district he took with him several men, including myself, as his guard.

The guard wore belts of cartridges, and often fired their rifles in front of the natives, to put fear into them, as they had no knowledge of this new weapon.

At that time there were many leopards and hyenas, which killed and ate many persons. Many of these beasts I poisoned with strychnine.

Father Dupont made a native trap in the gorge of the valley that leads to Kasagula. One day a leopard was taken in the trap. The meat was given to the guard, and Father Dupont presided over the feast.

Matimula, the chief who had agreed to hand over his village to the Mission, now refused to do so, but after much discussion, when he saw the people of Karema with rifles in their hands he agreed to leave, and the Mission remained masters of the village. By this occupation the Mission gained greatly in prestige, and its property increased by many good fields.

The people of Karema were encouraged, and now dared to go amongst the Wabende.

TWO EXPEDITIONS VISIT KAREMA

In 1892, Captain Jacques, with two lieutenants, came to Karema, on their way to found an outpost at Mfoa, and I gave them treatment on several occasions.

In the same year came a caravan led by Mr. Stears, composed of two Englishmen, a Belgian (Captain Bodson), and a Frenchman (the Marquis of Bonchamps). Their men had many tropical sores, and many persons died. The Mission constructed two wards for these cases.

The English doctor of the expedition asked for certain remedies, but as we had none of these he ordered poultices for most of the ulcers, but when the patients saw that these made no improvement they took the flour with which they were made to add to their rations.

Early in 1893, Monseigneur Lechaptois went to Europe to be consecrated.

During his absence, Father Dupont made renewed efforts to convert the Wabende, and as my wife was of that tribe it was more easy for me than for the others to go to them, especially as I was a stranger in this country.

In 1893, Mrundi died, and was succeeded in the chieftainship by Mkajala, who invited Father Dupont to go there for his coronation.

He was accompanied by one hundred men with rifles. My wife, with several Karemo women, went with them.

On arrival at the Court of Mkajala there were salutations, and we were given seats. The Father Superior then crowned him, and put around his shoulders some fine clothes. Then all went beneath a large tree, which was a divinity, in the centre of the village, for a war dance, at which people of the Wabende and of Karema danced together, firing off rifles and brandishing spears.

A Karema man, named Pimpite, frightened by the firing, ran off to Karema to tell Father Dromeaux that Father Dupont had been attacked and killed, with several other persons. Father Dromeaux, very alarmed, took a case of cartridges and went off with some men, leaving the station to Captain Jacques to make preparations for its defence. Father Dupont, meeting him on his way back, soon convinced him of the mistake, and to pay him out for this Pimpite was made to carry back the case of cartridges.

About this time Rumliza attacked the Belgian Congo, and was pursued there. The Administrative Officer of the District of Tabora, Monsieur Ligl, came as far as Ujiji to attack Rumliza, who, however, passed round another way and reached Dar es Salaam. Monsieur Ligl, with his lieutenant and Nubian soldiers, came on to Karema. All the lesser chiefs there made their submission, and to each important person he gave a piece of white cloth and some coloured cloth. I was also given some, and my son who could not yet walk.

NEW ARRIVALS

In 1893, a new missionary caravan arrived, with Fathers Boddaert, Lepelletier, Sigiez, and others, with several *médecin-catéchistes* for Tanganyika and the Upper Congo.

Several days after their arrival Father Dupont had a severe fever with haematuria, and received the last sacraments. Father Castelyn had a little water brought from Lourdes. This he gave to Father Dupont to drink, when he already appeared almost a corpse. To my astonishment I heard Father Dupont, towards midnight, asking for his pipe to smoke.

The Blessed Virgin had cured her missionary. In several days he was on his feet again. He had had several attacks of haematuria at Karema.

In the summer of 1894 I accompanied Father Dupont to Kirando, the post founded by Fathers Lepelletier and Sigiez. The latter we found blind in one eye following fever. I was sent to treat patients in the villages in the neighbourhood.

Kirando, a picturesque place on the shore of Lake Tanganyika, is, with its islands, full of mosquitoes. When Father Dupont was celebrating Mass there he was literally devoured by them.

I also accompanied him when he visited the islands of Urwira and Karengé, the only two that are inhabited. On them are many palm trees, but no ferocious beasts, but on the many rocks around them were crocodiles basking in the heat of the day.

ORDEAL BY POISON

On another occasion, when on a tour in the Wabende country, I was lodged in the house of Mwanawima, the executioner, a man of medium height, with red eyes, and a pitgail of red stuff on his head. When he went out he carried three spears, a double barrelled gun and a sword. He had a dozen houses for his twenty-four wives, all in a courtyard. Katunka, the chief, received me well, owing to fear of Father Dupont and because I had married one of his cousins. He lived chiefly on native beer, and pombe made from honey, called "tulile", with meat provided by hunting, and goats and fish requisitioned from his subjects.

Katunka lived on the river Lufubu, which flows into Lake Tanganyika.

As we passed along this in a canoe we saw many of them plunging into the water all around us.

This reminded me of the Musulman Kamberembere who had left the Mission to go to Katunka. He arrived at a bad time, when Katunka was giving the poison ordeal to all the village to find out who were the sorcerers. Under these circumstances a stranger coming to a village where the ordeal

by poison was being carried out had also to drink the poison to show whether he was innocent, so Kamberembere had also to drink.

As he did not vomit this he died, and was thrown into the stream to the crocodiles who devoured him. So died one of the enemies of our religion.

In 1897, Mlera, son of Irumba, chief of Ikola, died. Before his death he told his cousin Mkajala not to weep for him but to avenge him. After his death, therefore, no people were allowed to leave the village, but all there, and in the nearby village of Mazinga, were compelled to undergo ordeal by poison. The new chief Kapatila presided over the administration of the poison of proof, which must kill those responsible for the death of his predecessor.

Seventeen persons died in a day, and amongst them the sister of the dead chief. Mlera was avenged.

As I was married to one of Mlera's and Kapatila's relations I was sent to try to stop this butchery. Apart from the seventeen, the others continued to vomit, so no more died. One old man, called Mwiga, had all his body distended by the poison. I was promised a piece of cloth if I could make him vomit. I made him vomit by pulling on the hair on top of his head. I made others vomit by the same means.

FOUNDATION OF ZIMBA MISSION

When the station of Zimba was founded by Fathers Sigiez and Chormoille, with Brother Gaspard, I went on a month ahead, and found there some people from Kala, who had gone on to build houses for the missionaries. There I met again my fellow pupil Louis Coro, who had been *médecin-catéchiste* at Kala.

On arrival at Kantaramba we were presented to the King Kapera, and his Queen Unda, both about 16 or 17 years old. Their colour and figures indicated that they were of different race to their subjects.

They had the colour and figures of Arabs. They received us well, and we were even given a man to procure food for us at Zimba, on behalf of the king.

After having descended the highest mountain that I had seen, a continuation of the range at Karema, we arrived tired out at Ngongo about three in the afternoon, and at once a dust storm blew up, so thick that one could see nothing in it. This wind the natives call Kikulwe. The next day we reached Zimba, and after a month the missionaries arrived, to my great content.

Father Sigiez, who had learnt the Kifipa language at Kirando, organized the mission, and with him came a catechist, Lusi Kana, who also spoke that language well. The villages were divided between this catechist and myself, and each day we went to some village to teach our religion.

Lake Rukwa on this side is dried up, with no trees but only grass, which spreads like a carpet for miles. I saw many zebras, but as I was not a hunter I did not leave the path to hunt them.

GERMAN OCCUPATION

In 1898, the German government founded a post on the plateau of Ufipa at Kantaramba, then the capital of that part of Ufipa called Kansi, of which Kapere was king. Later the military post was transferred to Kasanga on the shore of Lake Tanganyika.

In 1899, I came into contact with German troops, some fanatical Musulman Nubians.

I had been given permission to take my wife to see her family at Kafisya. On the way I saw the catechist Lusi Kana running quickly and avoiding the ordinary track. He told me he had been beaten by some soldiers, and that they had forbidden him to teach the catechism.

This I told him they had no right to do.

I went on my way to Ngongo, and there met the Musulman Nubians. I asked them why they had beaten Lusi Kana. Their only reply was to beat me, and I went on to a house to inform Father Sigiez of what had happened. They had tried to tie my hands behind my back with my scarf but it was too short. They confiscated my little portable pharmacy, and I was guarded by a soldier. A Nubian soldier came up and ordered me to say the Musulman formula, "God is God, and Mohamet is his Prophet". When I replied that I would not pronounce this formula he was annoyed, and said that next day he would make me carry a box up the mountain, at least a two hours' journey.

I told him that I knew the officers at Kasanga, who had gone there from Kantaramba, and that they would surely release me.

The soldier then seeing some rats told me to bewitch them, but I replied that I was no sorcerer but only a doctor. They then went into the village Ngongo, and the sentry went to sleep.

Suddenly two missionaries came to my relief, with many men.

The Father Superior said he would report it to Kasanga, and I returned to Zimba. That was the first time that I had ever been asked to say the Musulman formula.

Several days later I left with my wife and family for Kafisya.

On the second day we camped in a village whose chief was Kitutu.

In the evening I saw a woman who had some stones, and pieces of grass and leaves, all mixed together in a grass bowl. On being asked what this meant she replied that in shaking the bowl she confessed her sins, by saying

to the gods that her faults were as many and as varied as these objects. "Have pity on me", she said, "and restore my child to health". I do not know, however, if her child recovered or died, because early next morning we climbed the mountain of Kalembe, which is less steep than that of Ngongo.

We camped three times before reaching Kirando, where we met a German sub-officer, who promised to arrest the soldiers who had ill-treated me, who they had heard had previously killed a man by Lake Rukwa. The officer put us in a boat and we made sail at once for Karema, not stopping at Utinta.

At Karema the officer searched out the soldiers who had then gone on there. He asked me if I recognized them, and when I did so each received at least twenty strokes of the lash with a hippopotamus whip, after which they were put in a boat for Ujiji, where their wives had to follow on foot.

After several days' rest we went on to Kifisya, where Agnes met her mother again.

Mkajala, the chief of Kafisya, successor to Mrundi, scattered grain mixed with water, and called upon the gods and members of his family who had died. I told Agnes that she ought not to take part in this pagan ceremony.

After some days we returned to the Mission.

CURFEW CUSTOMS

I was then charged to teach religion at Ngongo, where lived the sultan Kapere and his wife Unda, who later was baptized in the name of Adolphina.

There I saw the curfew ceremony at the court of Ufipa.

The king and queen were dressed in the native cloth called "seketa", made in the Rukwa valley. The king held in his hand two little bamboos tied together, and an attendant or page had on his head a basket called "kio", which has the form of a funnel, closed below, which contained the insignia of royalty.

The king then blew down the two bamboos, like a whistle, for the royal house to be closed. The page was inside the house, and two others were holding an ox-hide drum. When the king blew on the two bamboos the two pages beat on the drum and one of them said that they wished the king and queen good-night.

A page outside then gave the names of any notables there who wished to say good-night to the king and queen, to whom the page inside gave thanks in the name of the king and queen.

After all this the king and queen retired to sit down, and to drink pombe through a reed pipe. The page who carried the insignia on his head also retired.

At their awakening in the morning I do not remember what was done.

In December 1899, I had to leave Zimba, by order of Monseigneur Lechaptois, who wanted me at Karema. We left to the great regret of the people whom I had been looking after. My wife and I also wept.

AT KAREMA

After his return to Karema, Adrien Atiman continued his work as a teacher and healer, and his history contains many details of his cases and experiences. These, however, though of interest to the Mission cannot here be described at length.

He writes also of tribal disputes and conflicts, and of a duel between two opposing leaders, as a result of which both were killed.

The following brief extracts from these years may be given:

An adventurer called Kimarabunga came from Ugogo, and put terror into the Rukwa valley. He was taken near Lake Rukwa by Captain Pritwitz, Chief of the district of Ufipa, who resided at Kantaramba.

When the Wafipa saw Kimarabunga a prisoner they mocked him.

He replied "You may mock me, but I have sold your fathers and brothers for powder". He was a thin man, whose height was a little above average, and he was tattooed all over.

In 1898, before the foundation of the mission post at Mwazyé, I was called there to treat a Greek merchant who had fallen into a pit prepared to catch game. He had been wounded by the pointed stakes put into the pit.

There was at Karema a small German garrison consisting of a dozen soldiers in uniform and some Wafipa armed with percussion cap rifles. There was also a small garrison with two Europeans in Sibwesa bay. One of these Europeans had had a severe fever for many days, and a sailing boat was sent to bring me to treat him.

He had not been able to speak for some days, and I had him taken to Karema, where he was eventually cured.

Later the German sub-officer in charge of Karema became seriously ill with a liver abscess, which tended to open externally but had already opened into the intestine. I informed the doctor at Kasanga, who replied that I should continue to treat him. I opened the abscess externally, but he had become so exhausted by this and by dysentery that after several weeks he died, and was buried on the hill in front of the mission.

BELGIAN OCCUPATION

One day an English ship wanted to disembark some soldiers. There were only two German soldiers then in the little garrison. When they saw the small boat coming the garrison fired on this and on the ship. The English

went back to the boat, and the ship which had come from Kirando went off towards the Belgian coast, probably thinking that the garrison was strong.

Several days later the Belgian ship *Katanga*, afterwards called *Le Vengeur*, came about half past five in the morning, and later fired many cannon shots. The population took refuge in the church, with the missionaries, and in my house. The small shells from the Belgian cannon fell on the hill in front of my house, and others behind the hill. The Belgians did not fire on the church, nor on the houses of the missionaries or the sisters, nor on the villages on the hill or below. Some soldiers then entered the port and then the village of Mirumba. The cannon continued to fire, some shells falling in the fields half an hour from the mission.

The soldiers advanced rapidly, climbing the little hill almost at a run, when they saw several German soldiers in khaki.

These they pursued in the high grass in the plain behind the hill.

They killed a native soldier, but the two Germans fled in another direction.

At this time the Belgian officers raised the Belgian flag on the church which dominates all Karema.

The soldiers who had shot the German native soldier came to report his death to their officers. I was told to visit him, and if he was not dead to baptise him. I climbed the hill and descended to the plain, where I found the soldier dead.

On returning I saw many Belgian soldiers encamped on the hill.

All were in black uniform. I was asked where the Germans were.

I was uneasy in their midst, seeing their bodies all tattooed, even their foreheads. Some of the tattoo scars on their foreheads were like cocks' combs.

On my return to the missionaries I reported that the native soldier was dead, and was glad to be back safe, as I was afraid of the soldiers. The soldiers went all over the place searching for the Germans.

In the evening the ship *Katanga* (*Le Vengeur*) went off to the mission of Utinta, between Karema and Kirando, and occupied the place.

The ship *Katanga* took the name of *Vengeur*, because after having received damage from a German ship the Belgians repaired it, and then gave it the name of *Vengeur*, to mean that it wanted revenge.

The people of Karema, thinking that the need for porters was at an end, were well content. But fifteen days later the Belgians were searching for porters at Karema, but there were not many. Some of the women took children on their backs to show that they could not carry loads, having infants on their backs.

Several days before the arrival of the Belgians the Germans had beaten the Chief of Karema, Ressato Kaposo, who had then hidden himself in the fields. On the day after the arrival of the Belgians his friends went to look for him, and the Belgians restored him to his position.

The Belgian troops had for their doctor an Italian. I assisted him in looking after the sick. Before he left with a party of troops, Commandant Henenn arrived as Commander of the territory of Karema, with which were Utinta and Urwira, where the Belgians were in an entrenched camp.

Commandant Henenn appointed me doctor of the garrison at Karema, at 150 francs a month, which he intended to increase later if I was found satisfactory.

The house of the German sub-officer served as a hospital, which was increased by other buildings. I had two soldiers to assist me in treating the garrison, which consisted of over 100 black soldiers and three Belgian soldiers. Each month I made out a report on the garrison for the chief doctor at Kigoma. The extra work did not trouble me, for at that time my health was good.

I treated and wrote up the state of health of each sick soldier in the mornings, and in the evenings gave instruction in the Catholic religion to those who desired.

In the garrison in 1916, there were many cases of dysentery, as also in the mission. A black sergeant came with dysentery from the Belgian Congo and soon died. Another serious case in the garrison died in three days.

After the dysentery epidemic smallpox attacked both the garrison and the mission. The smallpox cases from the garrison were isolated at the tomb of Captain Raemakers, on the hill. He had died in 1882.

The position of his grave had been found, thanks to Felisiano Ismaili, who had been cook to Captain Storms, the last chief of the Anti-slavery Association at Karema, before he had handed it over to the White Fathers in the name of King Leopold. Later the Belgian soldiers built a memorial over the grave of Captain Raemakers on the hill.

In 1917 a soldier, angry with his corporal, fired a rifle at him. Fortunately there was no bone broken.

Another soldier perforated his intestine by some means, and after I had excised the portion of intestine which was pierced the man survived for ten days.

Several days before his death Dr. Lejeune, the second doctor of the Belgian territory, Dr. Trolli being the first, made a sanitary inspection of the

garrison and its dispensary. He took a liking to me, and seeing my work he several weeks later sent me to Kigoma to see the hospital there for white and black patients. The White Sisters worked in both hospitals. Dr. Dinart was second in charge of the hospital for whites and Dr. Lejeune was the chief doctor. The hospital for blacks was in charge of Dr. Brunel, who was also oculist and dentist, with a good reputation for treating the eyes. This was so great that patients from Bombay and Uganda came, especially for cataracts and other eye diseases.

The local administration there prohibited the making of beer. The police agent, a man of Ujiji, had the duty to supervise and to prevent the making of pombe, the native beer. But he was a drunkard, and used to go to cut wood so that he could there drink beer.

Several Indian merchants then came to live in Karema. These people were better dressed. Their married women had necklaces of pearls strung on many threads of different colours and sizes. The boys too were wearing pearls. It was the fashion.

The German money was withdrawn and replaced by Belgian money, the franc. The German money had consisted of circular pieces of zinc bearing the initials of each post. There were discs of zinc for a rupee, a half rupee, and a tenth of a rupee, which circulated only in the station. At times thieves tried to imitate the initials of the mission, but not very successfully because the mission had a seal of its own.

The first Belgian troops were of bad conduct, and these who had come from Baudouinville who caused disorders in the post were replaced by soldiers from the interior of the Belgian Congo, who were more disciplined. From these soldiers there remains here a dance, which consists of tapping the feet on the ground.

The soldiers had their own prison, separate from those people of the mission.

When the soldiers became fewer because the Germans had gone far from Karema, Commandant Henenn was replaced by a Lieutenant. For the good discipline that the Commandant had maintained at Karema he was esteemed and liked both by the garrison and by the civil population.

During the administration of Lieutenant Clairbois, Mr. Mercenier, a geologist, found the mica mine of Sibwesa, which was exploited by the Belgians.

There was a small garrison at Urwira. One of the Belgian sub-officers there, called Gournay, fell ill with smallpox.

Lieutenant Clairbois sent me there to treat him, and I saw the working of the mica mine.

It was during a voyage that Mr. Mercenier died. He was a true friend of the black man, and whilst on a voyage to Kigoma on the *Vengeur* he

wanted to get some fish for the natives with dynamite. Unfortunately he did not throw the dynamite in the lake quick enough. It exploded and blew him to pieces. He was wrapped in some cloth and the ship brought him to Karema. Monseigneur Lechaptois, who held him in high esteem, buried him.

In the time of Commandant Henenn there was at the military post a wireless telegraph worked by two Englishmen. This brought Karema into connection with the telegraph line from Rhodesia to Kigoma.

The military post had its own hospital, to which the sick from troops passing from Karema to go to the interior were admitted.

The Belgian military doctor of the troops in transit had confidence in me and I was put in charge of the patients.

One day two soldiers were brought who had been wounded by a leopard. One had a wound on the knee and the other both hands torn away. The former died of blood poisoning, but the other recovered and was able to be repatriated.

A short time afterwards I was granted leave to the native hospital at Kigoma, as I wished to visit the old soldiers of the garrison of Kigoma who were there. I found a number of them drinking the native beer called pombe.

Amongst them was a woman who professed to be a diviner. She said, 'I'll see if Adrien your doctor is a sorcerer'. She retired behind a curtain, and painted her face with kaolin, and then took in her hand a spear with four or five holes pierced in it, and painted this also with kaolin. She then came out from behind the curtain with the spear in her hand and began to speak in some language unknown to me, and partly also in Kimangala. Sometimes she spoke very quickly and sometimes very slowly.

I asked a soldier the reason. He replied that sometimes the spirits of a certain country spoke by this woman, and sometimes the spirits of another country.

I left the woman to continue her comedy, and went on speaking with the soldier for another half hour. At the end the woman was tired out and left the house without saying that I was a sorcerer.

When I left I could see that this woman had a strong attack of hysteria.

In 1916, following the taking of Karema by the Belgians on 19th August, a merchant came to Karema, and cloths were more plentiful so that the people dressed better, and illness from chills diminished.

DEATH OF MONSEIGNEUR LECHAPTOIS

In November 1917, Monseigneur the Apostolic Vicar was presiding over the council of missionaries. Father Avon, the Superior at Karema, noticed that his face was redder than usual, and proposed that he should take His Highness to his own room. As he was unable to walk he assisted him. On reaching his bed he asked him if he wished to receive the last sacraments.

He replied, yes, and that was the last word he spoke. He had a cerebral haemorrhage.

He lived on for a week in coma, and on 30th November passed away quietly. He was buried in the church, on the place where stood his *prie dieu*, where he had been used to read his breviary and recite the office daily.

The missionaries had sent me a letter to recall me to Karema, but by the time I had arrived he had been buried for several days.

Monseigneur Lechaptois was much mourned by the Christians, of whom he had baptized and confirmed so many.

I think, it was in 1919, that I made a voyage by boat to Baudouinvillie. There I saw a very unusual case. A man was sleeping covered by a mat which caught fire. The man, however, continued to sleep although not only his clothes but also the skin of his abdomen and his hands were severely burnt, and was still sleeping when his wife came back and saw him.

On hearing of this I went to see him, and as he continued to sleep even when I was attending him I thought that he must be dying.

I was unable to awaken him, but when the skin of his abdomen came away he awoke and said, "I cannot breathe easily".

Later he recovered, however, to my great surprise.

Before this I saw another case such as I had not seen before.

The sputum of a consumptive man was for several days phosphorescent.

When I was told of this I could not believe it, and thought that it must be the imagination of the natives. But the sputum was really phosphorescent. I put a little of it on a leaf, and it glowed like that of fireflies in the rainy season.

At that time there was in the dispensary some glycerophosphate of lime. I gave some to the patient, and after several days the phosphorescence disappeared entirely.

Another unusual case I saw. Two boys were playing together, and throwing stones. The younger but more sensible boy threw the stones behind him, but the other put them in his mouth and swallowed them. Several days later I was called to see this boy.

A certain number of stones were brought up after I had washed out his stomach. I counted 200 stones that he brought up.

On one occasion, during the British occupation, I was called to Kirando to see Brother Leopold, who had a swelling of the whole of his left leg. I made at least ten incisions through the skin, and gave injections of artificial serum. He recovered completely.

Snake bites are frequent. The natives treat them with local plants, which they put on the bites. But the application of pure ammonia is far superior to the native remedies. The application of the Belgian "Black Stone" is

superior even to ammonia. The Belgian stone absorbs the poison by a puncture made at the site of the bite.

A drop of blood is enough, after which one applies the Belgian black stone to the spot, leaving it in place until it falls off by itself. Even if the sick man is delirious he recovers, and feels the pain and inflammation to lessen after an hour. The stone should remain in place for two, four, or even six days, according to the amount of poison absorbed.

Once I did a Caesarian section operation, one hour's journey away from the hospital, on a woman just drowned, but found the child dead. At Kirando I also did a Caesarian operation on a woman who had died from malaria. The child was six months, but still alive. I baptized it, but it lived for only an hour.

In 1916, I did a successful amputation of a leg, on a woman whose leg bone was diseased.

A girl of 1½ years age fell and broke her thigh. I set the fracture and cured her. Now she is married and soon will be a mother.

I treated 25 or 26 cases of haematuria amongst the missionaries, of whom five died. Some of them had this disease four or five times.

"Eaters of earth" were at one time not uncommon. They used to eat especially kaolin. About 1938, a father of a family during his illness ate all the earth with which his house was plastered before he died.

On one occasion a woman, tired of life, tried to commit suicide by setting fire to her house, inside which she was sitting waiting to be burnt alive. I arrived before the flames had destroyed a great part of the house, and pulled her out alive. She lived on for many years.

About 1927, I was appointed to visit the steamer *Liamba* on its visits to Karema, to treat any patients on board.

On 24th December 1928, the Sultan Movamamolire sent for me about 5.30 in the evening. "I have called you", he said, "to baptize me as you did my predecessor the Sultan Kasagula. I wish to be baptized before I die". I gave him instructions and baptized him, and two days later he died content.

Describing his work in general, Adrien Atiman writes that wherever he went he carried about the little portable pharmacy brought from the coast to Karema by the missionaries, who had come, some on foot, and others on donkeys.

For nearly sixty years now Adrien Atiman has served his mission well.

In him the White Fathers have received full value for their rescue of him from slavery, and their foresight in having spared no expense or pains in educating him as a medical missionary to Africans.

When his labours come to an end he will have fully earned his rest, and his reward.

Dar es Salaam

By C. F. C. V. Cadiz

I WAS VERY interested to read in the June 1945 number of *Tanganyika Notes and Records* Mr. J. W. T. Allen's article on the origin of the name "Dar es Salaam", and the two letters which subsequently appeared in the *Tanganyika Standard* regarding its derivation. Since both the origin of the name and the circumstances surrounding the founding of the town are still the subject of conjecture, I feel the following facts should elucidate the matter.

Professor Coupland (now Sir Reginald Coupland) gives in his book, "The Exploitation of East Africa, 1856 to 1890", the authentic story of the events leading to the founding of our present capital and I shall in due course quote the text as it appears in the book. Before doing so, however, I think the following notes will help towards full appreciation of Professor Coupland's remarks.

First, it would be as well to consider Professor Coupland's sources of information. He quotes two, though there are possibly others. The first is contained in a private letter addressed by John Kirk (later Sir John Kirk of just fame) to his fiancée, Miss Cook, dated 18th October 1866. Kirk was at the time Assistant Surgeon to the Consular Agency in Zanzibar, having arrived just five months previously. The second is contained in an official despatch addressed to the Government of Bombay, dated 10th November 1866, by the Acting Consul at Zanzibar, G. E. Seward. It should be realized that in 1866 not only did British interests in Zanzibar predominate, but Britain was the driving power behind the abolition of the slave trade, and her Consular officers, Consul and Surgeon alike, were required not only to keep in the closest personal touch with the Sultan but with the affairs of his realm as well, and for this reason we cannot but accept as accurate their testimony of the events of the time.

Secondly, a brief account of the underlying forces that prompted Seyyid Majid to consider the building of a second home on the mainland would not be out of place since they serve as a background to his subsequent actions. To quote Coupland, "Majid however seems never to have felt secure in Zanzibar". Why this feeling of insecurity, this insecurity which prompted him to turn his eyes to the mainland? First consider the character of the man himself. He lacked all the attributes essential to a successful leader in the Arab world of his time: he is described as physically fragile and nervous. It is obvious too that he had little personality or strength of character and had it not been for British assistance, and on occasion very timely intervention, it is doubtful whether he would have kept his throne as long as he did.

From the beginning of his reign his position as Sultan of Zanzibar was insecure. Majid succeeded his father Seyyid Said as Sultan of Zanzibar in 1856. Said, a man of immense prestige and one of the foremost figures in the Arab world, decided, towards the end of his life, to divide his realm into two, nominating as his successors his son Thwain and Majid;* the former to have Muscat and the latter Zanzibar. Unfortunately it was not the custom of Arab rulers at that time to respect their parents' wishes, nor for that matter was there any reason why they should, since no established custom existed whereby a deceased ruler's wish should determine the succession. Anyway, be that as it may, Thwain's portion of the heritage was by far the less lucrative inheritance of the two and he, not unnaturally, quickly set about the undoing of the partition arbitrarily imposed by his father.

What followed is not within the scope of this article, suffice it to say that, as a result of British intervention, terminating with the arbitration award of Lord Canning, then Governor-General of India, Thwain's attempts at his own aggrandisement came to naught and Majid's throne became one step more secure.

Yet another brother, Barghash, who was later, in 1870, to succeed Majid, had from the outset designs on the Sultanship of Zanzibar. He had in fact attempted a *coup d' état* within a week or two of his father's death. This proved unsuccessful but it by no means damped his ardour and it was not long before he had enlisted the active support of France for his claim to the throne. Yet again, thanks to British intervention, the incident, which might well have assumed dramatic proportions since both British and French warships were anchored in the Zanzibar roadstead, was settled, and Barghash ordered to return to Muscat. Barghash, however, had other ideas and, collecting around him certain discontented elements, numerous in a town such as Zanzibar, fortified a house some six miles from the town and declared himself in open rebellion. Majid, despite a force of some five thousand under his command, formally appealed to the British Consul for assistance. Fortunately two British frigates, the *Assaye* and the *Lynx*, were lying at Zanzibar at the time and a naval party, one hundred and twelve strong with one twelve-pound gun, proceeded to march on Barghash's redoubt. They arrived to find that he had fled and had taken refuge in the town. He surrendered in due course and agreed to leave Zanzibar for ever. This he did, being taken to Bombay in the *Assaye*. Thus ended the third attempt on Majid's throne.

Finally, it should be realized that since Majid's accession the French had been persistently endeavouring to contest the ascendancy achieved by their British rivals in Zanzibar. This in itself could not but affect Majid's outlook

*Another authority, W. H. Ingrams, in his article on the History of Zanzibar published in the Handbook, *Zanzibar, an Account of its People, Industries and History*, states that Seyyid divided his empire into three. A third son, Turki, was to have Sohar, presumably part of his Oman Empire. This does not agree with Coupland who states the realm was divided in two.

on the security of his position. (Remember France had actively supported the claims of his rival Barghash.) Further, France and Britain were not the only two powers represented in Zanzibar. Both America and Germany had Consular officers, and one assumes that they too exercised due diligence in furthering the interests of their respective countries at Majid's Court. It is no wonder therefore that Majid, harassed by the demands of the various consulates, should seek a refuge, an "abode of peace", on the mainland; or, to put it more succinctly in Kirk's own words, "a place to retire to when Consuls troubled him or when he is kicked out of the island".

As has already been mentioned, all the above is in amplification of the passage from Professor Coupland's book, which reads:—

"For a few more years East Africa was still to be a field of controversy between the French and British Governments, but only in the matter of the slave trade. The Declaration had made it impossible to quarrel over territory, impossible for either party in existing circumstances to attempt the annexation of Zanzibar or the coastland. Thus Majid's throne and realm were now really safe. Majid himself, however, seems never to have felt secure at Zanzibar. In 1866, indeed, he attempted, in a curiously impulsive manner, to make himself another home. The site he chose was on the mainland, about forty-five miles south of Zanzibar, an attractive spot with a fine harbour and a good water supply. Building materials were shipped there at heavy cost and work begun, under Majid's personal supervision, on the erection of a palace, a fort, and quarters for resident officials. A powerful steam-tug was ordered from Hamburg to assist ships through the narrow inlet into the harbour. To attract a settled population gifts of land were offered to anyone who would undertake to cultivate it. New caravan routes radiating inland and a road along the coast northwards to Lamu and southwards to Kilwa were projected with a view to making the colony a great trading centre. Altogether it was an ambitious scheme of colonization, and the more interesting because it was an Arab scheme. But, apart from the cost, there was one insuperable difficulty. The supply of labour needed could not be maintained. In Zanzibar the slaves were imprisoned by the sea. On the northern section of the coast, at Mombasa for instance or Lamu, the inland tribes were, as G. E. Seward, Acting Consul at Zanzibar at the time, pointed out, 'more dangerous to the fugitive slave than his Arab masters'. But the country round about the projected colony was safer for runaways, and beyond it lay the area in which most of the slaves had been born and bred. In the ten days Majid spent on the spot, forty of them disappeared. But Majid made light of this and other difficulties. He brushed aside the opposition of the *Banyans* who disliked the idea of diverting trade from the ports at which their business had been long established. He would not listen to reflections on the climate of the place; he had some Arabs flogged who gave it a 'bad

character' for rain and fever. And the object of this unusual energy and eagerness on Majid's part was neither power nor wealth : no new settlement was needed to strengthen his rule on the coast or to increase its trade. The purpose of it all was revealed in the name he gave the place, Dar es Salaam, *the harbour of peace* : 'that is,' wrote John Kirk, whose long career at Zanzibar had just begun, 'a place to retire to when consuls trouble him or when he is kicked out of the island : for they (the Arabs) have an idea that soon they will be out'. 'Why they should think so', he added, 'I know not; for no power is desirous to possess it (Zanzibar) as things are'. As things were, Kirk was right. It was not in Majid's day that East Africa was threatened once more by European imperialism; and his successor, as it happened, was to keep Zanzibar and lose Dar es Salaam."

Native Authority Afforestation on Kilimanjaro

By R. R. Baldwin

SO MANY sad tales have been told of forest destruction in Tanganyika that it is a very great pleasure to me to have the chance of recording a very different kind of tale—a brief history of native forestry activities in the Chagga Forest Reserve on Kilimanjaro.

The Wachagga are domiciled on a strip of land running along the contour of Kilimanjaro and stretching roughly from the Kilelwa River in the north-east of the mountain to the Sanya River in the south-west. This tribal land varies in depth from a few hundred yards in some places to two or three miles in others. The important factor, however, is that their land for the greater part is hemmed in by the forest reserve above and alienated land below.

Since 1935 the Wachagga, under the guidance of Forest Officers assisted by Administrative Officers, have established tree plantations at various places on their own tribal lands. Plantations so established amount to 215·20 acres in all and are stocked with the quick-growing Black Wattle. It soon became evident, however, that if the Wachagga wished to continue with their afforestation activities, and on such a scale as would eventually make provision for the whole of the tribe's building and fuel requirements, they could not reasonably be expected to keep on giving up their own agricultural land for this purpose. Remember what has been said regarding their land being hemmed in. Then consider the fact that there are somewhere in the region of 40,000 tax-payers with their families living on this tribal land. Those families must have agricultural land earmarked for them against the time when the youngsters strike out for themselves. The question arose, therefore, how the Wachagga, with the best will in the world, could ever hope to establish a sufficiently large acreage of tree plantations to provide them with their full requirements of building poles, fuel and timber.

There was really only one answer. In August 1941, Government sanctioned a scheme which provided for the demarcation of a half-mile-deep strip on the lower limit of the Kilimanjaro Forest Reserve. This strip, stretching from the Kilelwa River to the Sanya River, and comprising approximately 21,660 acres, was to be made available to the Wachagga for their future forestry programmes. An interim working plan made provision for the planting of 200 acres of tree plantations annually. This programme, which also embraced soil protection and water conservation, aimed at the planting of fast-growing species for the first two or three years, and then a gradual switch over to indigenous and exotic species of finer quality.

The forest cover on the half-mile strip varies from high forest of poor quality to open scrub and bracken covered glades. In all areas the type of building poles required by the Wachagga are conspicuously lacking owing to heavy exploitation for free issues in the past. There is little useful timber, and what there is, is composed of poor quality camphor, *Rapanea*, *Albizzia*, and *Macaranga*.

Of the 21,660 acres in the strip, just over half is comprised of protection forest on steep slopes. Such protection areas will be left intact. A further 5,000 acres could possibly be improved silviculturally without recourse to actual clearing and planting operations, and operations in this case would consist mainly of thinning down second storey growth found to be dominant over seedlings and saplings of the finer timber species, the thinning and cleaning of camphor sucker and coppice growth, and the removal of old straggling trees in places where stands of the younger age classes are suppressed. This leaves roughly 5,000 acres for artificially established plantations which would provide more than enough forest produce to meet native requirements, and this brings us to the objects of the scheme.

The scheme was drawn up primarily with the object of creating an adequate supply of forest produce to meet the requirements of the Wachagga, and thus relieve the remaining area of Kilimanjaro Forest of the heavy drain on its resources. A planting programme based on the number of tax-payers in each chiefdom was adopted.

Before the scheme was really under way, many criticisms—not all of them very constructive—were levelled at it. False impressions were created by stories which, in the course of circulation, gained in sensational story value what they lost in veracity.

Demarcation of the half-mile strip was begun during the latter part of 1941, and areas for the first planting programme were prepared. By February 1942, the scheme was well under way and plantings which commenced in March of that year and ended in April totalled 326·63 acres. The 1943 programme was embarked upon and the same success was experienced. A total area of 186·5 acres was planted, and though this was a drop compared with the previous year's working, the explanation is that not by any means the same acreages of large open glades were immediately available, thus making preparatory work more difficult.

Up to this time, all work on the scheme other than that of forest guards and headmen had been done by free communal labour. This could obviously not go on indefinitely, as plantations require no small amount of labour expended on their maintenance, added to which, each new year's planting programme had to be got through. At the end of 1943 the Wachagga had raised 728·33 acres of tree plantations established by their own efforts, and it

then became very evident to all that this free communal labour could never cope satisfactorily with the rapidly growing snowball. The Chagga Council, a board composed of native chiefs, considered the matter, and decided to levy an annual forest rate of cents 50 per tax-payer. This rate, which brings in approximately £1,000 annually, enables the Forest Officer in charge of the scheme to employ picked men on monthly and daily rates of pay. This ensures steady forest squads comprised of men living close to the forest, who will, in course of time, become highly efficient forest workers. The forest rate was first levied in 1944, and the Wachagga forest workmen began to earn their livelihood through employment in the forest.

The 1944 and 1945 planting programmes showed the same success that had attended the efforts of the previous years, and a total of 420.75 acres was established during this period.

During the 1943-1945 period, however, a new aspect came into evidence. This was the collection of wattle bark from the older plantations established by the Wachagga prior to the commencement of the half-mile strip scheme. These older areas are clear-felled on reaching a stage commensurate with their dual capacity of supplying both good building poles and bark fit for sale as a tanning agent. Though, as already mentioned, the scheme provides for the planting of finer species on longer rotations, the twofold benefit derived from the wattle plantations has done much to foster the natives' enthusiasm for the scheme.

In case the reader is led to believe from the foregoing that the working of the scheme has been one, long, happy period of just honest-to-goodness toil without difficult snags cropping up, I must disabuse him of the idea. The recording of but a few will suffice to explain what I mean.

Firstly, by reason of shortage of staff, Forest Officers have to be moved round periodically. Up to date five different officers have been in charge of the scheme. This, as can be easily appreciated, might well have resulted in complete chaos had not those men each viewed the programme and the local native customs with quite the same understanding, or had all of them not shown the same keenness towards the scheme in general.

Secondly, during the first two years, many were the arguments to be settled in regard to the supply of free communal labour.

Another very sore point was raised on the question as to where each chiefdom's section of the half-mile strip should begin and end. Certain parochially-minded chiefs maintained that their tribal land boundaries should simply be extended into the strip. Had this suggestion been countenanced, certain small chiefdoms would have had extremely small areas of forest land in which to carry out their forestry programmes, and others, whose lands are not adjacent to the forest, would have had none at all.

One of the greatest difficulties at the beginning of the scheme was the lack of sufficiently trained men. Only two out of the great number of natives then employed were conversant with silvicultural work of any kind.

The financial aspect of the scheme is an interesting one, and I give what details are available to me, to prove—if further proof be necessary—that this native forestry scheme is a “going concern”.

Year	Expenditure	Details				£	Remarks
	£						
1942	...	247	...	Native staff	...	200	326.63 acres planted.
				Seed	...	47	Three nurseries made.
1943	...	377	...	Staff	...	217	186.5 acres planted.
				Nurserymen	...	70	Nurseries brought up to
				Silviculture	...	40	seven.
				Collection of bark	...	50	35.5 miles of boundary de-
							marcated.
							7 tons bark collected.
1944	...	1,050	...	Staff	...	240	190 acres planted.
				Nurserymen	...	120	Nurseries maintained.
				Silviculture	...	640	Demarcation completed.
				Collection of bark	...	50	First year of forest rate
							collection.
1945	...	1,007	...	Staff	...	96	230.75 acres planted.
				Nurserymen	...	411	Experimental plots planted
				Silviculture	...	400	and nurseries maintained.
				Collection of bark	...	50	
				Contingencies	...	50	
Totals...	2,681	...				2,681	933.88 acres.

Thus, the area of 215.20 acres originally planted on tribal lands, plus 933.88 acres planted in the half-mile forest strip, gives us the extremely satisfying total of 1,149.08 acres.

Species planted with success include various pines, Cedar, Japanese Camphor, *Podocarpus*, *Callitris*, *Cupressus macrocarpa* (*lusitanica*, *torulosa*, and *arizonica*), Eucalypts, *Pygeum*, *Acacia*, *melanoxydon*, and Black Wattle.

In conclusion I must add that recently I had the good fortune to be able to re-visit some of the areas which were the scenes of the initial endeavours. The results are pleasing indeed and have by far exceeded my early expectations. The snowball has grown—and is still growing!

Further Notes on Nesting Habits and the Breeding Seasons of Some Tanganyika Birds

By N. R. Fuggles-Couchman, B.Sc., M.B.O.U.

IN THE FIRST number of this Journal (1936), I published a paper on the nesting habits of some Tanganyika birds in the Eastern Province. Since that time I have travelled extensively in parts of the Tanga and Northern provinces of the Territory, meeting with several species unknown in the Eastern Province, and finding nests of others common to the three provinces. While the nesting habits of most of the species recorded in this paper are already known from elsewhere, the information is not always readily available to those interested in our birds, so I have thought it worth while to put together these further notes for their interest. The breeding season, judged from the condition of the gonads of specimens collected, is also given for a few species of which I have not yet found nests. A few of the records published here have been, or are being, included in joint papers with H. F. I. Elliott, which we hope to publish in the *Ibis*. As that publication is rarely seen by those who are not keenly interested in ornithology, it has been thought worth while to include those records in this paper, to increase the information locally available.

I believe that there are several residents in the Territory who are interested in the nesting habits of birds, and, among the younger generation, some who collect eggs. A word of warning and advice is, therefore, not out of place in this paper. It is almost valueless to collect eggs indiscriminately, unless the parent birds have been carefully identified themselves, and certainly identified as the owners of the nest. Presented with an egg, without nest or a very careful description of the parent birds, some qualified people might be able to make a fairly accurate guess as to the species. But closely allied species are so frequent in East Africa, and the differences between their eggs so slight, that few would like to do it. Thus, eggs taken from nests without such information are of no scientific value, and are little more than pretty, though pathetic, litter in the collector's cabinet.

This is not intended to discourage those who find pleasure in making egg collections, but is a plea for thorough field notes on the parent birds, let me repeat again, carefully identified with the nest, and notes on the nest itself, its materials, site, etc., and most particularly the exact number of eggs or young in the nest. Such notes add to the pleasure of collecting and to the scientific value of the collection.

There are still great gaps in our knowledge of the biology of African birds. One of these is the duration of the incubation and fledging periods of most

species. As it is not necessary to make prolonged observations at the nest this information is fairly easily obtained, and it is suggested that the collection of such data is of more interest and scientific value than a number of unidentifiable egg shells. Daily visits after the nest has been found, until the full clutch is laid, and then odd visits up to the tenth day (with small Passerines), are sufficient. After that daily visits are again necessary until the young have been hatched. Daily visits are then necessary from about ten days after hatching to discover the time when the young leave the nest.

OSTRICH (*Struthio camelus massaicus*)

I have yet to find a nest of this species but on the 23rd November I came on a family of two adults and ten small chicks, small, that is, compared with the parents. They were already the size of an African cockerel. They could have been only a very few days old. The chicks were extremely agile and most difficult to catch. In fact it was not until two of them lay down, with necks stretched out in front along the ground, that I was able to take one in my hands. Its plumage consisted of a thick covering of rather stiff filaments, very unlike feathers. These were mottled black and brown so that the whole made an excellent camouflage when the chicks lay close to the ground.

I have seen fresh eggs in late October, so that in the Northern Province the Ostrich appears to be a late dry season, or short rains breeder. Nests are said to contain up to thirty or forty eggs, laid by a number of hens. (Jackson, quoting Percival (1938)).

GREAT CRESTED GREBE (*Podiceps cristatus infuscatus*)

These handsome birds, very similar in appearance to the British race, are to be seen on most fresh-water lakes of any size in the Northern Province. They are fairly numerous on Lake Duluti, near Arusha, and very plentiful on Lake Tlawi at Mbulu. On the 4th March a bird was sitting on a nest on Lake Duluti. It was unfortunately impossible to inspect the nest closely as it was some thirty yards offshore. The nest was in open water, surrounded by a few lily plants. Through glasses it appeared to be made of a muddy mass of rotting vegetation. Five yards away the cock bird was floating on the water with his head tucked down to his breast. Jackson (1938) gives the clutch as three to five eggs, which are "white with a bluish tinge when laid, but become discoloured".

HAMMER-HEAD STORK (*Scopus umbretta bannermani*)

This easily identified bird, uniform dark brown with a large tuft of feathers projecting backwards from the crown, builds a great domed nest of sticks and dry grass leaves and other vegetable matter. It is generally placed in the

fork of a large tree, such as an *Albizzia*, and usually in close proximity to water. There is a single round side-entrance. Several native legends are recorded about this bird, one being that, as it is the King of Birds, other birds build its nest for it. If, on taking over the nest, it fails to "hole out in one" through the side entrance, the nest is abandoned!

Nest building was watched on the 9th December in a large *Albizzia* next to another which contained two old nests. The new nest, when found, consisted of a large, thick platform of sticks and vegetation, and the birds were collecting dead weeds and other dead vegetation in a nearby arable field. The nest was quite inaccessible, so that no records were obtained of the eggs, but Jackson describes them as white with a slight gloss and almost regular ovals, measuring 41-43 x 34-35mm.

WHITE-BACKED VULTURE (*Pseudogyps africanus*)

The open plains of the Northern Province, with their great game population, are a favourite foraging ground for all our vultures. A nest of this species was found on the 8th June in the top of a large umbrella *Acacia* near Monduli. The nest was a large platform of sticks lined with grass. In it was one young bird covered with white down and having a grey bill. Dr. Granvik (quoted by Jackson) has recorded the clutch to be one egg which is white with large and small greyish yellow blotches, with here and there large blood-coloured blotches.

AFRICAN QUAIL (*Coturnix africana africana*) AND HARLEQUIN QUAIL (*Coturnix delegorguei*)

In May 1944, the great Arday Plains, then cultivated and under wheat, contained large numbers of these closely allied Quails. Their chirruped call "wit wit, wit twit twit" could be heard constantly. A male Harlequin, shot on the 7th May, was in full breeding condition, but no nests were found until 26th June, after several coveys of young chicks had already been recorded. The nest, a shallow cup in the ground, lined with dead leaves of "Listening Willie" (*Commelina benghalensis*) and placed in and under a clump of that weed, belonged to an African Quail. There were six eggs, creamy white to very pale olive in ground colour; one egg was spotted with black, the other five were marked with large blotches of dull olive brown, confluent in many cases. They measured 31 x 24mm.

On the same day another nest was found in a wheat field, lined with dry "rusted" leaves of wheat. That contained seven hatched egg-shells, of the same type as those described. The latter hatched the day after I found the nest and the young had already left the nest. In a year of good rains, such as 1944, the end of June is probably the end of the nesting season.

The Quail seem to drop their eggs in a somewhat haphazard manner, like the Sandgrouse, for on the same day on which the nest with eggs was found, three other eggs were picked up lying in the weeds some ten yards away, but with no signs of a nest. Another single egg, believed to be a Harlequin Quail's, was found lying in a wheat field, again with no apparent nest. This last measured 30×23 mm.

YELLOW-THROATED SANDGROUSE (*Pterocles gutturalis saturator*)

In areas of better rainfall this species is the commonest of the three Sandgrouse found in the Northern Province. On the Ardai great packs spend most of the day on the arable, or in the young wheat in April and May. As soon as a field has been drilled they come in hundreds to pick up any grain which has not been covered. In late May and June, the packs split up into breeding pairs and only congregate in the morning and evening when they go to water.

A nest was found on the 7th July on the Ardai, placed in a small hollow in rather open *Themeda* grassland. There was a very sketchy lining to the nest, of broken pieces of dry leaves. The nest, from which the female was flushed, contained two eggs, measuring 47×37 mm. and 44×37 mm. The ground colour was buff, very slightly tinged greenish, sparsely and faintly scribbled and blotched with olive brown and greyish mauve. Later in the day two more eggs of the same type were picked up separately on an arable field, and not, as far as I could judge, from nests. These measured 44×35 mm. and 44×34 mm. They were of the same colour pattern as those described, but much more heavily marked.

In the dry year 1943, young chicks of this species were seen in late August and early September on the Ardai. This would indicate a later breeding season than that in the wetter year 1944.

LAUGHING DOVE (*Stigmatopelia senegalensis aequatorialis*)

This Dove is a resident of the drier, thorn scrub areas of the Territory, and can be distinguished from the other grey Doves by having no black collar on the back of the neck. It is common along the Great North Road west of Arusha in the *Commiphora-Balanites* scattered-trees grassland. Two nests were found on the 22nd June each placed quite low down, four to five feet from the ground, in small *Commiphora* trees. The nest is, in common with most of the Pigeon family, a very flimsy platform of a few small twigs criss-crossed, and placed in the fork of a branch. One nest contained two plain white eggs, the other two almost fully fledged young birds.

RED-BELLIED PARROT (*Poicephalus rufiventris rufiventris*)

Comparatively little is known of the breeding biology of the Parrots and Lovebirds. All I can offer is a record of this species at a nest hole in a Baobab tree, in dry thorn scrub near Gonja, Same District, on the 24th July. The bird entered the hole twice, once staying within for five minutes. I was unable

to decide whether the bird was building or feeding young. December is given by Jackson as the nesting season in Kenya for a closely allied Parrot to which the habits of the Red-bellied Parrot are said to be similar.

WHITE-EARED BARBET (*Buccanodon leucotis kilimense*)

This Barbet is a bird of well-wooded upland country, of forest and forest fringes. In the remnants of the *Albizzia* intermediate forests on Meru it is a common bird. A pair were feeding young on the 13th December in a hole in a *Grevillea* tree in a coffee plantation on the outskirts of Arusha. The nest hole was some thirty feet from the ground. While the parents were away from the nest the young birds kept up a constant rather shrill twittering, and one or two kept their heads at the entrance to the nest.

SPECKLY MOUSEBIRD (*Colius striatus* subsp.)

These common birds are to be found in most areas of Tanganyika Territory but, in spite of their commonness, I have found only two nests. One was at Msasani, near Dar es Salaam, the other near Morogoro, both in June. That at Msasani was placed about fifteen feet from the ground in a *Euphorbia* on the edge of a thicket. The nest was a bulk platform on grass and small twigs with only a shallow cup in which were two chalky white eggs. It was so untidy that at first I took it to be an old nest. The other was very much smaller and was only five feet from the ground, in a small shrub amongst tall grasses; it also contained two eggs.

BROADBILL (*Smithornis capensis* subsp.)

The Broadbill is a local bird, nowhere common. It is a bird of thicket and evergreen forest, and widely distributed, for it is found in the coastal forest thicket of the Pugu Hills, in scattered thicket near Morogoro and in the forests of Kilimanjaro, those on the south of Olosirwa and elsewhere. A male shot in the forests on the southern flanks of Olosirwa, at Mbulumbulu, was in full breeding condition on the 18th November. At that time several were heard in the forest making their curious "klaxon" call.

REDWING LARK (*Mirafrja africana athi*)

This is the common, large Lark of the open plains of the Northern Province, but only where the grass is rough and tufty, with scattered patches of short grass or bare land in between.

A nest was found on the Ardai in a wheat field, placed in a hollow in the ground, between two rows of wheat. There was a lining of a few dry wheat leaves and some inflorescences of *Chloris* sp. The two eggs had a very pale bluish white ground, with spots and blotches of very dark brown, deep violet and light brown, with a few undermarkings of very pale violet blotches. They measured 25 x 16mm.

BROWN-NAPED LARK (*Tephrocorys cinerea anderssoni*)

A male of this somewhat local Lark was in breeding condition on the 8th May. The Brown-naped Lark occurs in the Northern grassland areas where the grass cover is more sparse and was found to be the commonest resident Lark in the Crater Highlands, where there are great areas of short turf.

A fledgling which had left the nest, but still could not fly, was found on the 3rd May, in a field of young wheat in the Engare-Nairobi area. It was identified by the parents which hovered near me, making anxious chirrups while I examined the small bird.

RICHARD'S PIPIT (*Anthus richardi lacuum*)

This is a very widely distributed Pipit, ranging from sea level to at least 8,600 feet. It is more catholic in its choice of grassland, but seems to prefer good cover like the Red-winged Lark.

Three nests have been found, one in March and two in April. Two were in grassland with scattered tufted grasses, in each case placed close up against small herbs and in their shadow. The third was in a bare arable field, placed under a tuft of ploughed-up stubble. In such cases the nest was in such a position that it was sheltered from the midday and afternoon sun.

The nest is a deep cup with rather more material built into it than is the case with most ground-nesting birds. It is made from dry grasses and rootlets, lined with finer rootlets, and in some cases with black hairs, probably from cattle. Two nests contained three eggs, the other only two. In each case the sitting bird was flushed from the nest, and identified sometime later by returning to the nest.

Eggs from one nest measured 18×14 to 15mm. There is some variation in their colouring; the ground colour may be a dirty white, greeny or stone-grey. The markings are generally plentiful, of spots and blotches of grey and sepia, with scribbings of sepia in some cases. Two eggs were also under-marked with a few pale mauve blotches.

LITTLE GREY FLYCATCHER (*Alseonax adustus murinus*)

This species is really a highland bird, but has been recorded from as low as 2,800 feet in Moshi Township, and is known from the eastern and northern highland areas of the Territory.

A nest was found on the 24th January in Embagai Crater in the Crater highlands. Had the bird not been flushed from the nest it is unlikely that the nest would have been examined, as it had every appearance of being an

old one. It was a floppy old cup of tendrils and leaf stalks, with some lichen and dead leaves on the outside. The lining was of white vegetable down. The nest was slung at one side from a branch of a fork of a giant *Leonotis*, seven feet from the ground, and not set in the fork itself. There were two eggs of a pale greenish-blue ground, marked with rather small blotches of very pale sienna. They measured 17×12 mm.

BLACK FLYCATCHER (*Melaenornis pammelaina tropicalis*)

There are two common birds of the *Brachystegia* (Miombo) woodlands in the Eastern Province which are easily confused. They are this species and the Fork-tailed Drongo, both entirely black and of much the same size. The fork-tail of the Drongo is a certain distinguishing characteristic in the field, as that of the Flycatcher is square. The Flycatcher is also less glossy.

A nest was found on the 13th November at Kingolwira in Morogoro District, in a hole in a dead stump, twelve feet from the ground. There was one egg, greenish white in ground colour covered heavily with small spots and blotches of reddish-brown and slate.

MOUNTAIN CHAT (*Pinarochroa sordida* subsp.)

This Chat, known from Kilimanjaro, Meru and other high mountains in East Africa, was found by H. F. I. Elliott in the Crater highlands in July 1944. When we visited that area in January 1945, we saw a lot of this species and were fortunate enough to find a nest. It is a species of very localized distribution, but plentiful in its limited habitat, the high grasslands and moorlands of the mountains, above 8,400 feet.

The nest was placed two feet from the ground near the top, and in the heart of a great tuft of *Eleusine jaegeri*, the tussock grass, three to four feet high, which covers much of the Crater highlands. It was a deep cup of grass stems and rootlets, sparsely lined with feathers, one apparently from a Flamingo. From the cup to the outside of the tuft there was a platform of dried *Eleusine* leaves. The two young birds had their eyes just open and were covered with grey down. Long searches were made for other nests of the species, but none was found, and from the condition of the gonads of specimens collected, the main breeding season would appear to be rather earlier.

TICKING CISTICOLA (*Cisticola juncidis perennia*)

There are several small *Cisticola* in the Territory and two or three are usually found together in the same habitat. As they are very alike in appearance it is only possible to identify them certainly in the field by their characteristic song, and display flights. This species has been recorded on Mafia, once from the mainland at Dar es Salaam, and frequently in the open

plains of the Northern Province. In the last it occurs with the "Desert" *Cisticola* and one of the "Cloud-Scrapers", both mentioned below. From them it can be distinguished in song and flight. When flushed it flies off quite near the ground, making a rather slow "ticking" call, the "ticks" spaced at intervals of approximately one second. It may fly up fairly high when only the ticking can be heard, but its flight is regular and the bird flies round in circles. The Desert *Cisticola* has a very similar note, but it is uttered much more quickly and the flight is more erratic with several dips, and some wing-snapping both as it rises from and descends to the ground. The Cloudscraper utters a very rapid metallic "chinking", flies up very high, where it circles, calling constantly, and then closes its wings and dives to the ground. It also has a distinctly short tail, which is noticeable in flight, and is rather more heavily and richly marked on the back.

A nest of the ticking *Cisticola* was found on Mafia on the 21st May in a clump of grass (*Chloris*, sp.) some nine inches from the ground. This species makes a very characteristic nest which Lynes (1930), described as of "soda water bottle type". The entrance is at the top of the nest which is a roofless purse, narrower at the top than the bottom. It is made by binding together grass blades with cobwebs and plant material, and is well lined with plant down. Three to four eggs form a clutch and the four found on Mafia were pale blue, finely spotted with dark reddish brown with a few greyish under-markings.

TANGANYIKA DESERT CISTICOLA (*Cisticola aridula tanganyika*)

This is the commonest small *Cisticola* in the drier open plains of the Northern Province, and occurs in Morogoro District, north of the Central Line. It nests towards the end of the long rains, in May. Two nests have been found, on the 7th May and 20th May. The nest is placed nine inches to a foot from the ground in a tuft of *Pennisetum mazianum*, or other tufted grass. It is a fairly large ball, for the size of the bird, with a side opening near the top, which is also quite large. Dry grass leaves are woven to form the ball and there is a thin lining of fine grass inflorescences, or the "feathery" inflorescence of *Pennisetum stramineum*. The nests found contained a clutch of two and one of three eggs, which have a white or very pale blue ground, lightly and finely spotted with brown.

BROWN CISTICOLA (*Cisticola brunnescens hindii*)

This species, originally known in Tanganyika only from the Masai Steppe west of Kilimanjaro, has recently been shown to be fairly widespread in Northern Tanganyika, where I have collected it at Engare-Nairobi, on the western flanks of Kilimanjaro, at Ol Donyo Sambu, on the western flanks of Meru, on the Ardai, west of Arusha, as well as in the Crater highlands. Since then I have found it widely distributed in the drier grasslands, but nowhere common.

The nesting season and nest are similar to those of the desert *Cisticola*, but the nest is generally placed in a small shrub or herb in or by a clump of tufted grasses. The eggs, three in a clutch, are white closely spotted with fine red spots. The nesting season in the highlands may be earlier, as one shot on the 24th January was coming into breeding condition.

HIGHLANDS GRASS-WARBLER (*Cisticola hunteri prinioides*)

This species is essentially a montane form, common on Kilimanjaro and Meru above 5,000 feet, and very common in the Crater highlands. It has an unmistakable and unique song, a duet in which one bird sings "whirdle whirdle whirdle" while the other interpolates a rather higher "eee" between each "whirdle".

On the 27th January, specimens obtained in the Crater highlands at 11,000 feet had enlarged gonads. Lynes (1930), describes the nest as of ball type, set eighteen to twenty-seven inches from the ground, in a rich growth of sedges, grass or soft-leaved herbs about three feet high. The eggs have not been satisfactorily described.

ROUGH-WING SWALLOW (*Psalidoprocne holomelaena massaca*)

This all-black Swallow is a widespread species found most commonly in highland areas in and around evergreen forest. But it has been collected in *Acacia pallens* woodland, at 1,700 feet in Morogoro and was common around Morogoro itself.

Birds were constantly visiting a nesthole in the three-foot high bank of a furrow in the forest at Mbulumbulu (thirty miles east of Oldeani), on the 2nd December. Moreau (1940), has given a very full account of the breeding biology of this species.

PIED CROW (*Corvus albus*)

A nest of the Pied Crow was found on the 23rd October, at Msongozi, Morogoro. It was built into one of the top forks of a tree some thirty feet from the ground. Twigs were loosely made into a platform and cup, the cup lined first with circles and crisscrosses of wild vines. Inside this was a layer of bits of paper and rags, on top of which was a thick layer of goats' hair and wool mixed with pieces of maize leaves and broad-leaved grasses. The inside was finished with more goats' hair, feathers, pieces of red, white and black rags, and a quantity of human hair—thin narrow plaits cut during the hair-dressing of native women. There were four eggs, pale greenish blue in colour, longitudinally lightly streaked with pale olive, with a few scattered small black spots, mainly at the larger end.

KENRICK'S STARLING (*Stilbopsar kenricki*)

Until recently this species was known in Tanganyika Territory only from Kilimanjaro and the Usambaras, but it has now been shown to occur on Meru (Couchman and Elliott in press). It is an evergreen forest bird which

sometimes ranges some miles from the forest to feed on fig trees when in fruit. Nothing has been recorded of the nesting habits of this species and I can add little that is definite.

In April a pair of birds were seen constantly entering a hole in a large *Albizia* in our garden near Arusha. I believe that they were feeding young. In October in the same year a pair were carrying nesting material to a hole in another *Albizia* in the same garden, but no nesting took place. A male shot on the 12th September in the same place had enlarging gonads, and at the same time four birds were playing round the first nesthole, but unfortunately I was away for two months after that and do not know if nesting took place.

WHITE-EYE (*Zosterops euryricotus*)

The little green White-eyes are widely distributed in and around the mountain forests, several races having been described from Tanganyika Territory. In January a nest of this species was slung from near the top of a branch of an exotic *Acacia* planted near the Sawmills above Arusha, some four hundred yards from the forest edge. The nest was five feet from the ground, a deep cup of rootlets, a little moss and some unidentified white vegetable threads: the small bird was almost completely hidden in the nest, so that only the top of its head could be seen. The two eggs, rather rounded at each end, were a rather deep, unspotted, blue.

TACAZZE SUNBIRD (*Nectarinia tacazze*)

The Tacazze Sunbird is a rather rare montane sunbird belonging to the long-tailed group. Elliott and I found a nest on the 23rd January during our visit to the Crater highlands. It was built near the tip of a small branch hanging over a pool. The large domed nest was woven from grasses and vegetable down, with pieces of dry slender twigs and dead leaves stuck on the outside. The lining was a thick layer of the *pappi* of the seed of some composite, with one or two feathers. There was a small porch to the fairly large side entrance, which was near the top of the nest. The one egg—the normal clutch of *Nectarinia* spp.—was olive in ground colour, heavily blotched and spotted with olive-brown. It measured $20\frac{1}{2} \times 14$ mm.

JOHNSTON'S SUNBIRD (*Nectarinia johnstoni*)

This is a very rare and local species found in Tanganyika only in the moorlands of Kilimanjaro, Meru and Olosirwa. It was only recently discovered by H. F. I. Elliott on Olosirwa during our visit to the Crater highlands. A female shot on the 27th January, had a fully formed egg in the oviduct, measuring 19×12 mm. No nests were found on this occasion but Elliott tells me that he found a nest in the top of a giant *Senecio* on Kilimanjaro in late December.

GOLDEN SUNBIRD (*Drepanorhynchus reichenowi*)

At the time of our visit to the Crater highlands this beautiful species was coming into breeding and on the 2nd February several nests were found. The Golden Sunbird is another montane form, found near the edge of forest in mountain bush from 5,900 feet to 9,000 feet.

The nest is a fairly large purse slung from the top of a large *Leonotis*, or placed in the head of a *Vernonia* or other tall, shrubby plant, six to twelve feet from the ground. Those found in the Crater highlands were woven almost exclusively from the inflorescence stalks of the climbing *Thalictrum*, stalks with three or four slender stems radiating from the top, like the skeleton of a raised umbrella. A little dry grass was also used with these stalks. The nests were well lined with white vegetable down, some of which was also worked into the outside of the nest near the apex. There was no porch over the entrance, which was at the side and towards the top of the nest.

A single egg forms the clutch. Those found were stone-white in colour, blotched solidly at the larger end, and more sparsely over the rest of the egg, with pale sepia.

RED-CHESTED SUNBIRD (*Chalcomitra senegalensis lamperti*)

The nesting of a closely allied race, *gutturalis*, was described in my previous paper. Moreau (1942), has collected together records of the nesting of African birds in association with other living things and mentions this species as one which appears to nest unnecessarily close to European houses. The following account describes the successful raising of a young bird in a house.

Our house in Moshi had a small entrance verandah, partially closed from the outside by loosely growing creepers, with an unobstructed wide entrance in the centre. This had no door and was always open. On to the verandah opened three doors, from sitting-room, dining-room and children's bedroom, while all entrances to the house were made through the verandah. In the centre there was an electric light hanging by flex from the ceiling and shaded by a medium-sized, deep, round lampshade, which was open at top and bottom.

On 5th September, I noticed a pair of these Sunbirds prospecting the lampshade. By 11th September bits of string and plant fibres had been attached to the flex above the lampshade holder. Further fibrous material was woven into this, and increasing inside the shade to form a horizontal hollow cone. Between 12.30 and 2.00 p.m. one day the female made several visits with material, alighting on the flex and then flying in under the shade at the bottom. There was a pause in nest-building between 13th and 16th September, but on the 17th September the female was seen to make fifteen visits to the nest in half an hour, only four of those without material. The

male appeared to give no help in nest-building, generally flitting around from the creepers to a tree outside, or occasionally to the flex. When the female left he would sometimes give chase, both of them making an excited chittering. Every time the female arrived or left she did so with a sharp "chirit". Nest material now festooned two adjacent wires of the lampshade support.

I was away until 1st October and on my return I found a completed nest slung from the crosswires supporting the shade, between the bulb and the lampshade. There was one egg on the 3rd October, which hatched on the 12th or 13th October. As I do not know which day the egg was laid the incubation period cannot be given. Most of the feeding of the young bird was done by the female, although the male was generally nearby in the creepers, and did visit the nest on a few occasions. Six days after the chick had hatched the female visited the nest three times in nineteen minutes, between 1.45 and 2.10 p.m. Later we had notes of visits at rather longer intervals. By the 23rd October the young bird constantly had its head out of the nest and on the 25th October it climbed out on the edge of the entrance. The parents were very active at that time, flying in and out of the nest to a pram handle a few feet away. Eventually, on the 25th October the young bird flew and the family took to the garden. From these notes the fledging period was $12\frac{1}{2} \pm 1$ days.

The nest was closely examined after the young bird had flown. It consisted of an outer shell of interwoven vegetable fibre, small pieces of string, with a little pale yellow vegetable floss in the attachment to the crosswires. A number of skeletal leaves were used in the bottom of the shell and were stuck here and there on the outside of the nest. The inside was entirely lined with kapok, a little of which was also placed at the sides of the entrance. A few grass inflorescences were twined round the entrance making it rather firmer than the rest of the nest, while also forming a small, straggly porch.

It is remarkable that the female did not desert the nest. On one occasion the lamp was left burning for an hour and when we remembered the bird we found her with her head poked out of the entrance, bill wide open. On other occasions the light was frequently used, while there was always a lot of noise under the nest due to the children's playing. On the contrary, the birds appeared to have liked our hospitality so much that they built another nest in a similar position in the sitting room, gaining access through a small top window left open for them. That nest, however, was deserted without any egg-laying.

In June 1945, the late S. R. Marlow showed me an almost completed nest of the coastal race of this species, which had been built in a similar position, in the bathroom of his house in Dar es Salaam.

I must acknowledge my wife's assistance in obtaining much of the data recorded above, as I was absent on safari much of that time, and without her notes, could not have given this account.

GREY-CAPPED SOCIAL WEAVER (*Pseudonigrita arnaudi arnaudi*)

This little Social Weaver is confined to the dry thorn steppe of the northern part of the Northern Province around Engare-Nairobi and Longido. It is gregarious and several nests are built on a single small *Acacia* or *Gall* *Acacia* tree. Nest building was in progress on the 8th March, near Engare-Nairobi where several new nests were found, some fifteen feet from the ground, suspended from the tips of branches of a group of small *Acacias*. The nest is an untidy ball of dry grasses, and during building it has two entrances opposite one another, at the bottom. Before egg-laying takes place one of the entrances is blocked up. The unfinished nests are said to be used for roosting.

CHESTNUT SPARROW (*Sorella emini*beys)

H. F. I. Elliott discovered this small Sparrow in the Monduli area, extending its range in Tanganyika Territory well to the east, from the Lake area where it is common, and to the south from Magadi Lake. It is fairly plentiful in the *Balanites-Commiphora*-*Gall* *Acacia* scattered-trees grass-land ten to twenty miles west of Arusha. Both during the breeding and non-breeding seasons it is gregarious, foraging in flocks of twenty to thirty birds, and sometimes even more.

The breeding season is rather late for the seed-eating weaver family, newly occupied nests being found on the 27th June. This Sparrow freely makes use of the nests of several Weavers (*Ploceus* spp.) including those of the Chestnut, Cabanis and Speke's Weaver, as well as building its own nests. (cf. van Someren, 1945). A colony had started laying eggs in old nests of the Chestnut Weaver in a *Balanites* tree on the Ardai, while the Weavers were still feeding young in the nests at the top of the tree. When the nests are taken over they are lined by the Sparrows with a considerable quantity of fine grass inflorescences and some feathers. Nests built by the Sparrows are rather large, untidy balls of dry grasses, with a small porch over the side entrance. One found on the 1st July was in the top of a small *Gall* *Acacia*, eight feet from the ground.

The eggs show some variation and are rather large for the size of the bird. Three clutches of three, and one of four eggs were found on the 27th June and 1st July. The ground colour is a pale greeny-blue to almost creamy-white. Markings on the white eggs are sparse spots and many blotches of pale olive-brown, while those on dark eggs are heavier blotches of pale and dark olive-brown. Sixteen eggs averaged 19×14 mm.

RED-TAILED WEAVER (*Histurgops ruficauda*)

Tabora is the type locality of this Weaver but during recent years Moreau found it at Karatu, Mbulu District, Elliott found it common to the north-west of Oldeani Mountain, and I have recorded it as locally frequent about twenty miles west of Arusha, in the Monduli-Leshaine-Ardai area. It is a bird of *Balanites-Commiphora*-Gall Acacia scattered-trees grassland. It is rather a large bird, about the size of a Song Thrush, easily identified by its uniform drab colour and rufous tail.

Nests found on the 28th June were placed two or three together in small Gall Acacias, forming a somewhat dispersed colony. They were not more than eight feet from the ground, and often only five feet. The nest is a large ball, made of grasses of the following species: *Pennisetum mezianum*, *P. Stramineum*, with some *Urochloa* and *Sporobolus*. It has a large side entrance with a spout four inches in diameter and length. A few feathers are used for lining. The breeding season was nearly over, one nest containing two half-fledged birds, two others one fully fledged bird each.

BUFFALO WEAVER (*Bubalornis albirostris intermedius*)

This is another species of rather dry scattered-trees grassland and thorn scrub, found in the country to the north of the Pare Mountains, and to the west of Kilimanjaro and Meru. A big nesting colony was found thirteen miles west of Arusha in rather open *Balanites-Commiphora* grassland. The colony covered about two acres and each *Balanites* tree contained several nests. These were placed towards the end of the branches, held in place by the thorny twigs.

The nest is a large and untidy, rather elongated mass of stems of two grasses—*Pennisetum mazianum* and *Cynodon plectostachyon* with several pieces of twigs of Gall Acacia, with a chamber well lined with inflorescences of fine grasses. The entrance is three inches in diameter and placed at one end. The nest examined contained two almost fully fledged young on the 24th April.

REICHENOW'S WEAVER (*Ploceus reichenowi*)

This Weaver is confined to the Usambaras and northern parts of the Territory, being particularly plentiful in mountain bush and well wooded areas above 4,500 feet. It is also common around Moshi, in *Combretum* bush.

On the 2nd February, nests of this species were being built on the tips of branches of a large *Crotolaria* in the mountain bush of the Crater highlands. The nests were large and untidy balls, mainly made from grass inflorescences, and hung eight feet from the ground. No eggs were found. Jackson, quoting

van Someren, says that never more than two pairs nest in the same tree, and where more nests are found, the others are either old or spurious nests built by the male.

SPEKE'S WEAVER (*Ploceus spekei*)

In Arusha, around Monduli and in the Masai steppe, this Weaver is plentiful, though somewhat local. In common with most *Ploceus* spp. it is gregarious, and nests both in the short rains and about the middle of the long rains. On the 28th April, a colony was found in a small solitary *Balanites* tree on the Ardai Plains. The nests were as low as five feet from the ground. In Arusha, before the Eucalyptus trees were cut down to make room for the electric power line, this Weaver used to nest in the trees, and nests were then thirty to forty feet from the ground.

Some eighty nests had been built in the *Balanites* tree. They were rather large, loosely woven grass balls, made from the inflorescence stalks of *Pennisetum mezianum*, the rounded flower heads decorating the outside of the nests, with some *Cynodon*, *Themeda* and *Eustachys* grasses interwoven. There was a short, downward pointing spout, at one side, rather narrow at the entrance. The nests were lined with fine grasses. Two clutches of four, and an incomplete clutch of two eggs, were found. The eggs were deep unspotted blue, somewhat pointed at both ends, and measured 24—26 x 15—17mm.

CHESTNUT WEAVER (*Ploceus rubiginosus rubiginosus*)

I have found this species less common than the foregoing, and it is more particularly a bird of rather dry scattered-trees grassland and thorn bush, confined to the northern part of the Territory.

The nests are built in colonies in *Balanites* trees. One such colony was found on the Ardai, on the 27th June, toward the end of the breeding season. The nests were bulky balls of grass, six inches by six inches, firmly woven to the spines at the tips of branches. They were rather untidy, with a bottom entrance and only a very slight spout. *Eurochloa nubica* formed the greater part of the nest, but small dry heads of wheat, with some *Pennisetum stramineum* and *P. mezianum*, as well as *Themeda triandra* were also used. Under the tree were many half-shells of the eggs, a deep unspotted blue like those of *P. spekei*, but only young were found in the nests.

VITELLINE WEAVER (*Ploceus vitellinus uluensis*)

This is one of three species of Weaver very similar in appearance, the others being *P. intermedius* and *P. spekei*. The iris of this species is orange or red, those of the others white or yellow. The male has only a narrow band of black in the front of the crown, whereas *P. intermedius* has half the crown

black, and *P. spekei* has no black on the crown at all. It is much less common than the other two species and I have seen it only once, in the Rift Valley near Engaruka.

The nest can readily be differentiated from those of *P. intermedius* and *P. spekei*, as it has no entrance spout. A solitary nest was found on the 3rd February, in a small isolated thorn bush in the dry country near Engaruka. It was suspended from the tip of a twig, six feet from the ground, a grass ball woven from broad, green grass leaves. The entrance was below the nest. There were two eggs, turquoise blue, spotted and blotched boldly with sepia. They measured 20×14 mm.

GOLDEN-BACK WEAVER (*Ploceus jacksoni*)

In my previous paper, I recorded the nesting of this species in riverside reeds. Around Arusha, it also nests in colonies in trees, and not always in close proximity to water. This different habit is probably due to the lack of suitable riverside vegetation in and around Arusha, where rivers flow through gallery forest or between banks covered with shrubs or short turf.

ZANZIBAR RED BISHOP-BIRD (*Euplectes nigroventris nigroventris*)

This little Bishop-bird is common in the coastal areas of the Territory around Dar es Salaam, Tanga and Morogoro. It is territorial during its breeding season, in common with the Fire-crowned Bishop. Its breeding habits have been fully described elsewhere (Fuggles-Couchman, 1943), but a short note is given here.

Round Morogoro, the nesting season is during April and May, running into early June. This species does not seem to need such tall, strong grasses in which to build its nests as does the Fire-crowned Bishop. The slender stems of *Panicum maximum* or small shrubby *Vernonia* plants, rarely more than three feet high, are commonly used. The nest of this species is generally rather smaller and more purse-like than that of the larger bird (described in my previous paper), and has a smaller porch. The eggs are very similar to those of the Fire-crowned Bishop, being the same unspotted greenish blue, though rather smaller.

GRENADIER BISHOP-BIRD (*Euplectes orix nigrifrons*)

This species seems to take the place of the foregoing in the Northern Province, but it is a very local bird, nowhere as common as the Red Bishop is in the Eastern Province. I have not found nests but a male collected on the 2nd March was in full plumage and coming into breeding.

CARDINAL DIOCH (*Quelea cardinalis rhodesiae*)

The Diochs are some of the most serious crop raiders in the Territory. In the Eastern Province a closely allied species, *Q. erythrops*, occurs, together with *Q. quelea*, the Sudan Dioc; the latter also appears sporadically in

parts of the Northern Province. The Diochs might be termed nomadic in their habits for they appear to irrupt suddenly in an area and then disappear. For instance, my records of this species and the Sudan Dioch, and those made by H. F. I. Elliott in Masailand, show that in 1942 and 1943 they were almost absent from that area, only a few single birds being seen. Yet in 1944 vast hordes appeared everywhere. The Cardinal Dioch nested in great numbers in the uncultivated areas between the fields on the Ardai, while the Sudan Dioch invaded the wheatfields in huge flocks after its breeding season. Where it bred is not known, but the Lake Eluanata marshes are suspected. In 1945 only very small flocks of the Sudan Dioch were seen in the wheat area, too small to be able to do any appreciable damage. The hundreds of thousands present in 1944 completely ruined several hundred acres of late wheat.

The Cardinal Dioch breeds in colonies and on the Ardai used almost exclusively the sturdy yellow-flowered *Bidens schimperii* in which to build. This plant, of the same genus as "Blackjack", grows some four feet high all over parts of the Ardai in a wet year, such as 1944. The nests are flimsy purses, slung between two or three stems of *Bidens*, partially hidden in the grass. They are loosely woven from fine strips of grass leaves, with an almost non-existent lining of the inflorescences of a fine seeded grass. The entrance is large and takes up almost all one side of the nest which measures four inches deep by three and half inches wide. The entrance is two inches in diameter. There is no porch. The breeding season in 1944 was from late April to the third week in June. From the many nests examined, the normal clutch appears to be three; other nests with two eggs were also found, but incubation had not commenced. One nest with two fully fledged young was also found at the end of the season.

Eggs show great variation. The commonest type has a very pale blue, almost white, ground evenly spotted and blotched with sepia, grey mauve and brown. Others have a greener blue ground with bolder spots and blotches. Blotches may be very large and scattered. Another type, with a white ground, had heavy markings at the larger end. Yet another had a distinct pink ground, as though the sepia of the blotches had run and dyed the egg-shell. Two eggs measured 17×13 mm.

WHITE-WINGED WHYDAH (*Colinus passer albonotatus eques*)

There are several types of Whydah birds in the Territory, the males of which moult from their brown sparrow-like non-breeding plumage to a more or less long-tailed breeding plumage of black, or black with some other colour. This species does not have such a noticeably long tail as the common black and white Pin-tailed Whydah for instance. It is entirely black with a white spot on each wing. The species is common in the low, wetter areas of the Eastern Province, but rather rare in the Northern Province.

A nest, found on the 4th June, at Morogoro, was placed only one foot from the ground in a clump of Rhodes Grass (*Chloris gayana*), in the territory of a Fire-crowned Bishop-bird. The nest was a woven purse of fine grass inflorescences, with a side entrance. There were two eggs, pale blue well spotted with brownish-grey, with undermarkings of grey spots.

ZANZIBAR FAN-TAILED WHYDAH (*Urobrachya axillaris zanzibarica*)

This Whydah is another which does not develop a particularly long tail in the breeding season, and is black all over, with a red spot on each wing. The species is very common in Mafia and widespread over the treeless riverine plains and low-lying swampy areas of the Eastern Province.

Nests were found between 19th and 22nd May in Mafia, placed near the ground in patches of *Chloris* sp. or low shrubs. The nest is very similar to that of the preceding bird. The eggs were pale bluish-green, well marked with blotches of darkish olive.

QUAIL FINCH (*Ortygospiza atricollis mulleri*)

This little Weaver Finch appears to be confined to the drier open grasslands of Masailand, more particularly in stony areas and below 5,000 feet. It is fairly plentiful in the plains south of Monduli, and in the open *Balanites* scattered-trees grassland of that area, on the poorer land, with sparse grass cover.

A nest, found on the 28th June, was placed on the ground in stony, almost bare country, with a few scattered patches of short grass. The nest was placed under a tuft of short grass and was a grassy cup, over which was a flimsy dome of a few large feathers. There were three newly hatched chicks, and two unhatched eggs, which were small, pure white, and rather rounded. The palates of the young birds had on either side, near the gape, two white spots with black centres, with three black spots on the palate itself.

YELLOW-BELLIED WAXBILL (*Coccygia melanotis kilimensis*)

A highland bird, found in mountain bush and scrub and round the edges of forest, this little Weaver-Finch is well distributed in the Northern Province.

A nest was found on the 25th January in the fork of a large *Leonotis* at 8,000 feet, in the eastern area of the Crater highlands. It was a typical Weaver-Finche's nest, a ball of loosely woven dry grasses, with a good lining of white vegetable floss, and a small side entrance. It was twelve feet from the ground. There were three eggs, plain white, which measured 12 x 9mm

STREAKY SEED-EATER (*Polioptila striolata striolata*)

This is chiefly a bird of the highlands in the northern part of the Territory, very plentiful in the cultivation belt round Kilimanjaro and Meru, in Mbulu and Usambara districts, and found up to 11,000 feet on Olosirwa.

Nesting was in full swing during the visit to the Crater highlands made by Elliott and me in January 1945. Three nests were found, one placed in the heart of a great clump of Tussock Grass (*Eleusine jaegeri*) another in the top of an Erica at 11,000 feet on Olosirwa, and the third in a small bush of *Leonotis*, ranging from eighteen inches to four feet from the ground. The nest was a deep, well-formed cup of rootlets and grass stems, in one case laid in a thick pad of grass stems. The lining was made of fine dry grass leaves or vegetable floss.

One clutch of three and one of two eggs were found, and one nest contained three young chicks covered with grey down. The eggs were pale blue, sparsely spotted or boldly scribbled with deep chestnut. They measured 18×14 or 15mm.

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NOTES

A Note on the Death and Burial of Chief Gwasa of Heru

By J. J. T.

ON 15TH APRIL 1946, a chief died who for seventeen years ruled one hundred and fifty thousand of Tanganyika's most primitive Africans. He was Joseph Gwasa the Third, Chief of Heru, in Buha.

Few people will have heard of this chief or of his country, but he is worthy of memorial.

Before becoming Chief of Heru, Gwasa was called Ndalichako. Then he followed tribal custom by assuming the name of one of his kingly forbears, Gwasa II, who was his grandfather. Thus he became the third of that name, and the eighteenth chief of Heru. His father, the fifth to bear the name Ntare, met a violent end in the troubled days before British Administration.

Gwasa's death, while still under forty years of age, was sudden and tragic, and is an immeasurable loss to his country.

If the memory of his sound and honest rule fades in the course of years, the manner of his burial will be handed down for generations. For the first time in history a Tussi Chief of Heru received Christian burial on the spot where, for two hundred years and more, pagan barbarity had held sway.

According to the custom always observed in former days, the body of a Tussi Chief must not be buried. Rites, savage and degrading, are carried out upon it, while the country seethes, restless and unhappy, awaiting the appointment of the new chief through whom "Imana" (God) will again return to the land.

After grisly preparation, the corpse is forced into the hide of a newly-slaughtered ox. Then, unhonoured and solitary, the dead chief is taken to Kasangi, where, on the hill, his forbears have their last resting place.

There the body is hung over a fire and smoked, and later is placed in a rough wooden trough. Supported on trestles, it remains in a poor grass hut in the care of its special guardians, the Banyongozi, until the final stages of corruption are reached.

Nothing is done to mitigate the squalor in which the dead chiefs rot away.

At the time of Gwasa's death, all that remained of the former rulers of the country were a few bones, a handful of rotting bark from the troughs, a mound of soil compounded of flesh long since turned to clay, mixed with the mouldering grass from fallen huts. These pitiful fragments were scarcely distinguishable from the ground which slowly absorbed them. They had no covering and were open to the sky.

Such was Kasangi, taboo to all living chiefs, where tribal custom demanded that Chief Gwasa should be taken for his first and last visit.

But it was impossible to allow such treatment, unmitigated, to a civilized man of Gwasa's type, with a devoutly Christian wife and family.

For the first time in history, at the risk of wounding pagan susceptibilities, the body of the chief was saved from this indignity. It was taken intact to Kasangi under the British flag and there decently interred in accordance with the rites of the church, of which he was a member.

Gwasa lies among the bones of his ancestors, indeed, but his burial there marks the first breach with old and barbarous custom.

In years to come visitors to the spot will, it is hoped, find a simple memorial to remind them of the history of the place and of the changing face of Africa. They may also see, as they could see to-day, a shabby piece of wood below the cross that marks this first grave. It is the "Bao" board of Gwasa's grandfather, placed there by some not irreverent pagan hand.

The Mtani again as a Sanitarian

By R. E. Moreau

IN AN ARTICLE in *Tanganyika Notes and Records*, No. 12 (December 1941), I drew attention to the sanitary and quasi-magical functions of the *mtani*: for example, he removed lepers and unlucky children. Recently a somewhat surprising extension of these functions was brought to my notice by one of my clerks, Mr. J. R. Mynah. The wife of one of the station employees, a Christian Bondei, had died, supposedly of ankylostomiasis. After the (Christian) funeral, but before the grave had been filled in, an *mtani* opened the corpse and withdrew the embryo, which was then buried in the same grave.

I have since ascertained from Bondei, Sambaa and Zigua informants that the practice has been a regular one in these tribes, at any rate among the non-Christians, and that a male *mtani* is always used for this purpose. The *mtani* is of the same tribe, for the Bondei and Sambaa do not recognize "external *utani*" and the Zigua, who do, prefer an "internal" *mtani* for this purpose. Some informants also stated that, among the Sambaa at any rate, a sliver of bamboo, hardened in the fire, is preferred to any ordinary knife for this operation. Others were of the opinion that any cutting instrument would do, for example, of tin-plate, provided that it was fabricated specially for the operation. All agreed that whatever the instrument it must be buried in the grave with the corpse.

An "internal" *mtani* is said to have been called upon also when a male member of one of these tribes has died with swollen testicles or scrotum. The *mtani* must puncture the swelling, preferably with a splinter of bamboo.

The "explanation" offered for these customs is that if they were not observed other members of deceased's clan might die. I gather from enquiry that the same operations are performed by tribes at the opposite end of the territory, the Fipa using an external *mtani*, the Ngoni a relative, not an *mtani*, and the Nyakyusa a *mganga*. The practice has evidently been very widespread though the agent may differ.

I have stated in my earlier accounts that the Sambaa (who have in all ways a reputation for being an exclusive tribe) have no external *utani*. I now learn of an interesting special exception, namely that the ruling clan in Usambara, the Kilindi, have *utani* with the Wakinangumi, descendants of the families who were living at Kwangumi, in country on the south side of the Pangani River, below Korogwe, in an area occupied by the Ruvu section of the Zigua. The origin of this *utani* is stated to be that on one occasion when a Shebuge was raiding across the Pangani he was isolated and killed by the men of Kwemgumi. They carried his corpse to his capital, Vuga, which they reached with-

out molestation. Here we have a most interesting combination of origins for an *utani* tie, both the former enmity that seems to be the precedent condition for *utani* practically throughout East Africa, and something akin to the "acts of legendary clemency" to which "*parenté à plaisanteries*" has been reported as ultimately attributable in West Africa. The Kilindi-Wakinangumi *utani* is said to have been thorough-going, with the standard mutual abuse and horse-play as well as the occupation of the grave by the *mtani*.

A good example of the way the *utani* customs are giving way before the pressure of modern conditions has just occurred at Amani. A man of the Ngoni tribe died suddenly. His compatriots set about digging his grave and sent word to the "external" *watani* who were living near. These arrived, indignant that they had been forestalled in their formerly exclusive privilege of digging the grave. But it was mutually agreed to forego the rite by which one of them should obstruct the funeral by lying down in the grave: because if he had done so the cooks and house-boys attending the funeral could not have got back for their evening duties.

Mumiani

By E. C. Baker

THE STANDARD Swahili-English Dictionary describes "Mumiani" as "a dark-coloured gum-like substance used by some Arabs, Indians and Swahili as a medicine for cramp, ague, broken bones, etc.", and further states: "It is used as an outward application, also when melted in ghee for drinking as a medicine". It is said to be brought from Persia but many natives firmly believe that it is dried or coagulated human blood taken from victims murdered for the purpose and when a runour is started that *Mumiani* is being sought for, the natives in a town are filled with terror and seldom go outside their houses after sunset (Pers. "Mumiya", a medicine, with which mummies are preserved).

Since the word *mumiani* is connected with mummification it is interesting to find in the Encyclopædia Britannica that "the word mummy is derived from the Persian *mumiai* meaning pitch or asphalt which substance occurs frequently in the prescriptions of the Greek and Roman medical writers. Medical physicians in the East conceived the happy idea that the highest virtue would exist in that which had been already employed by the Egyptian priests in preserving the human body. Thus the bituminous and fatty matters found about the mummies and their wrappings were employed as a sovereign remedy particularly for wounds and contusions and a brisk trade began in the exudations of mummies. This led further to the medical use of fragments of the mummies themselves and, finally, the starting-point was lost sight of so that the dried and prepared flesh of criminals became one of the standard forms of mummy in the pharmacopœia"

Unfortunately I cannot give the reference number of a letter which appeared in "Man" some years ago reporting the belief of *mumiani* in India. The method of obtaining the ingredients and preparing the medicine was similar to that given in the Standard Swahili Dictionary.

I can find no trace of *mumiani* in literature dealing with Arabia but am told that, though unknown in the interior, it is common in those regions of Arabia which adjoin India, on the Arabian coast and also among the Shia Communities of Persia and Syria. Some years ago a Swahili told me how the Khalifa Haroun el Rashid when wandering at night peered through the window of one of the poorer houses of Baghdad and saw a number of "Washihiri" (any but a Muscat Arab is liable to be called Shihiri by the less-erudite Swahili) seated on the floor. His insatiable curiosity prompted him to knock at the door and he was admitted to the circle, but after a few minutes polite conversation he noticed that his hosts were sniggering and chuckling though they

endeavoured to hide their glee. When he asked what was the cause of their merriment he was told "We are makers of *mumiani* and when we can entice a stranger into this house we hang him by the heels from the roof-beams and place a large dish on the floor under his head. We then prick his body with spears and the blood which falls into the dish we sell to make *mumiani*".

Haroun el Rashid found nothing amusing in this narration and when he said so he was told, "The joke is that you are a large, fat man and full of blood. Indeed, so full of blood are you that when we sell it we shall be paid as much as two hundred dollars". The Khalifa was greatly perturbed but needless to say he tricked his hosts and finally escaped.

Imported from the East, a belief in *mumiani* is widespread in East Africa. It is generally believed that the blood is drained from an incision made in the neck of the victim and one hears periodically that those who traffic in the medicine are abroad. The apparent reason for these rumours is an assault or a series of assaults on persons of either sex by unknown assailants who in an attempt to rob their victims try to strangle them or cut their throats. In either case the lacerations so caused might lend colour to the idea that the object was to obtain *mumiani* but I have never seen anyone whose injuries were said to be the result of an attack made with that end in view. A scare occurred recently in Dar es Salaam but, so far as I know, no case of assault which could be connected with *mumiani* was reported and I was told by Africans that the rumour probably arose through the attempts of hooligans to steal the necklaces of women wandering in the streets at night.

Occasionally one hears of individuals who are said to collect blood for *mumiani*, even though no assaults occur to support the rumours. Though the traffic is undoubtedly believed to be operated by Africans as well as non-natives I have never known any particular African indicated as having *mumiani*, though two if not more non-natives have been mentioned to me by name as being collectors. Suspects have a sinister expression or some other peculiarity and in one instance a pair of rather piercing light blue eyes was the reason for the accusation.

It is quite possible that an unguarded remark made in a moment of anger may give the impression that the speaker trades in *mumiani*—old women cursing people who annoy them sometimes suffer for their bad temper and unguarded speech by being accused of witchcraft.

Finally, Government is not immune from the charge of preparing *mumiani*. A Kuria once told me that he knew the house in Nairobi in which it was made and the building proved, as I expected, to be the one in which post-mortems were held. To anyone who believes in *mumiani* the knowledge that such operations take place would naturally be considered as proof positive that those responsible were collecting blood for its manufacture.

The Distribution of the Chimpanzee in Tanganyika Territory

By Captain C. H. B. Grant

I HAVE re-read recently with much interest Mr. R. E. Moreau's article in your Journal for November, 1942, No. 14, page 52, and, as perhaps I know the shores of Lake Tanganyika and the interior of this western side of Tanganyika Territory better than most Europeans, I may be allowed to add my remarks on this subject.

Mr. Moreau's article gives me the impression that little or nothing was known about the chimpanzee in western Tanganyika Territory and that its occurrence there was in doubt, whereas it was well known to all the Germans, Belgians and British who had ever resided in Kigoma, in fact it was a rare but occasional sight to see a family party on the lake-shore inside Kigoma Bay opposite the township. Under these circumstances it is surely remarkable that the Game Warden had no "first-hand knowledge" of its occurrence and yet I was granted a Governor's Licence to shoot a specimen for the British Museum (Natural History). Such reports as those on the Malagarasi River near the Igoma Itale Falls, in the Tongwe country towards the Tabora border and others inland to the east of Lake Tanganyika, all of which appear to be based on native information, in my opinion, need confirmation before they can be accepted. Native information is, as I know too well, most unreliable and they will tell a white man any tale they think will please him.

As regards its occurrence on the Kungwe Mountain end of the Kungwe-Mahare mountains, I was assured by the natives that it did not occur and neither myself nor Charles Grey ever saw it or heard its cry there, nor in the mountains falling northward from Kungwe Peak, a part well known to Charles Grey. Charles Grey was extremely interested in the fauna and as a personal friend of mine communicated to me anything of interest which he had seen. The peculiar cry of the chimpanzee, usually heard in the early morning, is quite unmistakeable and wherever they are found this cry is bound to be heard.

In all my extensive travels in the Kigoma District I only saw and heard the chimpanzee along the wooded and forested mountains running north along the lake-shore between Kigoma and the Urundi boundary and also a short distance inland on the Kaseke River, east of the Kigoma-Nkalinzi main road. The next place further south is the Mahare mountains, the long high ridge running south from the Kungwe massif, and although I made enquiries from natives elsewhere they had no knowledge of it in that area. In these places their "nests" can be seen and regular paths, like native tracks, run along

the mountain sides, to which the chimpanzee takes for escape in the more densely-forested ravines. Although they sit in trees overlooking native gardens and appear interested in the people's activities they do not raid the crops.

I would express the opinion that the figure of two hundred is a gross exaggeration, and I should put this figure at a few small parties only. The parties I have seen number but three, the two adults and a young one. I may add that I obtained a specimen, a very old female, north of Kigoma many years ago, and it is now in the British Museum (Natural History). They are considered timid animals and I found them difficult to get even with a rifle.

I am far from desirous of casting doubt on the observations of others, but I do feel that more definite corroboration is required before we unquestionably accept that the chimpanzee occurs elsewhere in Tanganyika Territory than along the adjacent shore line of the lake north of Kigoma and at the Mahare range, and do the observers know the difference between the "nests" of this ape and those of the large birds of prey? None of the recorders quoted by Mr. Moreau appear to have heard the unmistakeable cry, the surest proof of all, and to accept these records as they stand may lull the authorities into, perhaps, the fatal idea that to eliminate this animal from the area north of Kigoma is of no very serious moment. I view with alarm the report in the *Tanganyika Standard* of the 30th October 1942 (see page 4 of Mr. Moreau's article), as the primeval forest in the ravines was not only the home of the chimpanzee but contained other forms of fauna and flora that were related to the fauna and flora of the Belgian Congo.

