

TANGANYIKA NOTES AND RECORDS

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Tanganyika Notes and Records

Editorial Note

THE aims and objects of this Journal are set out in the introduction to this, the first number. We hope, without encroaching upon any field already covered by official or unofficial publications, to collect and publish a series of facts and studies relating to Tanganyika in the hope that the sum total of our own knowledge and that of the outside world may thereby be increased by the addition of many items of interest and value which are at present inaccessible or undisclosed, in danger of being lost or forgotten, and gradually to form a storehouse of information for present and future generations. Politics will be eschewed, and the taint of dull officialdom so far as possible avoided.

But, clearly, the success of the Journal will depend not only upon willingness to buy it, but also upon willingness to make it live by contributing articles and notes for publication in it. We would therefore appeal to all who are interested in Tanganyika, members of the public and officials alike, to support the project by sending in contributions, long or short, articles, notes, memoirs or queries, addressed to : THE EDITOR, *Tanganyika Notes and Records*, THE SECRETARIAT, DAR ES SALAAM.

Introduction

It was a source of surprise to me, when first I came to Tanganyika, to find that a country so rich in diverse interest had so few records available in a form easily accessible to the general reader. One could buy a few books dealing with certain aspects of its history, its *fauna*, its economics or its sociology; one could make researches into official files; above all, one could find men who knew a great deal about the past and present of the people, their traditions, their customs and their mode of life. But official files are not easily available and the work of separating wheat from chaff is dull and onerous. Moreover, there are many subjects which do not figure in official files but are none the less interesting; and the majority of those who know most about the country have never found the time, or may be had the inclination, to commit their knowledge to paper. As the years went by, it seemed to me, much knowledge might be lost from lack of record, many people might remain ignorant and incurious of things which if brought to their notice would have excited their immediate attention, the newcomer would start handicapped and no foundation would have been laid whereon subsequent generations might build. I therefore made inquiries to find out whether the idea of a journal to which those who had any special knowledge could contribute, and in which those who were interested in any subject could find pabulum, would be well received. The response, I am glad to say, was excellent, and *Tanganyika Notes and Records* is the result. Its success will depend upon two factors, willingness to buy it and willingness to contribute articles or notes for publication in it. The former will obviously depend to a very large extent upon the latter, and I would make an appeal to those who know to make their knowledge available to the rest of us. Many are shy of "rushing into print" or "really cannot find the time" or are afraid of the critics. I would urge that none of these very human reactions be allowed to prevail. Diffidence is a misplaced virtue in such a case, time can always be found by one who really has the will to find it, and the more critics there are the greater will be the emergent truth.

There is an infinity of subjects which might figure in the journal. Let me instance the following, not with any idea of covering the ground, but in the hope that someone may be encouraged to contribute information under such typical heads and in order to illustrate the type of subject which seems to me most likely to attract readers:—The *flora* and the *fauna* of any district, the fishes (sea and fresh water); the shells, the birds; tribal traditions and history; customs and beliefs; boat-building and designs; types of native building, cultivation, irrigation and husbandry; incidents of the campaign in East Africa; the journeys of the great explorers of the nineteenth century; the history of such places as Kilwa; (Here let me digress for a moment.

Kilwa was first mentioned by Yakut in the thirteenth century; it was visited by Ibn Batuta in the fourteenth century, and by Vasco da Gama in 1502; its fort was built by Almeida in 1505 and abandoned in 1507; it was referred to by Camoens in the *Lusiad* and by Milton in *Paradise Lost*; it was described by Duarte Barbosa as having "fair houses of stone and mortar" early in the sixteenth century, and it figures on the earliest maps of Africa—what a store of interest, and yet how little is known or cared about it even by those who have visited it in the recent days of its decline!); the coastal harbours and ancient settlements; occurrences of stone implements; types of pottery; the ornaments worn by various tribes; systems of land tenure; native astronomical lore; secret societies; geological formations; the development of mining. The list seems almost infinite—and the fact is the measure of our need for *Notes and Records*. I wish the project every success and am confident that we may count upon all in the Territory to do their best gradually to make it a compendious storehouse of valuable information both for those who live in Tanganyika and for the outside world.

H. A. MACMICHAEL.

A Synopsis of the Geography of Tanganyika Territory

By C. Gillman

IT IS hoped that *Tanganyika Notes and Records* will prove a repository for much knowledge of the inanimate as well as the animate world of the part of Africa in which we live and work; knowledge gathered in the course of our routine duties or culled by more concentrated study from the multitude of facts which daily surround us. It seems, therefore, appropriate that the first number of our venture should contain a few general notes on the geography of the "Land we live in." For without a correct grasp of this geographical setting, geographical in the wide, modern sense of the word that comprises the whole beautiful though complicated inter-relations between the Earth's surface and Man, its moulder, detailed observational facts, however carefully obtained, are not only often incomprehensible but may even lead in many ways to entirely wrong conceptions.

Structurally by far the greater part of Tanganyika Territory lies within the highest of the great basins which, with their separating sills, build up the African continent. Like a great saucer, surrounded on all sides by a higher rim, this high Unyamwezi-Uganda Basin is flanked in the east and west by the two much larger and lower basins of the western Indic and the Congo, in the north by the likewise low basin of the White Nile, while a much broader highland sill, which carries the small depression of Lake Bangweulu, separates it from the next southward adjoining continental basin of the northern Kalahari. Its lowest parts are covered in the north by the shallow waters of Lake Victoria and in the south by the great swamps and inundation areas of the Malagarasi-Ugala river system.

Like all eastern and southern "High Africa," Tanganyika Territory owes its present elevated position to a long continued, but in geologically quite recent times probably more marked, uplift of the earth's crust, that is to mass movements in a vertical direction. These movements, of the real causes for which we are still more or less ignorant, have resulted at different times in warping at the centre and in a large scale shattering of the marginal strips of land. To our eye these "shatter belts" appear as a tumbled scenery of relatively high and often tilted blocks which drop on one or more sides by steep scarps to the adjoining lower blocks; or as true "rifts," lake filled in the moister west where precipitation exceeds evaporation, or arid basins of interior drainage where evaporation is the master and where, consequently, rapidly disappearing salt lakes or "pans" give way to ever-growing deposits of the waste from the adjoining high blocks; where the characteristics are those of a landscape choked and obliterated under sediment for the transport of which to the sea there is not sufficient water.

This geologically young mountainous scenery where high and low, steep and flat are nearly everywhere found in close juxtaposition, where in many places the rejuvenating force of the streams from the higher ground has already succeeded in carving the scarp faces by furious dissection, stands in striking contrast to the endless level horizons of the as yet untouched old peneplain of the inland plateaux with their gently rolling ground, their sluggish drainage, their general aspect of a senile landscape. Both in the east and in the west the main rim of the Unyamwezi Basin, to which the country rises from all sides in gigantic circular steps, has been pierced by the larger drainage arteries in their effort to readjust themselves to the new topography so greatly altered by the mighty heaving of the surface in the immediate geological past. The Pangani river in the north apparently follows tectonic lines of least resistance. The Mukondokwa, emerging from the scarp land at Kilosa in a fairly old transverse valley is probably the successor of the old, preshattering main drainage. The Ruaha has only just managed to find a new and as yet quite immature outlet by a series of gorges; whilst in the south the upper Rufiji and Rovuma have had less formidable tasks to carve their way through the southwards widening sedimentary foreland. In the west, the Malagarasi has given new drainage directions to the southern and central parts of East Africa's high basin, thus making them tributary to the Atlantic across five sixths of the whole continent!

Where the breaking up of the crust has been most pronounced, and chiefly where shatter belts intersect one another, great outpourings of lava and other volcanic happenings have taken, and in a milder form are still taking place, and are thus adding a further type of scenery to the country's chequered pattern: The giant volcanoes and cauldrons in the north-east; Mount Rungwe and the volcanic bar which the Mporotos have thrown across the Nyasa-Rukwa Rift in the south; the lava sheets in the Musoma hinterland and the Kifumbiro cluster of partly still active cones in the north-west are features which greatly increase East Africa's scenic beauty for the lover of nature.

A few words on *Geology and Soils* are unavoidable: The old archaic complex, with its highly metamorphosed sedimentaries and volcanics and its oldest granite intrusions, forms the major portion of East Africa's crust. It occurs generally as the deeply denuded and recently upraised remnants of very ancient fold mountains. The younger pre-Cambrian, comparable to the vast series which, in the south, cover the Rhodesian basement schists right up to the Witwatersrand formation, we find in extensive zones chiefly along the western margin of East Africa. Early palaeozoic formations have been recognized in patches and the so-called "younger granites" have frequently intruded the older post-archaic crust. Karroo remnants are only exceptionally seen in their original position on the plateau. Usually they are found down faulted and therefore preserved between upstanding archaic blocks. There is, however, a thick foreland of apparently continuous terrestrial sedimentation which has been accumulated from the Karroo onwards throughout the mesozoic and tertiary ages, a foreland which stretches from the foot of the eastern scarps

eastward to the continental "hinge." This latter, running NE.-SW. at no great distance from the coast, is a line separating long high and dry continental lands from the narrow strip which, from the Jurassic to the present day, has been the scene of repeated transgressions and regressions of the sea.

That great variations in the distribution of rocks combined with topographically determined variations of climate and with the great tectonic and climatic changes during the recent geological history must have led to a chequered distribution of soil types goes without saying. Typically virgin soils, however, are rare in the inhabitable areas where the shifting agriculture of the Bantu tribes has through long generations tended to impoverish the land.

This attempt to sketch, as briefly as possible the merest outlines of the Territory's geological and morphological structure may sound very dull and yet, as we shall see presently, it is together with a grasp of the fundamental facts of climate of the utmost importance for understanding how Man, with whose activities structure and climate are closely linked up, favourably or unfavourably, has adapted himself in the past or ought to adapt himself in the future to the dictates of his physical environment.

Climate: This is not the place to probe deeply into the difficulties of modern meteorological science where, as in other activities of the investigating human mind, the ever accumulating mass of observational data tends towards reactionary views, upsetting old established and for long firmly believed "dogmas" and failing as yet to replace these latter by new "certainties." All we can say in a short resume of facts is that near the equator the general climatic regime is that of the trade winds; that, very probably, the latest views of the relation of the earth's rotation on precipitation far inland from tropical coasts will have to be seriously considered; and, chiefly, that the great differences of high and low in East Africa have a paramount influence on the distribution and often rapid variation in place and time of the climatic elements; greatly to the despair of those who would like to smooth out their difficulties by a complacent reliance on meteorological *means*! The sooner and the more thoroughly we get away from these "means" and the quicker we become accustomed to such new and useful concepts as the "Climatic Year," the greater will be our chances for solving some of our economic problems on the sound basis of realizing the tremendous variations from the "normal": in other words, of realizing that the only normal feature of East Africa's climate is its abnormality and, thus, its unreliability!

No doubt, rainfall is the most decisive meteorological factor affecting life which is unconceivable without water and the keynote, therefore, for a correct understanding of Tanganyika Territory's climatic position is the line which separates the semi-arid from the sub-humid regions, a line which coincides roughly with the isohyet of 1,000mm. (forty inches) or better with the isonotide of 40 (a line expressing the ratio of rainfall to temperature). Unfortunately this line lies near the western boundary of the country so that the bulk falls within a definitely semi-arid climate type, characterized by rainy seasons separated by prolonged seasons of drought and by the great irregularity of

rainfall in time and space, already mentioned. How important a factor this marked seasonal distribution of precipitation is can best be realized from the fact that the mean annual rainfall of the semi-desert around Dodoma, for example, is the same as that of Kent, the garden of England!

Broadly speaking, our rainy seasons are due to the annual shifting of the sun from tropic to tropic and to the consequent wandering of a belt of calms or light variable winds which favour the creation of so-called convection rains. In addition to this seasonally determined precipitation, however, there are "orographic rains," the result of condensation of the moisture absorbed from the sea and carried inland by the trade winds wherever these winds, on meeting rising ground, are forced upwards into cooler strata of the atmosphere. It is these latter precipitations which, due to the relief of the land and taking place in the shape of rain and mists, not only increase the total annual rainfall on the upper slopes and edges of the higher mountains and crust blocks but assure its much more even distribution throughout the greater part of the year; a regime which is repeated along the suitably exposed shores of the great lakes from whose surfaces the prevailing winds recoup much of the moisture lost during their long overland travel.

Where, on the other hand, crust blocks are tilted away from the prevailing wind, or where higher blocks or mountains screen lower ground to the leeward, areas of "rain shadow" are formed which experience a much drier climate than the neighbouring, more favourably exposed regions. There exists, thus, a very interesting interdependence between structure and climate especially over the great "staircases" of tilt-blocks by which the land mounts from the coastal belt to the inland basin: Narrow and steeply rising scarp steps with excellent exposure and conditions highly favourable for condensation alternate with the broader expanses of dip slopes or depressions which suffer from lack of rain.

Thus, within a major climatic zone, defined by geographical position and by a given distribution of land and sea, tectonic structure definitely determines local variations of climate. The antithetic adjustment of the crust blocks to the forces, which have resulted in differential continental uplift, leads to a disturbance of the normal exposure to the dominating climatic factor, the trade-winds, and thereby to the prevalence of more arid conditions than latitude and position relative to the ocean might induce one to expect. This aridity, in its turn, influences life in the general and human economic activities in particular, and the whole beautifully clear complex thus shows a direct dependence of the prosperity of man on the as yet little understood internal tectonic forces of the earth!

To living organisms generally and to man in particular and notwithstanding his capacity for acclimatizing himself, body and soul, to a great variety of conditions, one geographical element will always remain indispensable: A sufficient and, at least, in the case of man not as yet adapted to seasonal droughts, a permanent water supply. *Hydrography* thus assumes a very great if not paramount importance in a country by no means generously provided with water, a fact unfortunately so often overlooked by persons accustomed to

the almost continuous drizzle and the ever flowing streams of more temperate lands.

It is, therefore, useful to give the outstanding hydrographic facts which are, of course, the result of structure and climate: There is, first and foremost, the appallingly vast extent of country—more than 90 per cent. of the whole, probably—which does not possess any permanent surface streams. The exceptions to this rule are small and widely scattered highland islands with their scarp foot strips, and two larger connected areas in the south-west and north-west where a happy combination of geologic and climatic conditions favours a more evenly regulated run-off. True, the main drainage arteries, like the Pangani, Wami, Ruvu, Rufiji, Rovuma and Malagarasi, whose headwaters descend from the just-mentioned, still partly forest-clad, islands are permanent but in their middle and lower courses they traverse, as “stranger rivers,” the semi-arid lands along their banks from where they receive no tributaries in the long dry seasons and where they lose by evaporation much, if not all, of their life spending water. They form, thus, very narrow bands of permanent water supply which hardly affect the general semi-arid characteristics of the wide tracts of intervening ground.

Secondly, even the few areas with as yet permanent streams and the few main rivers fed from these areas are endangered by progressive deforestation of the watersheds, a process which has already during the last twenty years turned formerly permanent rivers into intermittent ones and is likely to continue doing so in a rapidly increasing degree unless timely countermeasures can be enforced.

Thirdly, groundwater at shallow depth is by no means of common occurrence but is restricted to geologically and morphologically narrowly confined districts; whilst the extent, characteristics and reliability of the deeper seated groundwater have as yet received only a very cursory and sporadic examination. In a few restricted parts of the country groundwater maintains permanent pools or swamps in suitably situated depressions: and elsewhere, especially along some of the scarps or where the unconformity between the old crystalline rocks and the superimposed younger formations is exposed, useful spring horizons exist.

The regime of the great lakes in the more humid parts and of the salt pans in the dischargeless areas of the shatter belts has already been mentioned. For the most part the shores of these lakes are too precipitous to allow man to make much use of their abundant water.

Vegetation all the world over is the faithful image of a delicately balanced adaptation to climate and soil, so faithful indeed that in a country as yet only scantily supplied with meteorological stations and soil surveys a study of plant communities and vegetation forms almost invariably gives one a reliable clue to the labyrinth of its climatic and soil patterns. That these patterns and with them that of plant life are highly intricate will be readily understood if the frequent changes of parent rock, of high and low, of arid and more humid are remembered. In addition there is, as everywhere on the earth, that unavoid-

able merging from one type into another which produces marginal belts of varying width, often shifting with time in close reaction to fluctuations of the climatic year; and there is also the steady flux of succession, that process by which vegetation and soil, by mutual interaction, are constantly changing, a process nearly everywhere altered, reversed or even stopped when Man with fire and axe, hoe and plough rudely upsets the neatly set equilibrium of Nature.

Without going into detail and leaving aside the minor stages in the ever-flowing development of plant communities, we can distinguish the following major formations:

In the tidal belt along the sea coast dominates the *Mangrove jungle*, that curious adaptation to an "amphibian" life which forms extensive forests on the delta of the Rufiji. The *deciduous scrub*, generally of a thorny nature and widely associated with that wonderful old giant, the Baobab, is characteristic of the driest regions. Great areas of less severe aridity carry the many forms of *Bush or Tree-Steppe*, i.e. grassland interspersed with usually fairly scattered woody plants. Where conditions are slightly more humid tree growth between tall grass becomes thicker: This is the "dry-forest" of the savannah, usually called *Miombo* in Tanganyika Territory where it covers three-fifths of the land, and which extends throughout most of Portuguese East Africa and Northern Rhodesia far west into Angola. During the wet season it is a symphony of green foliage and blue sky, in spring an orgy of colour from the brightest gold through orange and red to brown, spread like a precious eastern carpet over the gentle ridges of the peneplain, in the drought, after the annual fires have swept over the land, that awful and yet beautiful blending of blackish grey ashes and grey leafless stems which one can best describe as "the silver death of the miombo." One must have marched through its uninhabited and mostly uninhabitable, because waterless, monotony for weeks, one must have gazed over tens of thousands of square miles of this forest from high up in the air, in order to grasp its utter hopelessness from the point of view of human enterprise.

In the typical *Savannah Parkland*, indicating in Africa the climate perhaps most suitable for native expansion, Tanganyika shares but little as the semi-humid belts, that stretch from the West Coast between semi-arid country to the north and south and the full-humid basins of the Guinea Coast and of the Congo, rapidly taper out against high and dry Eastern and Southern Africa. In western Tanganyika certain types of highland vegetation, greatly changed by man, might be included with this group.

Lastly and representing more humid conditions, there is the *Ever-green Tropical or Temperate Mountain Forest*, whose small and widely scattered remnants practically disappear on a small scale vegetation map and which, at the foot of the mountain islands, follow the stream beds in narrow fringing strips far out into the dry steppes. An important and in parts widely extended vegetation type is the man-created *Cultural Steppe*.

A cursory glance at the Territory's *Animal Life* shows that the big herbivores, followed of course by their carnivorous enemies, still occupy vast

spaces not or only little disturbed by man. Indeed their numbers, particularly of some species like the elephant, are still large enough to form the latter's serious competitors in some parts of the country. The roaming herds of Bovidae and Equidae who make use of the land by nomadic grazing perhaps point out the interesting and important lesson that the more arid tropics and sub-tropics are destined for pastoral rather than agricultural exploitation. The study of the amazingly and closely interlaced pattern of game tracks in all kinds of vegetation from the high vantage point of the air traveller is recommended to all who wish to realize the abundance of game in our bush and miombo-clad districts. Bird life likewise forms a striking aspect of the landscape especially in the vicinity of such accumulation of water as remain through the seasons of drought.

The most important geographical task, however, is to understand fully the life cycles, the regional distribution and the synecological peculiarities of the lower insect fauna with its grave setbacks to human enterprise. One need only mention the mosquito, whose distribution is a function of drainage rather than of altitude-determined temperature, to call back to one's mind a whole string of obstacles to human health and efficiency. Then there is the tick in its many species, detrimental to man and beast. There are the ever-recurring invasions of locusts, against whom we still seem to be as powerless as our savage predecessors; there is the tsetse, which is not only far from controlled, but is actually spreading in an appalling manner, largely due to the development of modern transport and to the destruction of the soil. Above all there is the white-ant, perhaps more completely adapted to a semi-arid environment than any other living race by its marvellous husbanding of the soil's moisture resources, which has taken full and lasting possession of Africa and whose function in the household of nature is probably of much greater importance than we imagine. No doubt, close synecological relations exist between vegetation and termites and the latter's beneficial influence on soil improvement should not be overlooked and should be carefully weighed by those who are wont to think of this powerful insect merely in terms of a few destroyed door frames or rafters!

The intensification of human land exploitation has since times immemorial, unconsciously or consciously, attempted to destroy so-called animal pests and since the spread of western civilization into the "New Lands" such attempts have become ever wider, more thorough and thus more promising of success. It is therefore wise to remember that these insect "enemies" have by age-long adaptation reached a well-defined position in the equilibrium of the earth's surface and that, therefore, wholesale destruction, should it prove feasible, will undoubtedly disturb that equilibrium with results perhaps more disastrous than the minor evils which, in our shortsightedness, we look upon to-day as unbearable "plagues."

And this leads us from physical and lower organic geography to the human side of the science of the earth. In the first instance a short historical review of *Human Migrations* in East Africa will be useful. We are not much

concerned in the present notes with the older movements of our race over Africa. But it is interesting to remember recent investigations which have made it probable, if not certain, that in pleistocene times, when the present teeming centres of humanity further north lay buried under successive sheets of continental ice, Africa, moister and more temperate than now, may well have served for a time as the main stage for pre-historic development. It may be that the oldest now scattered remnants of clicking and rock painting tribes and of dwarfs in their forests retreats are survivors from those far-back days.

However that may be, we are pretty sure that during later times successive waves, generally coming from the north-east, have overrun Central Africa, pushing before them the earlier arrivals or intermixing with them to a large extent.

First came the Negroid races who now hold West Africa. Then the Bantu who, in the south and east, rose to powerful kingdoms; in Central Africa they now form the dominating element, but in the richer land to the north and west of Lake Victoria they succumbed to Hamitic invaders who, based on the subdued Bantu as serfs, likewise founded remarkably fully organized states. Other Hamites stuck to their nomadic habits, which enabled them to make use of the driest parts of East Africa where, as Masai, they form to-day a serious problem for the Administrator. Much later followed Semitic Mohammedan raiders, the Arabs, who merely held the coast and a few lines of communications to the far inland areas productive of white and black ivory. At about the same time, or even earlier, wavelets from Malaya and India reached the shore of East Africa and in the tenth century a flourishing Persian culture was for some time established on the coast where its ruins can still be seen. In the sixteenth and seventeenth centuries the Portuguese obtained a temporary and precarious foothold; and finally, only fifty to sixty years ago came the modern, Christian, capitalistic and technical European.

Each of these waves, of course, brought its cultural possessions, primitive first, increasing in number and in importance later, until at last the white man presented Africa with the most far-reaching asset of "Pax Europea." And it is around this asset that one sees the problems centred which to-day deserve the geographer's foremost interest, problems towards whose solution nothing can and will contribute better than that synthetical treatment of the geographical whole which is the great aim of geographical science. For it must be remembered that "Pax Europea," notwithstanding its many undoubted blessings, has meant and still in many ways means, the unbalancing of that geographical equilibrium which primitive man had achieved by adapting his life, his cultural standards and systems to his unrelentingly harsh environment. This harshness, or even in many parts precariousness, of life conditions finds excellent expression through the fact that the mean density of the *Native Population* of approximately 4,800,000 souls amounts to only 5.5 per square kilometre (14 per square mile); and still more significant are the following figures: Two-thirds of the whole country are uninhabited; and five-sixths of the people live, frequently congested, on one-fifth of the land!

A closer scrutiny of the actual distribution shows very clearly that population density is primarily dependent on a sufficient and permanent supply of domestic water and varies from an average of 50 per square kilometre (with local maxima reaching 400) in the best watered areas, to 15 in the still fairly well watered districts, and down to 7 in those parts of the vast thorn-bush and dry forest regions where water supply becomes very sporadic. Where, thus, permanent domestic water is non-existent or is insufficient to maintain a population dense enough to keep the natural bush vegetation permanently cleared, tsetse, so much better adapted than man to a semi-arid climate with its long annually recurring periods of drought, reigns supreme. In other words, our uninhabited or only very sparsely inhabited regions owe their lack of population not, as one hears so often, to the presence of fly, but to the absence of sufficient water. And *vice versa*, where domestic water is ample man, closely packed, has long ago driven out the fly and remains safe until, for one reason or another, his pressure on the land relaxes, bush grows up again and fly "advances."

If this perfectly clear chain of cause and effect is grasped, it follows automatically that the creation of ample domestic water supplies, probably possible in many parts where native means, tools and perseverance have failed in the past, through application of our own scientific knowledge, technical skill and capital resources, will have to form the first task in any effort to counter the evils of congestion and to achieve a more even distribution of population and of their beloved cattle, sheep and goats. There are, of course, a good many side-issues which will require careful consideration by the geographer and administrator alike, but it is maintained that the relation between water supply and population density will always remain of primary importance and that, therefore, salvation lies in the direction of making a small fraction of our periodic rainfall, which in most parts of the country is reasonably abundant, permanently available throughout the year. As we cannot alter the climate, let us at least increase the "effectiveness" of our rainfall!

Compared with the nearly five million Africans the number of the *Non-Natives*, approximately 6,000 Europeans and 16,000 Asians, is insignificant. It is, thus, their influence on administration, religion, trade, industry and communications that interests the geographer. That, on the whole, this influence in every direction has been and continues to be beneficial to the development of the natives and of their land cannot be doubted, even if one has to admit a good many mistakes or errors of judgment, inevitable in a "new land" where knowledge must be gained against considerable odds and where, at least in the earlier stages, enthusiastic optimism more often than not tends to take the place of such knowledge. To remedy where possible mistakes of the past, to avoid fresh mistakes in the future nothing, to the author's mind, will be more valuable and effective than closest co-operation between the administrator and the geographer.

Note on Learning Tribal Languages

By A. Sillery

IT IS often said, and no doubt with justice, that this Territory is fortunate in having a *lingua franca*, Swahili. Yet it is often forgotten that Swahili is not, as it were, a language destined from the beginning of time to be the most widespread in East Africa, but is merely one of a large group of languages, which, by historical accident, has assumed an importance which could hardly have been foreseen a few hundred years ago. The growth and spread of a language is due not to any intrinsic superiority, but to such accidents as the siting of a seat of government, trade penetration, etc. Thus in France, in the middle ages, there were many languages, some of which had brilliant literatures; yet to-day we find, for one reason or another, the language of the Isle de France alone surviving as a really vital speech, whereas Breton, Provençal, and others, are relegated to the category of "dialects" (which, of course, they are not) and survive but to attract the curiosity of a few etymologists. Yet to many people, these "dialects" remain the language of the home. It is the speech of the old people and the one the children first hear and speak amongst themselves before they are taught to forget it first in the village school and later in the workshop and factory.

So it is in Tanganyika to-day. The vast majority of the tribesmen are bilingual. To them Swahili is still a foreign language. It is one which they learn (after a fashion) with a facility that is quite incredible, but among themselves they still speak their tribal tongue.

To anyone with the slightest linguistic bent, the study of these tribal languages is a fascinating hobby, and adds greatly to the interest of life in remote stations, and as one who has spent much time in this study, I venture to offer a few suggestions as to how best to set about it.

The first thing to do is to dismiss from our minds any contemptuous idea that we are dealing with a mere "dialect." It is with a living language that we have to do, and as such it must be treated with the respect that any vehicle of human speech deserves.

I assume that the prospective student has a good knowledge of the principles on which Bantu speech is based, and has learnt Swahili correctly, if only in order to qualify for his examinations.

I would not lay too much emphasis on the Swahili side of things. I am often asked, "Is such and such a language like Swahili?" The only possible answer in most cases is "As much as any one Bantu language is like another." Swahili may be a useful standard of comparison, but it is not a touchstone by which the merit or difficulty of other languages can be judged.

But the most important thing to have is a sound knowledge of comparative Bantu and English grammar. These, unless one is born and bred in the

country, are a *sine qua non*. Nor are they so difficult to acquire. A careful study of Dr. Werner's compact *The Bantu Languages* will give a very satisfactory grounding of the former, while, as for the latter, we can always brush up what we have learnt at school.

An important thing to remember is that tribal languages cannot bear mutilation. In Swahili we can perpetrate the most incredible linguistic atrocities and yet, miraculously, be understood, but the same does not obtain in a tribal language. You must either speak it correctly or not at all.

Now, imagine an administrative officer or young planter with some three years experience in the country, armed with a desire to learn, and possessing ordinary intelligence, and a "second-tour" knowledge of Swahili with a sound grammatical background. He goes to an area where the people have little Swahili and where nothing has yet been written of the local language. How is he to start learning it?

He starts with a decided advantage. He has no short cut to knowledge in the form of a written grammar and he will be forced to make his own. For this it will be necessary for him to find an intelligent native who speaks both Swahili and the local language.

The student has already mastered the principle of the Bantu concord and thus knows that he must first find out what are the noun classes. In classifying these, I would advise him to follow the system, now universally recognized, of counting the singular and the plural as separate classes. Thus, in Swahili, *mtu* is the first class, *watu* the second, *mti* the third, *miti* the fourth, and so on.

The first and second classes are easy. In Swahili they are *mtu* and *watu*, and it is a fairly safe bet that in most languages the singular and plural of "man" will be of these two classes.

The third (Swahili: *mti*) and fourth (*miti*) classes will not be difficult. It is more than likely that a word and its plural will be found to correspond to one of the Swahili examples of these classes. I suggest "*mti*" as a first cast. The fifth and sixth classes (*jicho* and *macho*) will almost certainly be represented by the singular and plural of the word for *eye*, *nose*, *name*, or *word*. The seventh and eighth classes may present difficulty but the student should run over the words he knows in Swahili of those classes: *kitu*, *ritu*, *kiti*, *viti*; and, if all else fails, some diminutive: *calf*, *calves*, *little child*, *little children*, etc. The ninth and tenth classes, which in Swahili are represented by *nyumba*, singular and plural, should be the words for *ox*, *oxen*, *dog*, *dogs*, *house*, *houses*.

The eleventh class, which frequently has as its prefix *lu-* or *olu-* — and is especially noticeable in this form in the neighbourhood of Lakes Victoria and Tanganyika—may present a little difficulty. In the languages I have studied I have found it in the words *dust*, *rope*, *side* (Swahili: *upande*).

The twelfth and thirteenth classes are diminutives and appear to be sparingly used in Swahili. They begin with *ka-* and *tu-* respectively: *katoto*, a little child, *tunzi*, a drop of water. The student may find that the thirteenth class

does not exist in the language he is studying, its place being taken by the eighth.

For the fourteenth any abstract noun should be tried.

The fifteenth consists of infinitives of verbs.

The sixteenth, seventeenth and eighteenth are locative nouns.

There are in addition one or two other noun classes which will crop up from time to time; for instance the *gigantic* and *grotesque* classes beginning with *gu-* are amusing to use on occasion.

Having got the noun classes set out, with an example of each, it is a simple matter to add the adjective and the numerals by mere translation from Swahili.

The pronouns, personal and demonstrative (all three kinds, near, middle distance, far) and the locatives (*ko*, *mo*, and *po*) are simple.

The student will then attack the verb. In the indicative mood he may find two or three types of present tense, one of which serves as a future. In the past, he will find the past tense proper, the narrative (*akafanya*) and, if he has assimilated Dr. Werner's book, he will look for a perfect mood with a suffix, which is frequently *-ile*, or *-ele*.

He will find the subjunctive mood almost exactly the same as that to which he is accustomed in his Swahili studies and, probably too, the imperative. All tenses should be written out in full, taking a typical verb as example.

After having taken down the most important moods and tenses he will now go on to the verb *to be*, which he will discover has two or three different forms: either an invariable *ni* or *n'* in the present, or a form in *-li*, *ndi*, *uli*, etc. *I am*, *you are*, or a form like *kuva*, *kuwa*: *to be*.

For the sake of vocabulary, a few adverbs will then come in useful; *quickly*, *slowly*, etc.; and these must be conscientiously set out.

By the time this skeleton grammar which should occupy about ten pages is compiled, the learner has probably been in the district about two months. By listening to natives speaking (and not merely by waiting for the interpreter to translate) he has gradually been accustoming himself to intonation and pronunciation. Soon he will find he can pick out words, sometimes only *good morning*, but often words in common use, like *ox*, *dowry*, *wife*, *theft*, *till the ground*, *sell*, *buy*, etc. It is then the time to ask his tutor to tell him stories.

These should be of the Brer Rabbit family (a) because everybody knows them and (b) because he will probably find a similar plot in Swahili. The tutor should be asked to dictate the story slowly, sentence by sentence. It is often difficult to induce a tribal native to dictate slowly, but a little perseverance will soon show him what is wanted. Often, to begin with, words will be missed, and they should be omitted and the blank spaces filled in at the second, third or fourth repetition. A good margin should be left, and in this margin should be compiled the vocabulary. Thus:—

Kaka Sungura akenda
kukata miti.

Kaka Sungura : brer rabbit.

Akenda : narrative past tense,
vb. *Kwenda* : to go.

Kukata : inf. vb. to cut.

Miti : noun, fourth class, trees, sticks.

The tutor should be asked to explain any words that are not understood, first in Swahili and then, after about three months tuition, in the language that is being studied. Every line will give material for notes and additions to the grammar.

The pupil should try his hand at repeating the stories. First in writing then, as he becomes more fluent, verbally. Every word should be analysed and in his everyday life the learner should be alert for any application of the expressions he has learnt to the uses of everyday life.

My experience has been that after about four months work on these lines, one can acquire a knowledge sufficient to hold simple conversations; after this it is plain sailing. The student will find the local tribe eager to converse with him in their own language; at first a good deal of the conversation will pass over his head, just as when he first became articulate in Swahili he found that he was missing much of what was being said to him; but imperceptibly he will find he understands more and more of what is going on around him. Both for the benefit of posterity and to maintain his own standard of accuracy he should continue every now and then to take down stories; and he will thereby accumulate a mass of local folklore.

In six months the skeleton grammar should be sufficiently expanded, though it will still be subject to correction and revision; it only remains to widen the vocabulary by constant practice and inquiry.

In writing a Bantu language the student who merely wishes to acquire a work-a-day knowledge, relying on his memory and his ear, will find the roman alphabet, used in Bishop Steere's Exercises, sufficient. The serious student who wishes to do real research work will need a more complicated orthography. For instance, vowels may be open or closed; confusion often exists between the tremulants *l* and *r* so that one is often left in some doubt as to which to write; there are sounds that cannot be rendered by a single letter so that clumsy and inaccurate expedients are often resorted to (e.g. the nasal velar usually written *ng'*, as in Swahili *ng'ombe*).

A certain knowledge of phonetics and phonetic script is therefore desirable and the prospective student would be well advised to acquire some knowledge of the recognized system of orthography.

The following books are recommended :—

Introductory Sketch of the Bantu Languages, by Alice Werner (Kegan Paul, Trench Trubner & Co.).

The Language Families of Africa. Same author and publisher.

Practical Phonetics for Students of African Languages, by D. Westermann and Ida Ward (published by the International Institute of African Languages and Cultures).

These will give the beginner an excellent start till, as time goes on, he will be able to choose for himself more advanced books either on particular languages or on general Bantu linguistics.

Fostermothers in Ulanga

By A. T. and G. M. Culwick

IN 1933, in the course of collecting material for our book *Ubena of the Rivers*, we came across the practice of creating fostermothers for babies whose mothers have died. The idea of a woman "bringing back her milk," as the people themselves phrase it, was something of a shock to us and we determined to investigate the matter as fully as possible. According to the Wabena of the Ulanga Valley, any woman who had once borne a child and who had not yet passed the menopause could suckle a baby after quite simple treatment lasting only a few days.

Unfortunately, our leave was near and we had no opportunity to arrange a demonstration of the treatment, but we saw several women who either were then suckling or had suckled motherless babies when they themselves had not been pregnant for a number of years. It is, perhaps, as well to point out that in the course of our work among the Wabena a peculiar friendship and confidence has grown up between certain of the tribe and ourselves, and that we were as far removed as it is possible to imagine from the position of the inquisitive stranger for whom any crazy tale is good enough. Moreover, the whole subject came to light almost accidentally, the people themselves regarding it in such a matter-of-fact way that they did not consider it worthy of special mention. It is so much a part of ordinary village life that none save those immediately concerned takes any interest in a case, and during our recent investigations we were forcibly struck by the absence of any stir among the women in whose midst the treatment was being given. When required, they assisted by pounding the ingredients or tending the cooking-pot in which these were being boiled, but otherwise they went about their normal business with hardly a glance at the principal performers. So far from being a "star-turn" for the benefit of the stranger it was to them a commonplace of everyday life.

We thus have no reason to suppose that in the case of the women with whom we talked in 1933 an elaborate fraud was being practised on us, a fraud which would have been not only unlikely but altogether unprovoked, for it was not we who first brought up the subject of artificial lactation, of whose existence we were unaware till somebody casually mentioned it in conversation. The women themselves were slow-minded peasants, interviewed without warning at widely separated places, and their histories were independently confirmed by other people.

The importance of this practice is at once apparent. The Wabena of Ulanga live in a country where they can keep cattle only at a few favoured places, and it may safely be said that the child who ever tastes milk, other than that of his mother or wet-nurse, is a very rare exception. Suckling

continues till the child is between two and three, supplemented of course by other food, and it is essential for a motherless baby to find a wet-nurse. Obvious difficulties militate against its adoption by another nursing mother. In the first place, possibly owing to deficiencies in her diet, a Bena mother's flow of milk is not usually very plentiful and, particularly during the months preceding harvest when supplies of food tend to run low, many a woman finds one hungry youngster quite as much as she can manage. Secondly, a mother has but one back on which to carry her nurslings, and herein, indeed, lies one of the Bena women's chief objections to twins. Thirdly, there is a clearly-defined circle of relatives to whom children are commonly sent for longer or shorter periods, and it may well be that no wet-nurse of the ordinary type is available within this circle, while the grave objections to sending the child to an outsider will be obvious to any with even the slenderest knowledge of primitive mentality. The difficulty is, however, easily overcome by creating a fostermother among the near relatives. Normally a woman nearing midde-age is chosen, probably the mother, mother-in-law or elder sister of the dead mother; for any eligible younger woman is, of course, preoccupied with the desire for more children of her own and by no means willing to waste two years of her prime on another's baby, with the taboo on sexual intercourse that it involves.

Intensely interested in this custom, we inquired among members of other communities and found that a number of tribes have a similar practice, though by what methods the milk is produced among them we did not discover. Even certain people from cattle-owning tribes reported it, while members of other cattle-tribes where there was no such custom were well acquainted with the fact that it was possible to make women into nursing mothers, and all showed some surprise that we should not know about it too. A little later one of us had an opportunity of talking with a certain very well-educated native in Dar es Salaam, and he informed us that the practice is well known on the coast where the inner bark of the wild fig-tree (*mkuyu*) is used. In addition, we found a whole chapter devoted to it in *Hidden Africa*⁽¹⁾, where the author describes a more drastic and severe form of treatment used among the hill-people of northern Zululand, treatment which, he asserts, is effective even on a girl who has never yet been pregnant. Further, he says (p. 68), "I knew that it had been scientifically proved that other primitive people in various parts of the world, Eskimo and Maori, Arawaki and Betschuanis, knew and practised this extraordinary feat. In fact, the phenomena had even been given a Latin name, *lactatio serotina*, by Bartels, the famous German scientist." Two friends in Oxford kindly glanced through Bartels for us, but the book has no index and they were unable to find the reference. During a visit to Canada, however, in 1934, we came across the practice again, recorded among the Bella Coola Indians⁽²⁾

⁽¹⁾ Attilio Gatti, London, 1933.

⁽²⁾ H. I. Smith, *Materia Medica of the Bella Coola and Neighbouring Tribes of British Columbia*, Ottawa, 1929.

who use the leaves of a stonecrop (*Sedum spathulifolium* Hook.) before the plant flowers. Our attention was also drawn by Prof. T. F. McIlwraith of Toronto to the following passage in Junod's great book, *The Life of a South African Tribe*⁽³⁾: "A woman died shortly after the birth of her boy called Mayimbule; the grandmother, by name Mishidohi, who had an adult son and had had no other child since, prepared light beer and other appropriate food and succeeded in secreting milk in her own breast; so the child was saved."

The production of lactation by artificial means would thus appear to be a widespread phenomenon of the primitive world, and it seems surprising that it has not received more attention from scientists, particularly from medical men. In January, 1934, one of the writers mentioned this practice to some of the latter. The result was entertaining. Amid aspersions on our veracity, or, more generously, imputations of unbounded credulity, one critic so far discarded the open mind of the scientist as to declare dogmatically that the thing was impossible. In fairness we must add that others accorded our reports a more scientific reception! We thereupon determined to study the treatment as fully as possible if we were so fortunate as to return to Ulanga after our leave, for we knew that the Paramount Chief of Ubena, Towegale Kiwanga, was ready to demonstrate it from start to finish whenever called upon to do so.

In the course of our Canadian tour our determination to pursue the matter was further strengthened by our good fortune in Toronto in meeting a group of biochemists who are working on the action of hormones. We told them of our experiences in Ulanga and, so far from expressing either surprise or derisive incredulity, they were immensely interested in the phenomenon and its possibilities in view of recent work done by themselves, and urged us to continue our investigations, to discover the ingredients of the medicine and, if we could, to let them have a supply for experiment, with a detailed description of the treatment. Needless to say, we shall send them a report of our latest observations so soon as the botanical specimens have been named at the Kew Herbarium.

Towards the end of 1934 we returned to Ulanga, and as soon as pressure of other work allowed we turned our attention to this question of lactation, with the result that we have recently observed its production by artificial means in two women. Let it be duly noted that one of the writers knows both women and their families well, quite apart from this particular investigation, while one at least of the young mothers whose babies were used is her personal friend. There is not the least shadow of doubt that the fostermothers have not got young babies of their own and they are not noticeably pregnant, while it is extremely unlikely that they are pregnant at all. Both are middle-aged and cannot be far off the menopause. We will call them A and B.

A has had six children, of whom the only survivor is the father of the baby used in the demonstration, a young man of rather over twenty. He was her

(3) First Ed., 1912, Vol. I, p. 49.

fifth child, her last one being a boy (a few years younger than the surviving son) who died when about five years of age. When the youngest child was a baby at the breast she separated from her husband (a tribal cross-cousin) and returned to her own relatives, where she remained unmarried till last year when her husband's brother took her into his household by paying over a small amount of bride-wealth to her guardian. She does not, however, live in her husband's house or village, but with his consent she has a house near her son and daughter-in-law so that she can help bring up their child, now about six months old.

B is somewhat similarly situated. She has a grown-up son and a daughter of fifteen or so, while three other girls and one boy died before they were weaned. To our certain knowledge the last birth was more than three years ago. She declares that when she suckled her children her milk was always on the heavy side. She has a house and field near her elder brother where she lives with her daughter, who is "courting" but not yet married, and her husband visits her now and again, chiefly at such times as she requires help in her field, but most of the time he lives several miles away over the river, with two younger wives. The baby whom she suckled for our benefit is the daughter of a young relative of hers and was born on the day of our arrival.

The essentials of the treatment to which *A* and *B* submitted were as follows: (1) They drank quantities of a thick hot soup made with the pounded leaves of four plants, ground ginger, ground seeds of one particular kind of pumpkin, and plenty of salt. The result tasted something like groundnut soup with a little curry-powder in it. (2) Their breasts were gently but firmly massaged with a hot infusion made from the pounded inner barks of the wild fig-tree, *Mninga* (*Pterocarpus Bussei* Harms.) and a third tree, with the root-bark of a fourth. (3) The child was constantly put to the breast—as often, in fact, as its own mother would allow.

We started off with *A* alone. One evening and again the following morning she drank the medicine and was massaged. By 4 p.m. she was able to express a few drops of a thin, watery fluid. Treatment was continued that evening and the following morning, but difficulties arose over the child. For various reasons it was impossible for the two women to sleep in the same house, and the young mother, whose milk supply is not very good just now pending the harvest and a better diet, naturally refused to send the child to its grandmother at night for fear that the lack of stimulation to her own breasts should cause her milk to dry up. At the same time, the grandmother found that the fluid present on the second evening dried up during the night in the absence of stimulation by the baby. Moreover, the child was old enough to know its own mother and declined to suck at other breasts in more than a half-hearted fashion.

It was therefore decided to start a second experiment with *B*, *A* meanwhile continuing with the treatment and doing as best she could with her rather reluctant young granddaughter. There was no such trouble with *B*. The baby, only a week old, did not discriminate between mother and foster-

mother, and there were no social difficulties in the way of *B* going to sleep in the building where the baby and its mother were temporarily housed so that, when it woke hungry in the night, it might both suck the breasts of the would-be fostermother and also receive the nourishment it sought from its own mother. This case worked very well. Beginning at mid-day, *B* had three draughts of medicine and was massaged three times that day, each time for about fifteen minutes. Next morning she reported the presence during the night of a small quantity of watery fluid, taken by the baby. In the morning and again at mid-day she received further treatment and by evening was able to express a drop or two of very thick milk. After treatment in the evening she spent a second night with the child, which took what milk she had, and in the morning the woman again expressed a few drops of thick milk. That day she had treatment in the morning and evening, and did not suckle the child after 2 a.m., so that the milk formed during the night (the third) should remain in her breasts, and in the morning she was easily able to express some much thinner milk. We also continued to watch the slower progress of *A* and by the seventh day of her treatment the watery fluid gave place to a thin watery milk.

Now one of those scornful critics of our first reports declared categorically that massage of the breasts, if sufficiently violent and prolonged, could produce a discharge, but that discharge would be nothing more nor less than pus. It is difficult to believe that anyone, however low his opinion of native intelligence, could seriously suggest that African mothers feed babies on pus, and yet it is an observed fact that the babies do imbibe the liquid produced by the treatment described here, and not only imbibe it but like it and thrive on it. We have seen it happen among our own friends in the tribe. One of them is now suckling her son's child, born about last August⁽⁴⁾. She is a sister-in-law of *B*, and she and her husband and all her family and their affairs are well known to us. She has two adult sons, while two others and a girl died years ago before they were weaned. Her daughter-in-law died a few months after the birth of the baby, whose paternal grandmother has thus come to its rescue by bringing back the milk to her own breasts.

It is difficult to distinguish the essentials from the non-essentials in the treatment described above. As one would expect, it is accompanied by a number of more or less ritual details which obviously partake simply of the nature of sympathetic magic and which we have omitted. With regard to the massage, one is inclined to feel that massage with, for instance, warm soap and water might be equally effective. And in the case of the medicine taken internally, it appears that not all the ingredients are used in every case, but the chief was taking no chances this time! All that can be said at present is that ginger and pumpkin seeds seem to be among the essentials, for they are also in general use to promote the speedy establishment of an ample flow of milk in newly-delivered mothers. On the day following our arrival in the village where the above demonstration took place, one of the writers

(4) Received for publication in April, 1935.—EDITOR.

went to see the new baby and its mother, and on the way she overtook *B*, bound on a similar errand and laden with a supply of ginger and pumpkin seeds for the mother. She was also taking a quantity of rice flour specially prepared for the occasion, for making a kind of porridge likewise intended to ensure abundance of milk. She had prepared it as follows: At about the seventh month of the girl's pregnancy she had moistened the necessary quantity of unhulled rice and kept it wet until it began to germinate, when it was dried in the sun and put by till required. She had now hulled it and ground the grain, and was about to prepare porridge which, she informed us, would taste like unfermented beer. But to return to our ginger and pumpkin seeds: When required by a newly-delivered mother, they are not mixed with any of the plants used in our demonstration but simply dried and ground and cooked in chicken broth. It is also said that those lucky enough to own cattle increase the milk supply by administering this mixture to their cows.

It would be most interesting to collect details of the treatment undergone by women of other tribes for a similar purpose and to see how far the same ingredients reappeared elsewhere. In the meantime we are sending home specimens of all the plants used, for determination at the Kew Herbarium, and, of course, corresponding with the biochemists in Toronto; and it is greatly to be hoped that further light may presently be shed on this interesting problem and its implications.



Fig. 1—A general view of some Ukara holdings. All dark patches are stands of the green manure *Crotalaria striata*.



Fig. 2—A plot ready heaped with farmyard manure to be dug in before sowing *Pennisetum*. In background, a crop of *Crotalaria striata*.
In foreground, Bambarra groundnuts.



Fig. 3—*Crotalaria striata* and *Tephrosia* sp.
The plant press is 21in. high.



Fig. 4—A fodder grass pit on the lake shore.



Fig. 5—Heaps of farmyard manure. Background, green manure: note the orchard-like disposition of the trees.



Fig. 6—Muzzled stock.



Fig. 7—Fodder tree, stacked with stalks of millet to protect them from white ants.



Fig. 8—A stack of *Pennisetum* stover, for fuel.



Fig. 9—An Mkara carrying *Crotalaria striata* fodder for his cattle.

Ukara Island and the Agricultural Practices of the Wakara

By D. Thornton and N. V. Rounce

THE ISLAND OF UKARA, which lies some ten miles north of Ukerewe in Lake Victoria, is of great interest to those concerned in the improvement of native agriculture, as the Wakara have evolved and practise a system of farming which allows the small island to support a very dense population. The neighbouring tribes still practise the primitive and simple method of shifting cultivation, but, as all available land on Ukara is already taken up, the people have been forced to adopt a system of maintaining soil fertility under almost continuous cropping.

The Wakara are essentially a simple native tribe who have no specially developed art or culture and it is only in their agricultural practices that they are more advanced than their neighbours.

The total area of the island is approximately twenty-nine square miles. The total population is 17,506 which gives a figure of 603 people per square mile; but of the total area barely twenty square miles are suitable for cultivation which only allows two and half acres per adult male.

FIGURES OF POPULATION.

		Males		Females		Total
Adult	...	4,691	...	5,070	...	9,761
Children	...	3,976	...	3,769	...	7,745
						17,506

General.—The island is roughly square in shape, the northern and eastern parts are broken up by a series of rocky hills and granitic outcrops but the southern and western areas, although hilly, are not so stony.

The most important soils are those which have originated from the granitic rock and vary in texture from medium loam to almost pure sands. Beds of partly formed laterite have given rise to a number of small areas of a stronger reddish soil. Rainfall follows the seasons of the mainland but begins earlier. No records are available but it is probably about forty inches. Owing to its insularity dews are heavy as on Ukerewe Island. Rains extend from October to May.

Owing to the fact that the soils are under a state of almost continuous cropping and that all crop refuse is removed either for cattle food or fuel they are very deficient in organic matter and the people have to apply farm-yard or green manure as often as possible if they are to obtain any return from their crops.

There is hardly any natural vegetation except the grass slopes of some of the hills and very small traces of bush. There are no trees except those planted and conserved by the people.

Cultural practices.—The present agricultural practices are due to economic necessity, that is, limited areas of poor soil and a dense population, and the main principles of the system of farming, which was evolved and practised before European colonization, are—

- (a) the rotation of crops; or perhaps another term better suited to native conditions of cropping would be "cycle of cropping;"
- (b) the stall feeding and housing of their stock;
- (c) the making of farmyard manure by supplying bedding and the application of it to their land;
- (d) the growing of forage crops; and
- (e) the growing and digging in of a green manure crop.

The main crop of the people is *Pennisetum* and all available land is planted with it at the beginning of the season. Areas to be planted usually receive a dressing of green manure or farmyard manure which is dug in before the sowing of the crop. The crop which follows the *Pennisetum* varies, but a second cropping can only take place when the *Pennisetum* has been sown by itself. This is done when it is known that there will be sufficient farmyard manure to dress that area the next season, as it is essential that the slow growing *Crotalaria striata* be allowed nine to ten months growth in order to give a sufficient quantity of green matter. Such a necessity precludes the planting of a second crop.

The second most important crop is bambarra groundnuts, *Voandzeia subterranea*. These are interplanted in the *Pennisetum* just before the setting of the seed; when the *Pennisetum* is ripe it is harvested and the stalks are removed, allowing the bambarra groundnuts to develop. If bambarra groundnuts are not required very often a sorghum crop is taken after the *Pennisetum*. This is more often the case when the previous *Pennisetum* crop was given a dressing of farmyard manure.

The other general crop is cassava. This is never treated as a pure crop and the main cassava crop is interplanted in the growing *Pennisetum*. It is given a very wide spacing and attains its fuller development when the *Pennisetum* is removed; if the land has received a good dressing of manure, either farmyard or green manure, bambarra groundnuts are planted in addition to the cassava so that in the one season the land carries three crops. Sweet potatoes are usually planted in the damp sandy soils of the Lake shore but sometimes they are seen following the *Pennisetum* crop on the main shambas; but only in small patches.

The Mkara shows a very good knowledge of both the needs of his crops and soils and makes careful plans for the cropping and manuring of his holding well ahead.

Although the keeping of stock both for the supply of milk and the making of farmyard manure is essentially part of his system of farming, the limited grazing and food supply do not allow the native farmer to keep anything but a small number, and certainly not a sufficient number to make enough

manure to dress even a small holding. In order to be able to crop the land which he is unable to dress with farmyard manure he has made use of two indigenous species of Leguminosæ, namely *Crotalaria striata* and *Tephrosia* sp. as green manure. Both are called "malegeya" in Kikara. The latter is of less importance and is rarely planted pure but it is often found mixed with the *Crotalaria striata*. The usual practice with both species is to interplant them when the Pennisetum is about one foot high. Both species are slow growing but reach a height of four to five feet when eight to nine months old, which is the usual period allowed before it is dug in: they both have strong tap roots which bear a large number of bacterial nodules and in addition the plants develop a heavy leaf growth which provides the humus so lacking in the Ukara soils. The protection afforded by the strong vegetative growth and the heavy leaf fall preserves the soil moisture and prevents erosion. In comparing the indigenous species used by the Wakara with *Crotalaria juncea*, now so commonly used as a soil renovator in tropical agricultural practice, it has to be realized that the indigenous species at first make very slow growth and allow any crop in which it is interplanted to make normal development and at the end of the season will produce up to nine tons per acre of green matter; whereas the latter is more often used as a catch crop yielding around three tons per acre in the short period of six to eight weeks. *Crotalaria striata* is dug in at a mature stage, after flowering, whilst *Crotalaria juncea* is considered at its best in the flowering stage when there is little woody development and decomposition takes place rapidly. If a very strong growth of *Crotalaria striata* takes place often the native cultivator removes a portion of the crop using this to dig under in some other part of his holding. Selective weeding is practised in the case of the composite "masura" or *Erlangea Duemmeri*, which is allowed to remain in the crops and afterwards is dug in. It may also be found as a pure stand green manure in some cases. The diagram of the three-course rotation of the Wakara illustrates these operations more clearly in their sequence. (Page 29.)

Methods of applying manure.—It is generally considered that a green manure is most advantageously dug in when the soil is moist and it is an interesting fact, worthy of investigation, that the Wakara dig in their *Crotalaria* in a woody, mature, fibrous stage in the dry season, and plant their crop on that land at the first rains when it seems hardly possible that complete decomposition could have taken place. Farmyard manure is laid out in small heaps on the holdings during June, July and August and dug in while the soil is dry and powdery. It is not allowed to dessicate on the surface for long.

Stock.—Cattle	...	15,000	} Approximately 3 head of cattle and 4 head of small stock per adult male.
Sheep	...	5,000	
Goats	...	16,000	

The ownership of cattle in Ukara is entirely different to the general idea of ownership in other parts of the province, as the Wakara tend their cattle as an essential part of their system of farming and not only as a means of

storing up wealth. The number of cattle owned by the individual is usually small and definitely limited by the supply of fodder and grazing. In spite of the poor natural grazing, the cattle, although small in stature, keep in quite good condition. All stock are housed on one side of the native hut, and are bedded down and hand-fed. Pits are dug in the floor of the hut for reception of the dung and bedding, so that undue dessication will not occur. The cattle are taken for short periods only for grazing and watering. Bulls are rarely grazed with the rest and the only exercise they receive is when being watered and on the occasion of bull-fights. In order to avoid damage to standing crops stock are muzzled. This is necessary as the natives' sense of ownership of crops and grazing is so strict. All grazing is owned and no trespass is allowed.

Fodder and bedding.—A great variety of fodders is hand-fed mostly in the morning and evening, of which the greater proportion is crop refuse. In addition this limited supply is eked out by the cultivation of grasses on the lake shore, the lopping of trees, and the cutting of *Crotalaria*.

Crop refuse used as cattle feed—

1. Stalks of sorghum, *Pennisetum* and rice;

(The stalks of *Pennisetum* are stacked in the forks of trees or on rocks owing to the depredations of white ants.)

2. Haulms of bambarra groundnut.
3. Stripped dried leaves of sorghum.
4. Leaves and stems of cassava and sweet potatoes.
5. All weed growth.

Cultivated stock feed—

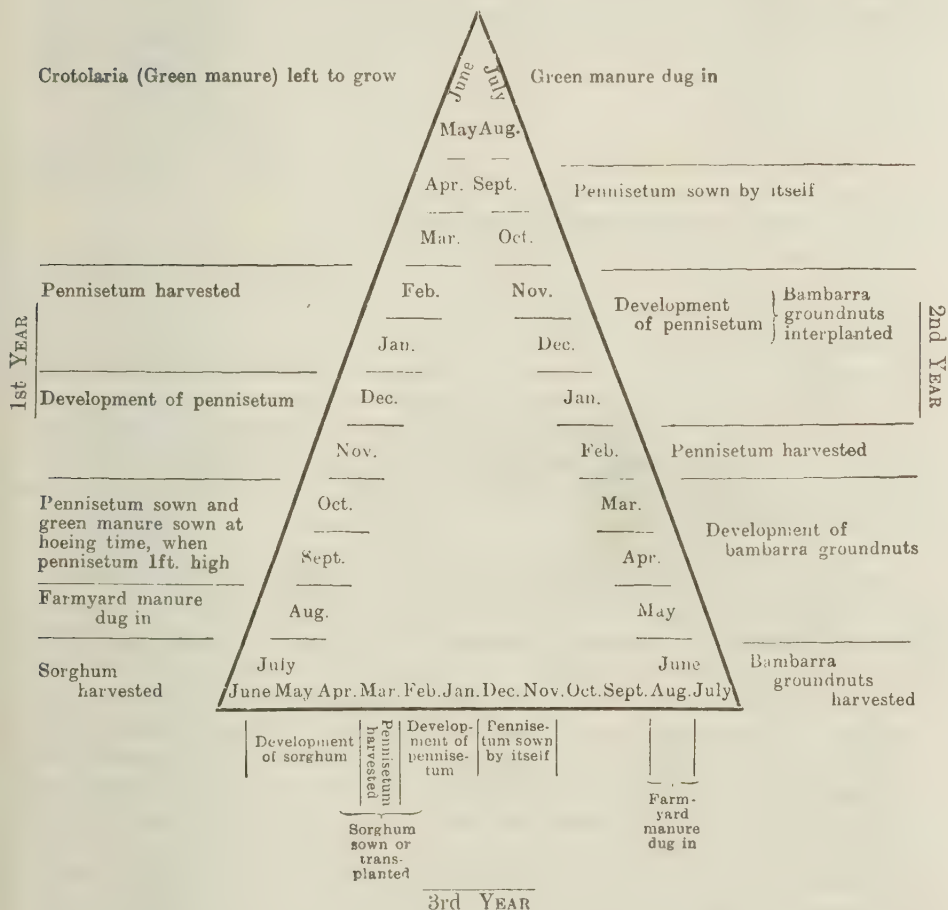
1. Mabimbiri grass. *Vossia cuspidata*.
2. Binyambe grass. *Echinocloa* sp. Near *E. stagnina*.
3. Mabingo. Elephant grass. *Pennisetum purpureum*.

Pits three to four feet deep are dug close to the lake, so that the lake water-level can be reached by the roots of the grasses which are planted therein. At intervals the lake water may be let in for irrigation purposes. The grasses are all of a water-grass type, rooting at the nodes and spreading very quickly. Roots are planted and fodder is cut and fed to the cattle, numerous cuttings being taken each year. On the banks of the pits elephant grass is planted to hold the sand together. This is cut for fodder.

Mention should be made of the grass which grows on the "mtwe" or reserved grassland for thatching purposes. The species "Bwimbu" *Trichopteryx Kagerensis* grows almost as a pure stand in the hilly centre of the island. This grassland is owned by a few individuals and the grass is sold to any who care to pull it at fixed rates per bundle. The only time that cattle are allowed to graze there, is after it has been pulled for thatching, and when it flushes at the first rains until it is six inches to one foot high. Not all owners exercise their rights of ownership in the case of grazing on this grassland. The comparison between this reserved grassland and the un-

controlled grazing adjacent is obvious. Erosion and bare patches are prominent and the grazing is exceedingly poor on the latter.

THE THREE-COURSE ROTATION OR CYCLE OF CROPPING OF THE WAKARA
(MAIN CROP PENNISETUM).



This rotation is not followed quite so closely as is, say, the Norfolk or Berwick rotation, but nevertheless there is a definite cycle which is followed by the majority as outlined above.

Trees.—The centre of the island is treeless but around the perimeter, where the people are settled, trees are not only carefully preserved but also planted. Close stands of trees are found grouped around the villages and single specimens scattered through the holdings, so that in some parts the cultivated areas look like orchard country.

Every tree has its owner and trees are looked upon as valuable possessions, according to their species they are used either for the building of huts or the small leafy branches are lopped off and fed to stock. The leaves of all species are used for the bedding of their cattle. With the exception of one or two species no trees are felled but the practice is to pollard them and the small timber that shoots from the bole is eminently suitable for the building of huts. These trees, the leafage of which is palatable to stock, are continuously topped to keep up a supply of young growth. This practice has resulted in most trees acquiring a peculiar appearance of large thick trunks with small leafy heads.

Fifty-six species of trees were noted of which the leaves of nine are used for stock feed. Eight of these are probably *Ficus* sp.: Ifilu, Ifuti, Ikobe, Itoma, Isenwa, Bukuyu, Butabolo, Bulumba.

The leaves and young branches of the species enumerated above are relished by the cattle and goats to which they are fed. There are two other species of major importance: Msambia, Kikara; Mabunga, Kikerewe (*Markhamia platycalyx spraguei*); and Msira, Kikara; Misisi, Kikerewe (*Mæsopsis Eminii*). The former is the most numerous tree on the island and has a variety of uses supplying building poles, hoe handles, etc., and is valued for its quick growth and free pollarding. This tree is planted by the natives round their houses in little plantations. The latter is the only true timber tree and is used for the making of canoes, planks, etc. It is quick growing and has a clean bole, and would seem to be suitable for afforestation elsewhere in the lake shore area.

Trees are bought and sold in the same manner as agricultural holdings not with the purpose of felling, but for supplying poles and cattle fodder. Sometimes fodder trees are sold separately quite apart from the land but not as a general rule.

Cash crops.—The only important cash crop and the one that pays a good proportion of their tax is rice. Bambarra groundnuts in good years may be sold in small quantities and Pennisetum seed also, when Ukerewe's seed supplies run short. Sena rice is the variety grown, but it is extremely mixed both with Sena with a red testa and with what appears to be a cross between Kalunde and Sena with a red testa.

The rice is grown on the only fertile soils in the island in valleys and on the lake shore.

Crotalaria striata may be cut and brought down to the rice holdings to be dug in. Ashes also may be applied to the soil. Sweet potatoes are planted as a catch-crop in September or October and harvested in December or January. In the meantime the rice seedlings in the nursery, which may have had ashes applied, are transplanted, and the rice is harvested in June and July. No farmyard manure is applied to the rice holdings. At transplanting time irrigation by damming the streams may be practised. Rice is sometimes planted for cattle food in June and sweet potatoes planted when it has been grazed or cut.

Diseases and Pests.—Owing to its insularity and lack of communications, pests and diseases are not prevalent. Striga is non-existent, although on the neighbouring island of Ukerewe, this pest is a controlling factor in sorghum cultivation.

Soil erosion.—Owing to the sandiness of the soils and the intensive cultivation anti-erosion measures are most necessary as arable land has to be kept at maximum productive capacity. The various methods of overcoming erosion are as follows:—

(a) Against sheet erosion:

- (1) tie ridging or pitting;
- (2) terracing without stones;
- (3) erection of stone walls to form terraces;
- (4) ridges used as paths between individual holdings.

The first two methods are most common and effective.

(b) Against deep-seated donga erosion:

- (1) banking up the sides of the streams to prevent widening of the stream bed, flooding of holdings and the spread of tributary dongas. Years of banking-up have resulted in the stream beds rising above the level of the surrounding land.

These methods very successfully counteract erosion in cultivated land, and have undoubtedly done much to allow such a dense population to subsist on such a small acreage. Nevertheless there are appalling examples of erosion on the edges of the little central plateau and elsewhere where there is no cultivation.

Land Tenure.—All land is completely owned by the individual and passes to the heirs. Actual holdings are bought and sold. Owing to the fact that land does not pass to a single heir, but may pass to all equal dependents, this has led to a disadvantageous splitting of the ownership into very small holdings, rarely exceeding one-tenth of an acre, with an average of probably one-twentieth, scattered over a wide area.

Summary.—Although this island gives us an example of what admirable methods of cultivation a native community can adopt under pressure of circumstances, unfortunately the whole system is controlled by the extreme density of population and does not allow full benefits to be obtained. Were their methods applied to a ten-acre mixed farm (as has been successfully carried out in Nigeria and is being attempted in various parts of East Africa), with the peasant secure in the tenure of his land, a large surplus over requirements would result and the soil would remain in its comparatively fertile state. As it is, uncontrolled settlement has led the Mkara to a very low standard of living, only sustained by a comprehensive improved system of native agriculture. On a soil so infertile, in an area of even moderately dense population, it is doubtful whether natives would attempt to plant any crop on it but cassava. The Wakara before the initiation and in the process of building up their system lost the greater part of the fertility of their soil, and even now may not be holding their own, and certainly would be unable

to do so should cattle sickness develop in the island. For this reason, the balance of trade is on the wrong side, and many Wakara have to emigrate to find work in order to pay their tax, whilst only the more fertile valleys allow of the production of the one cash crop, rice. Hence the adoption of the practice of mixed farming in any new settlement areas, should be accompanied by a complete control of incoming human and stock population, if it is to be successful and profitable to the natives. The Wakara have evolved a system, known for centuries in Europe, of great importance to native agriculture in the solution of the problems of overstocking, erosion, shifting cultivation and soil impoverishment.

Some Notes on the Mafia Island Group (Mafia, Chole, Juani and Jibondo)

By T. M. Revington

BEYOND very occasional references by various writers, little is known of the history of these islands prior to the beginning of the last century, and there are few other sources from which any information can be derived.

Lying as they do, on the ancient sea route, in close proximity to such trading centres as Kilwa, Madagascar and Zanzibar, they must, however, have played an active part in the chequered history of the Azanian coast.

In the first century, the author of the *Periplus* writes: "This coast (i.e. the Azanian) is destitute of harbours, but there are places where ships can lie at anchor. The island of Menuthias lies about three hundred stadia from the coast; it is low and wooded and has many kinds of birds and the mountain tortoise. There are no wild beasts except crocodiles. In this place there are sewed boats and canoes hollowed from single logs, which they use for fishing and catching tortoises. In this island they also catch them in a peculiar way, in wicker baskets, which they fasten across the channels."

Menuthias is usually identified with Pemba, but this reference serves to show that even at this date the Zanzibar Archipelago was inhabited, and probably there already existed a trade route along the coast for the traffic in ivory, both white and black. Local traditions mention the WaDebuli as the earliest inhabitants, but of these people, although they are similarly connected with Pemba and Zanzibar, nothing whatever is known, though it has been suggested that they came from the port of Dhabol, formerly Dabul, on the west coast of India.

As in Kilwa and Mogadisho, Chinese coins of the eighth and ninth centuries have been found here, which seems to indicate that the Chinese were trading here at that date. Mafia may have been included in the islands of Zaledji, of which Idris, writing in 1154, says: "When trouble arose, the Chinese transferred their trade to the islands of Zaledji, which face the coast of Zinj."

In 850, Ali bin Al Hussein founded the Sultanate of Kilwa, and Mafia must soon have felt the effects of his far-reaching power, a connection destined to last till German times. About this date too, the Islamic faith reached Kilwa, and doubtless spread to these islands. As to the events of the seven centuries following, it is fruitless to conjecture. This period probably saw the arrival of the Washirazii, that mysterious Persian people, who settled first, probably for reasons of strategy, on the islands of Jibondo and Juani. The ranks of Washirazii of to-day include many an Mbwera who has adopted

their race to raise his standing. Others, however, still have features which point to their being of Asiatic extraction.

With the advent of the Portuguese, we have definite, if scanty, information. On 4th April, 1498, on his first journey to Mombasa, Vasco da Gama sighted the island of Mafia lying to the starboard. The spread of Portugal's influence was rapid, for in 1509 Duarte de Lewes came here to collect arrears of revenue, and in 1571 an expedition visited these islands, which were under Kilwa. In 1635, a Portuguese commandant, subordinate to the Governor of Mozambique was stationed here, and a small fort was erected on the east coast of the island, with a wartime garrison of twelve. Local tradition states this fort was at Kirongwe, though in 1893 Baumann could find no trace of it. At this date, Auxole (Chole) and Juani had to pay an annual tribute of copal and coconut fibre to ships sailing to Portugal. From these references it can safely be assumed that Mafia formed a port of call where passing ships could refit, and a place of refuge when matters became unpleasant on the mainland, as at the time of the Zimba invasion in 1570, when these raiders from inland killed and ate three thousand Arabs. With the exception of the settlement at Kisimani Mafia, the submerged ruins of which are still to be seen, the bulk of the population was probably to be found on Jibondo, and at Kua on Juani.

The year 1697 saw the loss of practically all Portugal's East African posts except Mozambique, and marked the end of her activities here.

The arrival of the Shatri and the El-Kanaan Arabs cannot be dated accurately, but it is recorded that only after Said Said moved his residence from Muscat to Zanzibar did the rule of the Imams become more than nominal, and that the beginning of the eighteenth century found these islands the haunt of pirates. Local Arabs, however, claim that their ancestors settled here at least two centuries ago.

Intensive planting of the coconut palm had not yet begun, so that the main island of Mafia was populated only by the slaves of wealthy persons who still resided at Kua and Kisimani Mafia. About 1820 these places were raided and sacked by the WaEsclavi. Local tradition says that these people came from Madagascar in their war canoes, each carrying four men, and that the simplicity of the inhabitants made them an easy prey. The raiders were later repulsed on the mainland by the Sultan's Arab and Baluchi troops, but Kua was never rebuilt, and Chole Island, hitherto the residence of a slave population, became the seat of the Sultan's government.

By the treaty of 1890, these islands were handed to Germany, in return for her renouncing her claims to Stephenson Road on Lake Nyasa. Though the German flag was hoisted at Chole in that year, no resident officer was posted here till 1892, following the disappearance of the Indian Customs Clerk, together with the contents of the safe. Discipline was meanwhile maintained by a detachment of Soudanese troops, who made the most of their opportunities. Political affairs were in the hands of an Akida, subsequently imprisoned for embezzlement, who was responsible to the Kilwa Bezirk-

hauptmann. His house became the German Boma, and Chole continued as the seat of Government till 1912, when, owing to its better harbour, the present station of Kilindoni was opened.

On 10th January, 1915, this group of islands was captured by the British Expeditionary Force, under Colonel Ward. After a preliminary bombardment by the guns of H.M.S. *Kinfauns Castle*, a landing was effected at Kisimani Mafia, and the force advanced on Dundani, where contact with the enemy, some thirty strong, was made. The enemy retired on Ngombeni Hill, where they entrenched, but fled at the sight of an enflanking movement by the superior force. Kilindoni was occupied immediately, and the flag hoisted at Utende. Four German officers and one civilian surrendered, or were captured. A garrison of some two hundred troops was left, and Mafia became the base for operations by sea and air against the *Königsberg*, which, having hid in the labyrinth of the Rufiji Delta, was sunk on 11th August, 1915. Naval activities here have been aptly described by a local native who remarked that there were so many ships that their searchlights turned the night into day.

During the days which followed there were issued those provisional postage stamps, the rarity of which is one of the few things which acquaints many people with the existence of Mafia.

In November, 1922, the control of these islands passed from the Government of Zanzibar, in whose hands it had been since the end of martial law, to that of Tanganyika Territory.

The two following paragraphs are typical of the only knowledge of the history of the Islands left to the people. They were written in answer to a request to supply information as to the origin of the buildings to be seen beneath the sea off Ras Kisimani in the extreme north-eastern corner of Mafia. The inhabitants have no exact knowledge of Kua or Ras Kisimani, and impart information of events as having happened within the last century that must have occurred three or more centuries ago. "The town of Ras Kisimani was built by the Wadibri who came from the south and are the same people as the Wasakalava of Madagascar; they were at enmity with the people of Kua on Juani Island. The origin of the quarrel was as follows: The people of Ras Kisimani constructed a ship, and when it was finished and still on the stocks, they made a feast to which they invited the people of Kua. From amongst the guests they took by force several children, laid them on the sand and launched the ship over their bodies. When the Kua people heard what had been done at Ras Kisimani, they were infuriated and thought out a scheme of revenge. Seven or eight years later, when they thought that the incident had been forgotten, an invitation was sent to the inhabitants of Ras Kisimani to attend a wedding at Kua. When the guests arrived in the evening they were ushered into a room which had been especially prepared beneath a house; the hosts one by one left their guests on the excuse of inquiring into the food, until only an old man remained to entertain them. This he did so well, that the doors were bricked up without the guests

perceiving it. The bodies are there to this day. A message was then sent to Ras Kisimani, informing the headmen that the outstanding account against them was now squared. Less than a month later the town of Ras Kisimani was inundated by the sea.

At Kua, Shiraziy and Arabs lived together, and the reason for the destruction of the town by the Wasakalava is said to be that after the completion of the King's palace, orders were given for the amputation of the hands of the chief builder, a slave. This man travelled to the south and stirred up trouble among the King's enemies, chiefly the Wasakalava. He was successful, and Tungi town was taken and sacked. The Arabs of Kua were so incensed that they employed Abdullah bin Juma and Mohamed bin Juma to dislodge the Wasakalava, in which they were successful, recapturing the spoils of Tungi at the same time. This happened in the reign of Sultan Said bin Sultan of Muskat." (Early nineteenth Century?)

Several coins found on the Island at Ras Kisimani were sent to the British Museum this year through the agency of Mr. A. E. Robinson, of St. Albans, who writes: "They are specimens of the obsolete coinage of the once powerful Sultanate of Kilwa, which was founded about A.D. 740, by Omayad fugitives of Mesopotamia Three of the coins are illegible, but the one you cleaned was struck by the Sultan Suliman Ibn Husain. I have a note of a King (or Sultan) named Haji Husain, who ruled in 1503, so that fixes the date of the coin. . . ." Coins similar to that described above are plentiful and easily obtained on the Island; the British Museum has specimens.

The writer recently came into possession of a light green heavy china bowl, which is not without beauty. On the inside of the bowl is a fish's head in relief, the body and tail of the fish appearing below on the outside. The bowl is fluted and the edges scalloped. The former owner said that it had been in his family for over three hundred years, but until it has been examined by an authority on ceramics, the statement is scarcely credible. The fish motif would seem to suggest Chinese origin. A grey and blue plate, with the name of the maker on the reverse in Chinese characters, was bought for a few shillings on Chole Island, as were also two vases of a thick grey earthenware, decorated with irregular blue daubs. The latter three articles are described locally as "Sini Bakari." The name given to these pieces is most intriguing, but no explanation as to the term could be obtained from the natives.

The ruined town of Kua is rapidly disintegrating, but the remains are sufficient to enable one to visualize the character of the town. One of the dwelling houses was double storied, a flight of coral stone steps leading to the roof, on which the parapet, or the walls of the upper rooms still stand. Beneath the stairs, which lead from a walled courtyard is a "little ease," presumably used for the subduing of recalcitrant slaves. Beneath the main building is a "hamam," or bathroom. Its ceiling is of coral cut into curved

blocks, beautifully fitted together, making a plain vaulted Gothic type of ceiling, which is most attractive.

Indoor sanitation was provided by a flue from one of the top rooms to a pit dug beneath the outer wall.

Two mosques and a cemetery, with the familiar phallic headstones are nearby. Potsherds and beads can be picked up in quantities on the adjacent seashore. The writer collected a handful of the latter in a few minutes, and obtained a long string of them from a local native.

The town of Kua is on Juani Island, which is famous from Lindi to Mombasa for the curative properties of the milk obtained there. As the Island has very little soil, and the water is brackish, the virtue of the milk is a mystery. There is a cave on the Island, which has been formed by the action of sea water on the cliff, which also has healing properties. Sufferers from "baridi yabis," or rheumatism, and sundry similar ailments can be cured by bathing in the sea water as it runs out of the cave at the turn of the tide. Bathing is, however, inefficacious, unless the hereditary Mohammedan custodian is fee'd and the ghosts or spirits provided with an offering, which must be of some sweet substance such as honey, sugar or dates. Another cave, having like powers, is situated near Bweni in the north of Mafia Island.

The work of collecting and correlating the scraps of real history that can be picked up from time to time on these Islands still remains to be done, and would provide months of amusement in a somewhat lonely station. The dates of the happenings related can be determined approximately if the names of the Kilwa Sultans of the period referred to can be ascertained.

It does not appear that the present generation absorb, or take the same interest in, the details of the past that their fathers did. Any seemingly unimportant story might prove later to be a link in the chain of Island events, and is well worth recording for this reason alone.

The Story of Mbega

By Abdallah bin Hemedi bin Ali Liajjemi

Translated by Roland Allen

INTRODUCTORY NOTE.

Habari za Wakilindi was printed and published by the U.M.C.A. Press, Msalabani, German East Africa, in three parts. Part I, 1900(?) ; Part II, 1904 ; Part III, 1907. Part I, which is translated here, is now so rare that only a few copies are known to exist. Parts II and III, of which the manuscripts are in the library of the School of Oriental Studies in London, are fairly easily obtainable in Usambara ; but, except for a few short passages, the literary style is not nearly so good as Part I.

I have translated it into English almost word for word, in order to preserve so far as I can the form of Abdallah's speech ; but I have filled up the gap caused by the absence of one page with a few lines of plausible conjecture, and I have omitted one or two passages which seemed to me tedious or hopelessly confused, and particularly a few lines at the end of a chapter, where Abdallah anticipates the opening of the next chapter. This is a trick into which he falls from time to time, without any consistency, and it makes what is in English a very awkward and unnecessary repetition. The dramatic character of the narrative is wholly Abdallah's. I have tried to preserve it, but I have certainly not heightened it. It was that which attracted me : it is that which I think will appeal to English readers generally.

PREFACE.

I ABDALLAH BIN HEMEDI BIN ALI LIAJJEMI, have written this history because I think it good that all men should know it. What I did not know of myself I learned from reliable elders of the Wasambaa and I have written it in Swahili. It is the story of the origin of the Wakilindi and of how they conquered the country of Usambara and Bonde, and that part of Uzigua which is called the country of the Waluvu. Their command ran as far as the coast at Tanga and Pangani and Morongo ; as far as Vanga they were masters. In those days there was no higher authority but all judgment came from Vuga and all paid tribute, even freemen and Arabs paid tribute. See, then, the beginning until they became corrupt and lost their country through their ill-doing.

CHAPTER I.—THE BEGINNING.

Of old time there was in the country of Uzigua above Nguu a man named Mbega. This man was at strife with his kinsfolk. Every time one of his kin died the others gave him no share in the inheritance. According to their custom,

when a man died, his wife was given in marriage to one of his brothers. Now it came to pass that his own brother died, a brother born of the same father and the same mother. Then he said in his heart, I shall see whether they will give me my inheritance: I must certainly ask my brethren. The whole family met, and they said, Let us fetch an ox and a goat and make the wake. They all agreed and they fetched an ox and a goat. They met again and they said, Let us find a man proper to go into the house to sleep there, and they agreed that a certain young man should sleep there. Mbega was there on the spot with them, and he felt it bitterly, and he said, I will not stay here: in the morning I will go my way to my own house: these people hate me. I will not wait for their ox or for their goat, neither will I eat of their food; and he went out quietly and departed. And on his bed he wept bitterly. He had lost his brother, he had lost his brother's wife, and he said, Would that my brother were alive, for now I am alone. I have no one to stand by me, no not one; and my mother is dead, and my father. In the morning his kinsfolk killed the ox and the goat and made a feast, and prepared porridge in abundance, and all the people from all the towns came to eat of the feast and to hold the wake, and they gave the inheritance to that young man, and they gave him the wife of the dead, and they divided his goats and gave a share to each of his kin, and they divided his oxen, and they gave that young man his house, and the people went, every man his way. The family was left with their brother, and in the morning they charged him, Take good care of the children and your wife and your goats, and your oxen: see that you do not waste them; and when they had finished their charge, they went each to his own home, and he dwelt in the house with his wife and children in peace.

CHAPTER II.—MBEGA SENDS MESSENGERS TO HIS KINSFOLK.

When Mbega saw that they had finished the wake and that they had not sent for him, and heard that the man who had been made his brother's heir was so-and-so, he said, I must find men who will listen to me and send them to my kinsfolk to inquire what this means: this is a great matter. So he sent for elders of the town, and gathered them together at his house, and said to them, To-day I must speak, I must utter what is everyday in my thoughts, and do you elders hear me. And they answered, Speak, let us hear. And he said, I am Mbega the son of Buge and I have many brethren. Ever since my father died, whenever one of my kin dies, my family does not call me to the wake nor give me children, my share of the inheritance. Well, I want you to go, and to gather the elders of my family and my brethren and all who are within our gate, old and young, men and women, and to tell them that you have been sent by their child and their brother Mbega, and he says, Ask for me why I am put out of my inheritance whenever a man dies in whose inheritance I ought to share. What does it mean? What is my sin? And if I am a wastrel, let them tell you; ask them whether I am not fit to look after children, or whether they have found me a niggard who does not share

his food with all. Meanwhile I will be preparing food for you against your return. The elders answered, Very well; we have heard; and they went and gathered all the people together. When they had all come, they asked after their welfare, and said, We are all here: tell us why you have come. And the elders, the messengers of Mbega, answered, We have been sent to you by Mbega who said to us, Ask my elders why they do not give me my inheritance: every time a man dies they do not invite me to the wake: why is this? When they had finished speaking, the brethren of Mbega looked one on another, and every man said to his neighbour, You answer. And one man stood forth from among his brethren and he said, Listen you who have come here and we will tell you. A star does not show itself in the daytime. That Mbega of whom you speak is a madman. Why has he sent you instead of coming himself? Tell him, Your family says, there is no brother within our gate called Mbega. We are ashamed to say it: but we do not want him; we do not want to set eyes on him; not one of us wants him. The elders sent by Mbega asked, What is his fault that you all hate him? They answered, That Mbega is not human; he is an evil thing; he deals in black arts. All these deaths in our family are due to him. How then shall we give him any inheritance? Now our purpose is to find men to kill him that we may not see him again. The elders asked, But what proof have you that Mbega deals in black arts? They answered, From the moment of his birth his mother and his father hid him. They hid him because they loved him: he was a cross-toothed child; he cut his upper teeth before he cut the lower. When his mother died, we took the omens and we saw that he was indeed a bane and told his father to kill him, but he refused, because he loved him dearly. Well now our door is shut to him because he is Mbega, and we send you to tell him that we do not want to shed a man's blood, but he must leave our town, for we will not have him here. The men said, We are going, but we do not accept your answer. They replied, Be off, and come no more with words from Mbega. They said, We will come no more. They departed and came to the house of Mbega. He greeted them, and they sat down; he ordered food for them, and they ate and were filled; he said, Smoke tobacco, and they smoked. Then he asked news of their errand. They said, Our news is good; but your brethren will have nothing to do with you: they will not see you, nor hear you speak; they do not want you. Then go your way, and if you do not go, they are determined to kill you. That is quite certain: do not treat it lightly. Mbega answered and said, I have heard your words and theirs, and I have no reason to send anyone again. I too, do not want them.

CHAPTER III.—MBEGA'S CRAFT.

Mbega had a craft; he hunted wild pigs with dogs in the forest; and by that craft he got food and clothing. And he had many companions who followed him. When he went into the forest they went with him, and when they returned from their hunting, his companions tended the dogs and gave

them food and water; and some of the dogs lived with them in their houses. All these companions loved Mbega, and others of the people, all, except his brethren, loved him.

CHAPTER IV.—MBEGA'S TALK WITH HIS COMPANIONS.

Mbega gathered together his companions and said to them, I have something that I want to tell you all. Listen to me, and do not be afraid; I have no quarrel with you. You are to me as brothers. They answered, Tell us all, and we will listen. He said, The day before yesterday I sent elders to go to my brethren to ask them. Why do you not give me my inheritance? Whenever a man dies, you withhold my inheritance, and you do not call me to the wake, and when you hold the feast you do not call me. Well I sent the elders of the town to ask the reason for me. They went, they came to my brethren, they gathered them together, old and young and they told them what I have told you. When they had ended, my brethren answered and said, We do not want Mbega; we are all of one mind; we do not want to set eyes on Mbega, nor to hear a word from him. You tell him to go wherever he likes: let him leave nothing that he has; we are not robbing him, but if he does not go we will kill him. We have forborne long, and now we are tired. The elders whom I sent returned and told me all these words; they hid nothing from me; and now I have called you together to tell you. This is what I have to say. His pupils answered and said, What will you do now? Tell us all that is in your mind. He said, I am resolved in my mind to go whither I may go. I cannot live any longer in this country of Nguu lest I miserably perish. His companions asked him, Where do you think of going? He answered, I do not yet know where to go. I intend to take the omens and by them to seek out my path: if I find a way, I will surely call you and bid you farewell. They said, What do you mean? We want to go with you wherever you go, for we get neither food nor clothing except by this your craft of hunting; to leave you is ruin for us. He answered, Good. If the omens that I take agree, it shall be so. His companions went home. In the evening he took the omens using a medicine that induces dreams, and in the morning he saw the path by which he must go; but he saw a little flaw, and he said, What is the meaning of this flaw? Still I must go, and he called all his companions to bid them farewell; and he said in his heart, These companions of mine are other men's children. If they come to me saying, Let us go with you, I shall refuse. I will not take away any man's child, no not one. And he said to them, Collect all the dogs and come with them, and they collected them all and went to a place apart by themselves, that he might bid them farewell.

CHAPTER V.—MBEGA'S FAREWELL.

Mbega said, I am saying farewell to you my brothers, my helpers, my friends, my dear friends. We have long been closely united. We have shared our daily meals, we have long held fair converse together, you and I, and you have not wronged me at any time by a single word, and you have not

heard one evil word from me : well, let us be content. Do not be angry with me in your hearts : be content, and pray to God for me that I may meet no evil on my road. Good-bye, good-bye. To-day I leave this country, and I shall not return. I am not running away from you, nor from the people of the town ; I flee from my brethren who will not see me nor hear me ; that is why I am going. If you are asked, Where has Mbega gone? say, We do not know, nor do we know the path by which he went, only he bade us farewell. Well, again good-bye ; I shall fasten my door inside and no man can open my door. Then he sent his chief companion saying to him, Collect all the dogs, call them. His companion called all the dogs, and they came, not one was missing, and when they were all there, Mbega said, My friends I want to give you a parting present, accept it and give thanks to God. Do not forsake your craft of hunting and I will give you the charm. I cannot keep it from you. Now from these dogs take each of you one male one female ; do not take males only nor only females, because they will multiply and you will get a large pack and your craft will become perfect, and with God's blessing you will make your living. When he had ended speaking all these words, his companions answered and said, We did not know that you were going to say good-bye. When you said that you must tell us that you were leaving Nguu, we thought that you must tell us that we should all go with you, because, we and you—your fortune is ours—you have been as a parent to us : we should not have got our wives unless you had got for us the bride presents, so that we were able to marry ; we cannot let you go away alone, and if our wives refuse, we are content to leave them all. When they had finished speaking, Mbega answered, It cannot be : let me go alone : this is not unfriendliness. They said, Let two or three at least go with you. Mbega answered, Please, I cannot take even one. One of his companions stood forth and said, Give me leave and let me speak. They answered, Speak, and he said, Let us cease from entreating him. Let us not delay him, lest we bring ill-luck on him. His brethren do not love him : suppose that they get news that Mbega is here, perhaps they will do him a mischief. We had better let him go and bid him farewell with good luck in peace and safety. The others agreed ; they let him go ; they gave him their hands. Mbega set out with his wallet and his spears and his javelins and his bell-anklets and his dogs. Fourteen dogs went with him, and among them all he had one dog whose name was Chamfumu and it was as dear to him as his own heart. He went by night : when men finished their evening meal, he departed.

CHAPTER VI.—MBEGA LEAVES NGUU.

Mbega took his journey and went all night : he found a place to rest and he ate his porridge and pork and drank grain water and he thought with himself, I had better go to Kilindi. I shall find there many who know me, because the people of Kilindi often come to my house to buy meat and to seek my friendship. I have always refused, but to-day I am undone, because

my brethren cast me out. I had better go to those who do want me. So he set out and went all day till at sunset he reached the town, but when he arrived the gate was shut and he could not open it. In the town he knew one man by name, and he called him. His name was Mwanyange. Mwanyange did not answer, but another man came and asked, Who is that at the gate? Mbega answered, It is I, Mbega. He asked, What Mbega? We know Mbega of Nguu the hunter of wild pigs who drives them with his dogs, but there is no Mbega here in our country of Kilindi. Mbega answered, It is I, Mbega of Nguu. The man refused to open the gate for him, but went to tell all the elders and young men in the town, and he said to them, I heard a man at the gate calling Mwanyange, and I went and asked: Who are you? And he answered, I am Mbega of Nguu, so I have come to tell you all, and he is still at the gate. They said, We cannot believe that Mbega of Nguu has come here, but let us go and look if it really is Mbega we must open the gate to him. They took their weapons and they came to the gate, and they said, Hi, you, there at the gate, of what tribe are you? He answered, I am Mbega of Nguu. They asked, Who is with you? He answered, It is I with my dogs, I have no man with me. They opened the gate and he went in with his dogs, and they knew that it was in very truth Mbega the huntsman, and they said, It is he, it is he, and the report went through all the town, and they came to see him, and they said, Let us find a place for him to sleep till the morning.

CHAPTER VII.—THE REJOICING AT MBEGA'S COMING TO KILINDI.

When he was come into the town he lay down to sleep and in the morning the people of the town met together and the people of the towns and villages round about and those who were afar-off were sent word and they came, and they asked his story, and he told them all, he hid nothing from them. Then he said, I have told you all, but I have one word that I want to add. They answered, Hide nothing from us, and he said, I am your guest, and if in your hearts you will have me so, tell me. The men of the town said, We all want you here; but we are not our own masters, we must take you to our Chief. He answered, It is well. The elders went to the Chief of Kilindi, and told him the story of their guest, and how he had come to stay with them. The Chief said, It is well, but bring your guest to me that I may see him and give him wives. They went and took him with them to their Chief, and he greeted him. The Chief welcomed him with respect and ordered his servants to bring an ox and to give it to Mbega. Then the Chief told the elders and young men, Go with our guest, and find for him a good house and wait on him well. They went with him and did him honour and waited on him, and made a feast, and all the people, old and young, men and women, rejoiced; the rejoicing was exceedingly great, and they gave him a house and beds and mats of zigua; and then the elders of the towns and villages took leave of him courteously and went home, and neither had they any doubt in their hearts; and he stayed and rested with his friends two or three days.

CHAPTER VIII.—MBEGA BEGINS TO HUNT IN THE KILINDI COUNTRY.

When he had rested for three days, he said to his friends, To-morrow I want to go to find meat. His friends said, It is well, but we must take you, because you are a stranger and you do not know the best places nor the paths, and the forest is very great. It would be better for us who are natives to guide you so that you will not get lost. He said, Good. At daybreak he called his dogs, not all, but six only, and he started out with ten of his friends. They came to the forest, and they looked for pigs and found them. When they saw them, Mbega said, My friends, we have found the pigs, bring my wallet and gourds. They gave him his gourds and wallet, and he opened the wallet and took out his drugs and his bell-anklets, and he said to his friends, Hold the dogs, and let us bind on our bell-anklets and take our spears. They called all the dogs and they bound on their bell-anklets. Then he took his gourd and poured out a powder and gave it to all the dogs, and he said to his friends, Loose them. They let them go and pointed to the pigs, and the dogs saw the pigs and chased them and caught them up, and many of the pigs were taken and killed. When all was over, they collected them into one place, and there were very many. Then they took counsel and Mbega said, Bring much firewood and let us split these pigs and cut them up and dry the flesh. They brought much firewood, and lighted a fire, then they cut up the carcasses; and they roasted very much flesh and they ate and were filled, and they said, We cannot go to the town to-day, let us sleep here, and they lay down from very satiety. In the morning they said, What shall we do? Mbega, the master huntsman said, I should like to look for more; but his friends said, It is no use to look for more because the flesh here is as much as we can carry: let us pack up our loads. They packed up the loads as much as each man could bear, there was no load too heavy, and they set out and went and returned to the town. They journeyed till the sun was right overhead and they drew near to the town. Mbega said, We are close to the town, give me my wallet. They gave it to him and he opened it and took out horns, and then he said, Let each man take a little horn and I will take this big one, and begin to blow, and I will accompany the little horns, and they blew the little horns and he blew the big one, and when the people in the town heard it, they were startled, and they all came to the gate, men and women, old and young, and when they looked, they saw that it was the huntsmen who had gone the day before into the forest; and they welcomed them and took their loads from them and the huntsmen went with them to the house of the master huntsman, blowing their horns as they went, and there they put down the loads.

And Mbega went into his house and he set down his buckler and wallet and gourds, and he went out and the multitude rejoiced over him, and Mbega said to his friends, Undo your loads, and they undid their loads, and he said, Choose out the best meat, and set aside a large portion, and they chose it and set it apart. Then he said, Cut up the carcasses, and they cut them up; and he said, Let those who were with me take the two biggest animals, one animal

for five men, and let those five men divide it between themselves, and they did so. He said, Divide portions for every house and send them ; and they sent every house a portion, there was not one house left out. Then he said, Take the best portion, which you chose, and carry it to the Chief. When the messengers arrived, they said, We have been sent by that guest of yours. Yesterday we took him into the forest to hunt, and we found pigs and we returned to-day, and he said to us, Take my Chief a morsel and ask him to excuse me, I should have come myself, but I am very tired. This is the morsel. The Chief answered, I am content, do you not cease from your care of him and do not stay him from his craft, but go hunting often, and do not let him go alone, go with him, for in the forest there are many dangers. They answered and said, We will not leave him. So they returned to Mbega's house, and he asked them, What news from the Chief, what did he say? They answered, he was very pleased, and he gave us orders to take good care of you.

So Mbega practised his craft, and on his return from his hunting, he always acted like that. He did not fail to divide his spoil, and if one day he failed to take much he gave the people of the little that he had, that all might share, and if he caught much he gave much, so the people knew. To-day he has had good success ; to-day he has failed ; and they all loved him. As for the elders whatever happened in the country, they must needs tell Mbega, and he gave his counsel, and that was the end of the matter, it was accepted by the whole town and they did not oppose it.

Even the Chief held him in great respect, and day and night he was busy with men's affairs. Now God had given him grace of person and of speech, and knowledge of healing charms ; if any was sick he healed him ; and charms for war he knew, and to protect the town he could use magic, and wild beasts did not catch either men or goats or fowls. So Mbega was indeed a very great man in the country. He dwelt among the people and if war arose he worked charms and the war was ended, and if a sudden attack was made on the town, he made magic and covered all the town with clouds like smoke, and their enemies sought for the town and could not find it, and they departed and went their way. So Mbega was a very great man.

CHAPTER IX.—MBEGA'S FRIENDSHIPS AND HIS FLIGHT FROM KILINDI.

One day Mbega saw the Chief's son coming to his house to visit him, and he made him welcome courteously and asked, What is the news with you? He answered, All is well ; but I have a matter which I want to tell you ; only I want you to call two of your friends, men familiar with you, men of understanding. Mbega answered, It is well, and he called one named Mngodo and Mwanyange, and they came and said, You called us and we have come. And he said, I was sitting here when I saw this son of the Chief and I asked him his news, and he told me that all was well, but that he had something to tell me and asked me to call two of my friends whom I trusted. That is why I sent for you and now I will ask him his business, and they asked, What is it,

young sir? He said, Yesterday I was sitting with my father, and we were talking of magic charms, and I said, I cannot help wanting Mbega's charm for war, and for cloud screens, and my father said, You do well to want it. I told my father, I will go and ask him for it; but he will not give it to me unless I make a blood bond with him and we eat one another's blood; then he will not refuse, but will give me everything that I want. My father answered, Go, and if he agrees, take an ox and make the blood bond with him. So I have come. That is my business.

When he had finished speaking, Mbega said to his friends, Do you answer this. They said, It is good, but let us ask Mbega whether the charm would pass, and they asked Mbega. He replied, I have heard, but this business cannot be settled to-day, perhaps he had better come to-morrow, and I will think about it. The young man said, Very well, and he departed.

When he was gone, Mbega asked his friends, What do you think of this, my friends? They said, We ourselves think it very good; because, if you make a blood bond with him, we shall be delighted, and your position will be greatly strengthened; for perhaps your brethren may get news that you are here in Kilindi, and if they come with force to take you, he cannot give you up unless he does it honourably after they are reconciled to you.

Mbega answered them, For my part I do not trust his story. But go to the Chief quietly and see if his father knows about it. They said, Very well we will go. They went and came to the Chief and greeted him, he welcomed them, and they sat down, and a multitude of people were there. They waited for the people to go, but the number was no less, so they took the Chief and went aside with him, and said, We have come to see you because we have something to say. Mbega is your guest and he has a great store of magic charms which you want and he can give. How comes it to pass that you do not call him and ask him for a charm at least for rain, and get it, or for a charm for cloud screens, and get it from him? The Chief answered, That is what I and my son were talking about yesterday evening, and I told him, You go to Mbega and speak with him, and, if he agrees, make a blood bond with him, and my son went, but I have not yet seen him return. Now, if you see him coming, help him and bring them to agreement that he may get the charms. The men said, Very well; if he comes we will do our utmost to help him, and they took their leave and returned home.

When they came to Mbega's house, he asked them, What news from the Chief? They answered, When we came to the Chief, we took him aside privately and we spoke with him indirectly, that we might get at the truth of the matter, and we found that it was certainly true that he had of his own accord given his permission; he had even given the ox for the blood bond between you and him. So if he comes you had better consent, for he ordered us to help his son to win your consent. Mbega said, It is well, if he comes, it shall be so.

In the morning the Chief's son came and said, Give me your decision, yesterday I came with a proposal and you told me that you would consider it,

so I have come to-day for your answer. Mbega answered, It is well, I have considered it, and I am sure that it is good, if you are ready, I am ready. The Chief's son said, Now I will go to my father and tell him that I have got a good answer from you, and fetch the ox for the rite. Mbega said, Go.

The young man went to his father, and told him, Yesterday I went to Mbega and I told him all about our talk, and he answered me, I have heard, but I must think it over quietly; if you come again to-morrow you shall have my answer, yea or nay. I came back, but I said, I will not go to my father till I have his answer, that is why I did not come to you yesterday, now I have got a good answer from Mbega, and I want the ox for the rite.

The Chief answered his son and said, Yesterday two men came to see me, and they took me aside privately, and said to me, You are Chief, why do you despise charms? Mbega is your guest: whatever you want in the way of charms you can get from him. I told them, I have sent my son and he has gone to Mbega for that purpose; I am listening now for his return; if you see him talking to Mbega, help him till you bring them to agreement. And they said, If we see him coming and we are there, it shall be done.

The young man asked his father, What men were those who came to you. The Chief answered, Two men came, and they were Mwanyange and Mngodo. The young man said, I think those men were sent to spy out our purpose; because, when I went to Mbega's house yesterday, I found him alone, and he asked my errand, and I said, It is good; but I have something to say to you that I cannot tell you alone by yourself: call two men whom you trust, men of understanding, and then I will tell you what is in my mind: and he called just those two men who came to you; and when I had told my errand, Mbega said, My friends, do you answer; and Mwanyange said, His words are excellent, there is no evil in them; but we would hear you. And Mbega said, I have heard, I will think quietly about this till to-morrow. What an astute man Mbega is! I think that he sent those men to find out whether you knew of the plan and approved it, and to get the certainty from you by cunning questions. His father answered, Well, I said nothing against it. I told them to help you to agreement.

The young man said to his father, Give me the ox and let me go in the morning, and his father ordered a man to fetch a beast and the man went and brought a bull and gave it to the Chief's son, and he said, Drive on, let us be going, and they drove it to Mbega's house. The people who were there slew it and took sufficient meat and roasted it, and Mbega put off his clothes and lay down, and they made the incisions and then they made the contract in every detail as he desired; they omitted nothing. Then they divided the flesh of the ox and each took half, and Mbega said, Come into my house, and he showed him all, from the hole under the bed to the store shelf. And they ended.

The Chief's son said, To-morrow men will come to bring you to see my house; and he said, It is well. And the young man went home with his portion, and when he got home he put down the flesh, and he took a leg of

the ox and sent it to his father, for that was their custom, and he told his father all the terms on which he and his friend had agreed.

The Chief said to his son, When will he give you the charms? He answered, When we end the rite : he has shown me his house, even all that is in it, and I said to him, To-morrow come to my house. Well he will come, and I shall make him a feast, and after that I shall talk with him. His father said, That is good, but do not fail in your talk with him to speak of our charms. The young man answered his father, I will not fail, and he went to his house. In the morning he bade all his people and his wives, Get up, get up, and mix the meal, and others split logs : make haste, make haste, prepare food, my friend, my worker of charms will come, and very many people with him. His wives set up the mortars outside the house, and others sat down to the mills to grind, and then they kneaded the dough, and then his guests arrived and he welcomed them, and they sat down, and he said to his people, Set on food. When they had all come, they said, We are all here. The Chief's son said, Bring stools for all, and they brought stools, and he said to his guests, Come in, and they went in and each man sat on a stool, and they ate the food set before them, and were filled : they brought wine, and they drank, and they all rejoiced.

Then the Chief's son said to his friend, I want to speak with you and two others in private ; and Mbega took those two, Mwanyange and Mngodo, and they went aside and sat down. The Chief's son said, I have desired friendship and brotherhood with you. Clear your mind of all doubt, and do not deny me what I am going to ask. Mbega answered, Ask whatsoever you desire, and he said, I want you to give me charms : first I want a charm for rain, and then a charm for war, and then for the smoke that hides the town. Mbega answered, I promise to give you all, but collect little gourds that I may give you all that you ask. I cannot refuse ; but now our cuts are not yet healed, let us wait. The young man said, Thank you, let it be so ; and they made agreement and bade one another farewell ; and his friend went away with his people.

Then the young man went to his father and told him, My friend came and I made him a feast, and they ate and drank, and I took him aside and asked him for charms for rain and for smoke screens and for war, and Mbega answered, To-day it is not possible, because our cuts are not yet healed ; look for little gourds, and when our wounds are healed come and we will make the charms ; that is what Mbega said. His father answered and said, Let us do as he says, and do you have patience for these few days. So the young man waited until the days were fulfilled and he gathered many little gourds, and then he went and said to Mbega, I have got the gourds ; and Mbega answered, Come to-morrow evening and sleep here at my house. Next day he waited till evening and then he went and made smoke with Mbega, and they made charms all night and he filled his gourds, and when it was day he went to his house with his charms and laid them up, and then he went to his father and told him all ; and his father said, It is well.

Now Mbega took leave of his friend, saying, I am going hunting; and he went and spent three days and nights in the forest and on the fourth day he returned to the town with many pigs, and he divided the flesh, every house and every town and village received portions, and he sent much flesh to the Chief and some to his friend. He stayed at home three days and then he said, I will go hunting, and he went and spent two days and nights in the forest, and returned. That day he gathered all his friends together and said to them, I have a mind to hunt, but now the pigs have become scarce, they have gone far away. What shall we do? The men said, Now for this hunt, we will go further to a place in a forest where I think that we shall find them. Mbega said, I am a stranger here, and I do not know the coverts. They answered, We know them, so they collected food and braced themselves for the journey and took their pots, and Mbega sent a man to call his friend the Chief's son, and when he came, he said, I intend to go hunting, but I thought that I had better bid you good-bye, lest you should come to look for me. The Chief's son said, To-day I will go with you. Mbega answered, You cannot come, because now the pigs have gone very far away, and you are not familiar with the forest, and there are thorns in it, and there is danger and if your father hears of your going, he will be angry. The young man said, I certainly must go, let me take leave of him, and tell him that I am going hunting with my friend. Mbega said, Wait, and I will take counsel with my friends; and he asked them what they thought. They said, Do not go, return home, you shall have your share of the flesh: every time we return from hunting, your portion always goes to you. He answered, Yes, but I want to go because when you go, you do not come straight back, you sleep there in the forest, and when you come you have dried the flesh, and I want to eat it fresh. So they said, Come then, but take leave of your father, and come if he gives you leave.

He went to his father and told him, and his father said, Go, you have my leave. Then he went to his house and packed food for his journey and gave it to a lad that waited on him to carry, and he came to his friends.

They set out a very large company; there were twenty-five men. They went on and on far into the forest, and they looked for pigs all day without finding them, and they said, Let us look for a place to sleep in, and they found a place and swept it, and they set up their camp, and they slept.

In the morning they set out, and they looked for pigs all day but did not find them. They said, We will sleep out again to-day, and Mbega said, Ever since I began this work, I have never yet looked for pigs for two days, but to-day I am at my wits end. They answered, It is because there are not many left here near the town; so they slept there that night.

In the morning they said to Mbega, To-day let us go to that forest of which we spoke in the town, and if we do not find them, we had better go back. So they set out and came to the forest of which they had spoken, and when they got there, they went in in scattered parties, and they found pigs, and they called Mbega and told him, We have seen the pigs, but there are very

many of them, the clearing is full of them, and some of them are with young : there are too many of them.

When they told him that, Mbega said, Hold back the dogs, and they held them, and he took his spears and his shield and girded himself and then he gave all the hounds a strong drink and they were maddened by it, and then they set them on the pigs. The dogs rushed at them and scattered them, for the potion given them was strong. The noise made by the pigs was like the roaring of lions, and some of the men climbed up into trees and others fled at the sound of the pigs charging the savage dogs, for the turmoil was terrible. Five men were hurt and the Chief's son was killed. Very many pigs were killed, but when the men came together again they found the Chief's son dead, and they said, What is to be done? This is the son of great people. Mbega said, I shall do what you think best. They said, There is nothing for us now, but to flee wherever we may. Mbega answered, I know no place to go to because I am a stranger here. They said, We know many places; if you like, we will go together. He said, It is for you to choose. They answered, Come then, let us be off. Mbega asked, Do you think that where we are going, the Chief cannot follow us and catch us? His companions answered, Do not let us think of that; a fugitive does not heed darkness, sunlight is not for him: so we must not heed darkness or danger. Mbega said, That is true. They set off, fifteen men, and their names were, first Mbega the master hunter, then Mngodo and Mwanyange, and Muhuyangu, and Muhandu, and his brother-in-law Msiro, and Fumbiri, and Mwoka, and Kiumbe and Muambi and Dahi and his brother, and that slave of the Chief's son. So they started and went on and on till the sun set and they slept in the forest. They had with them eleven dogs which had come with them, and they slept in the forest three days and on the fourth day they reached the town of Ruvimbo.

They came to the outskirts of the town, but they did not go in. There was among them one man who was well known there; all the towns, all the country knew him; and that man was Mngodo. When the people of the town saw him they came to meet them in a body and asked their news, and they answered, All is well, we have come from Kilindi, we have come to hunt pigs. The people of the town said, It is well, we know that you Mngodo come from Kilindi, and they invited them all into the town. Mngodo said, We cannot enter the town because we have magic on us that does not permit. The people answered, It is enough. They stayed there three days, and on the fourth day they started and went as far as the town of Msingiri near to Mkulumuzi. They halted there one day and the next day they reached Mkulumuzi and came to Muwaleni, and when they saw the town of Muwaleni, they said, Now we have got here we will stay some time. Mngodo went into the town and they all recognized him as Mngodo of Kilindi and when anyone asked they said that they were all of Kilindi, because Mngodo was, and Mbega was of Nguu, but the others were men of Kilindi, so they supposed all were men of Kilindi.

They left Muwaleni and crossed the river of Luvu and came to a place where was a lake called the lake of Lamu. There they stayed two days, and they said, Here we shall catch no pigs, but there are no men, so let us follow the hills, perhaps we shall find men. for everyday we see the smoke of their fires. The hills which they saw were the hills of Kombora and of Mrungui and of Kelenge. They went along those hills till they came to a place where there was a large clump of trees, and they killed many pigs, and they said, Let us make a camp and stay here, for there is abundance of meat. They built little huts and they lay down there. On the next day the men of Zirai saw smoke by day and fire by night, and they said, Perhaps that fire is men of Kombora looking for honey. The second day and the third they saw the same thing, and they said, Let us look into that fire in the bush. Eight men set out in the morning and broke through the forest, for there was no path, and they came and watched, and the men there were all talking the speech of Zigua. They asked them, Strangers, whence come you? They said, We are hunters of wild pigs, and they gave them much meat, and they ate. Then they said, We are going home. Mbega and his companions asked them, What food have you in your stores? What do you live on? They answered, Our food is maize and bananas and yams. They said, Bring us some bananas and let us buy them with flesh, and bring us some maize. To-morrow, they answered, we will come. And they said, Bring us also a mortar and cooking pots, and let us buy them. They promised to bring them, and they were given much flesh and they packed it and took their leave, and went their way to Zirai. When they reached the town, they put down their loads of meat and called the people of Zirai who were in the town and had not gone into the bush and they gave every man a share and he was glad. Then they said, Business; those men asked us to take them a mortar and cooking pots and we promised them. Among those who were there was an elder who said, Attend to me. You had better take counsel in the matter of these strangers from Kilindi, and get them to move into the town here that they may not be troubled about food, because they have no women to pound for them and to sift the meal and to mix their porridge. Let men of standing go and talk with them and, if they agree, come with them: there are many pigs here with us. The people answered, This counsel is good and true. We agree. They lay till morning and then many of them went and among them were men of standing. The men of Kilindi asked their news, and they answered, Yesterday, you sent us to fetch you a mortar and pots: we have not brought them: we have taken counsel with all the elders in the town, and they said, Bring the strangers to stay with us and let them not stay in the bush where they will be distressed. So we have come to fetch you: that is why we have not brought the mortar. Mbega answered, We cannot go: but if you want us to go, we will not all go: I and one other will go to kill pigs and buy the pots for our use, and in two days I will return. His companions agreed, and so did the others, and Mbega went with one man and five dogs and came to Zirai Pangai.

[*To be continued.*]

Agricultural Notes

By D. Sturdy

MBULU.

“THE WAMBULU (properly Erokhi) are the most numerous and important tribe in the district. They are Hamites, diligent agriculturists and large stock owners.”—Land Development Survey Fourth Report, 1930.

The country at present occupied by the Wambulu, a rapidly expanding tribe, extends north, south and west outward from the highland area Kainam (including Kuba, Murray and Kareabi) within the encircling Nou forest. Kainam is the oldest known home of the Wambulu and they would appear formally to have been confined there by the presence of Masai and Mangati in the lower, more open country. This outward spread began westward into country toward the Eyasi depression, from which in more recent times they would appear to have been again driven by tsetse encroachment. The outward spread northward, following the retreating Masai, is marked by the following dates of occupation:—

ca. 1917–1919 : Bugere.

ca. 1920–1922 : Endabash.

ca. 1929–1930 : Ghurus and Karatu.

ca. 1931–1934 : Attempted occupation of Hg'mpai or Mbulu-Mbulu.

As the rainfall in the areas of more recent occupation is less than in Kainam slight variations in practice are adopted. In Kainam, with a rainfall probably of fifty to sixty inches per annum, the principal grain crop is maize with a smaller proportion of millets and sorghums; in other areas with a rainfall of only about thirty inches the proportion of maize is reduced apparently to about half.

Houses in Kainam are of round structure with tall, thatched roofs, long-lasting reed thatch being used, obtained from the abundant swampy streams. In the drier areas now occupied by the Wambulu reed thatch is not obtainable and the houses revert to the *tembe* type: this type is also seen elsewhere in use by other tribes in the district. The Wambulu pattern, however, gives more headroom than is usually found: indeed there may be six to seven feet of headroom within the doorway. The houses being invariably built into the western slope of a hill, this headroom is easily obtained by sinking the eastern wall of the house level with the surface of the ground.

The system of land tenure among the Wambulu is governed by certain hereditary elders, to whom payment in oxen for use of a given piece of land has to be made. The cattle so subscribed do not become, however, the property of the elders but are kept as a “Trust account” from which relief can be given to destitute widows, or to any persons overcome by sickness.

Excellent agricultural practices were adopted by the tribesmen before the advent of the "Pax Europea": this was probably forced upon them as they were circumscribed by more aggressive tribes and as everybody knows "necessity is the mother of invention." Nowadays, however, there would appear to be a tendency to forget these practices due no doubt in part to relief from external pressure.

Men and women work together in the fields, the men undertaking the heavier part of the work including the bulk of the initial season's cultivation, which is a thorough one. Manuring is diligently practised on the older fields. The manure after being cleared daily from the houses is carefully dried and stored in the houses under cover. It is applied during the dry season, and spread and incorporated in the soil at the time of cultivation, and in exceptional cases also it is used as a top dressing after the crops have commenced to grow. It is sad to relate, however, that although they have learnt the need of manuring their old cultivations, the Wambulu seem still imbued with the mistaken idea of "the inexhaustable fertility of tropical soils," and when the opportunity occurs of cultivating virgin land, they are accustomed to reap crop after crop without returning any manure to the soil until such time as the evidence of decreasing yields is rudely presented to them by nature.

From my own calculations I believe the Wambulu to cultivate not more than three to four acres per household, but this is cropped twice in the year. The planting seasons are: October, November, December, for bullrush millets, beans and maize; and April, May, June, for maize, sorghums and wheat. Fields are scattered widely apart, and are individually of small size, rarely more than a quarter of an acre. Thus wide variations in soil types and situation are obtained for each individual, each householder having approximately an equal proportion of bottom valley, and hillside slopes under cultivation. This scattering of the separate holding of each individual is probably governed by the same principle which directed the division of the open fields in medieval England, or the modern practice of the "Latin Square" in experimental agriculture.

The soil throughout the Wambulu tribal land (except in the far north on the slopes of the great cauldron volcanoes and in occasional isolated patches elsewhere, where recent lava flows occur) is derived from granite gneiss or schist rocks which appear as flat-topped tors and rocky precipices on some of the hills. In the highland areas it is almost always kept damp and probably carries naturally, open forest with wide grassy glades. Ungrazed within the forest reserve these grassy glades carry a large proportion of *Themeda trianda*, but on the heavily grazed areas outside the reserve this would appear to give place largely to the less palatable grasses *Setaria sphacelata* and *Sporobolus indicus*, and later, where erosion has occurred, to *Hyparrhenia hirta*. I have also evidence which tends to show that the valuable Kikuyu grass *Pennisetum clandestinum* is spreading in areas where grazing is heavy but not unduly so; this evidence is deduced from the presence of this grass in the close neighbour-

hood of settlement in areas where it was not otherwise observed. *Urochloa helopis* occurs in abandoned cultivations.

In the lower levels *Chloris gayana* is a common and valuable grass quickly extending into abandoned cultivations, and *Amphilophis insculpta* occurs in patches throughout the district. A thistle (Wambulu, *Bure*) is a serious weed of grassland everywhere in the area occupying in the place of grazing grasses many hundreds of acres in the aggregate. Bracken occurs particularly in eroded areas: while a cactus of the "rat tail" type is a persistent weed which, should it increase, might lead to the ruin of large areas.

In parts of the district, particularly in conjunction with Kikuyu grass, there occurs naturally abundant white clover.

I have commented upon the excellence of Irakw agricultural practices, the co-operation of men and women in the work of the fields, manuring, and the form of land tenure. At this stage it will be well to mention that the Wambulu, so largely interested in the welfare of their cattle, practise a certain amount of hand feeding, though this is negligible as compared with that done on Kilimanjaro: but they have devised a system of grazing reservations which is both exceptional and of considerable value in that during the wet season certain areas are set aside into which no cattle or other livestock may be taken for grazing until the elders give the word.

But it is in their efforts to solve the problem of erosion that the Wambulu deserve perhaps the most credit: a bird's-eye view of a Kainam landscape containing hundreds of individual fields revealed but a single instance, after a heavy rainstorm, of the tell-tale dark smear of eroded surface soil. Investigation of the Wambulu practice shows that around the upper sides of each field it is customary to dig a storm trench: the crops are contour planted, and ridged at the first cleaning to form a series of small contour ridges, strengthened in some cases by a line across the fields of sweet potatoes planted on a ridge. The lower ends of the fields are further protected by a row of pumpkins which help to catch any soil which may be shifted. In Kainam it is not unusual to see definite terraces, formed it is true by regulating the forces of erosion, but now after possibly hundreds, certainly scores, of years a sure safeguard against further destruction of the land.

It is deeply regretted, however, that these excellent precautions against erosion are not practised to anything like the same extent in the areas to which the Wambulu have migrated in recent times. Soil erosion due to cultivation is in such areas a serious factor, and after rain from nearly every field there can be shown loss of soil.

MBUGWE.

Eighty-eight miles from Arusha on the Dodoma road at the southern end of Lake Manyara on a dried up portion of the old lake bed, are to be seen the clustered *tembe* huts where live the Mbugwe tribe, numbering about three thousand tax-payers; they are the only Bantu tribe in the Mbulu District and are related to the Bantu Rangi of Kondoa.

The close clustering of the low *tembe* houses gives the appearance almost of a town as no cultivation occurs nearby. Some houses are of very large dimensions; that of the sub-chief being about fifteen yards square. The houses all face slightly north of west, and usually have a small veranda on that side. The floors are only dug down about one foot or eighteen inches and as the external height is only about two feet six inches the maximum internal height is only about four feet.

The interior of a house consists of a central passage with quarters for livestock on the right (south) of the door, and a sleeping compartment on the left (north): this is entered from a small side passage about two-thirds down the length of the building, which passage also communicates with one or more store rooms in the north-east corner or along the eastern wall. All the livestock of the tribe is housed at night but there is no handfeeding. Grain is stored in very large woven grass baskets holding up to a thousand pounds. These baskets approximate in shape to large cream scalding dishes.

The manure from the livestock is carefully carried out each day to a heap in the front of the house and is carefully dried. During the wet months this dried powdery manure is carried back into the houses as bedding. The manure is not put to any other purpose.

The area on which the houses are closely grouped together is near the lake on a definitely alkaline flat. No cultivation takes place near the houses except on a very few small ridges. At some time in the past (possibly during the war) drains have been cut through these flats to carry off storm water, but most of these drains are now silted up. In some cases the houses are surrounded by low dykes of manure or turves to keep out floods.

There are practically no trees on these flats and erosion is serious, due principally to the over-grazing and concentration of cattle night and morning while being driven to and from the houses. Erosion is further induced by the practice of cutting turves from the closest growing grass (*Sporobolus Spicatus*, Kunth., typical of alkaline flats) for edging the earth roofs of the houses.

All cultivation in Mbugwe is done by the men-folk who go to the fields armed with spears and shields besides their short-handled and broad-bladed hoes. Sorghum, bullrush millet and a very little maize are grown and no other crops. Of the first-mentioned millet three varieties are recognized called *kiloma* and *kimereri* both said to be early ripening and *ofemba* which is reputed to be a late maturing variety. The average area under cultivation per householder would appear to be about five acres: this is expected to yield between one thousand five hundred and one thousand eight hundred pounds to provide for a household of four during the ensuing year.

The reason given for the women not working in the fields is that owing to the entire lack of marriage custom and the constant changing of husbands, no woman stays long enough with one man to reap what she might otherwise have sown. No doubt this is also a contributory cause to the decreasing population and to the almost entire absence of young children. I have also

heard that it is *mwiko* for women to break the soil. The Mbugwe appear to be frequently on the verge of starvation, and in 1925 and again in the early part of 1934 famine relief food was issued. The cause of such food shortages would appear to be largely due to slackness about early planting resulting in partial failure of the grain crops, and due too to complete absence of any drought and locust resistant crops such as cassava or sweet potatoes.

All the cultivation, at least on the east side of the country, takes place on a ridge formed of lime conglomerate with a granite base; this lime ridge probably forms one of the older beaches of Lake Manyara and can be followed up along its eastern shore. The soil is fairly sandy and free-draining and is undoubtedly suited to the hardier grain crops such as are grown. Over the cultivated area baobab, Sausage Tree (*Kigelia* sp.), and some thorn are found, but the bulk of the thorn has been cut out of recent years to free the area of tsetse. *Aesclepias* sp. is a common herb in the area which may have a commercial value in the fibre industry, but which certainly could be used by the fishermen of Lake Manyara for making nets as it is by the Bolobolo of the Lake Tanganyika shore.

Besides being agriculturists the Mbugwe figure as large stock owners, fishermen, bakers of pots, salt extractors and basket cord and mat weavers. As stock owners they have a fairly large number of cattle and donkeys but comparatively few goats and sheep. The fishermen do not use nets. Water jars, cooking pots, and salt and basket work are bartered in times of food shortages for grain from the Wafume and the Wambulu with whom there would appear to be a standing agreement for help in times of dearth. The Mbugwe are not beekeepers and make no use of honey, they have not therefore any wax for disposal.

Game, such as elephant, pigs and eland in particular, do considerable damage to crops, while tsetse are encroaching on all sides but the west. Some encouragement has been given to the tribe to move westward to what is apparently very fertile land below the rift wall, but there has been little or no response. The Mbugwe are naturally conservative but, apart from this, the probable reason for this reluctance to move is their preference for the easier work on the old limestone ridges to that of the more arduous task of opening up new country. On the limestone ridges cultivation is simple and little weeding need be done whereas further west a heavier alluvial soil means a constant fight against weeds and an initial tackling of elephant grass. It is to be noted that the latter type of soil would give a bigger yield than the limestone ridge type. In 1934 when further famine appeared imminent and desperate effort was made under Government supervision to ensure food supplies by cultivating under irrigation at Kisangaji this was successful.

Acknowledgment must be made for much of the information given in these notes to letters and conversation with Mr. H. C. Baxter, District Officer, Mbulu, and his predecessor Mr. A. L. Pennington—also to Mr. Gordon Russel, Assistant District Officer, and Mr. Tully, Stock Inspector.

Preliminary Report on Examination of the Engaruka Ruins

By L. S. B. Leakey

GENERAL NOTES.

IN 1913 Professor Dr. Hans Reck of Berlin on his way to Oldoway Gorge passed through Engaruka and noticed a number of stone burial cairns—one of which he opened. He was of the opinion that they were probably of Neolithic age,* and after the war when I started work in East Africa he passed the information on to me, suggesting that I might go and investigate the place further.

I was unable to fit a visit to Engaruka into my plans until my fourth season, and I had made arrangements to visit Engaruka in July, 1935. When on 7th July I arrived at Arusha to get stores, etc., I received the news that Mr. Wetherell had "discovered" a large ruined city at Engaruka, and this news made me suspect at once that possibly the burial mounds were not, after all, of Neolithic age, but were probably much more recent.

Owing to car breakdowns, etc., I was not able to get to Engaruka until the 13th July and I spent from then until 1st August making a brief examination of the Engaruka Ruins. I may say at once that as a result of my investigations I have formed the opinion that the ruins and burials are of a comparatively recent date, not more than three hundred years old and possibly still younger, but at the same time there can be no doubt at all of the very great interest and importance of the place.

Although the existence of stone burial mounds and of a few small ruins had long been known, there seems little doubt that the credit for the discovery of the very large size of the ruined city belongs to Mr. Wetherell, and thanks are due to him for having made his discovery known so promptly, so that adequate measures for the protection of the ruins can be made before they are destroyed by casual and haphazard "treasure hunters."

The Geographical Position.—The Engaruka Ruins are situated along the scree slope of the Rift Valley Wall on either side of the small stream known as the Engaruka River. The main ruins are concentrated upon the slopes mentioned above, but there are less concentrated ruins to be found in the plain below over a wide area, and it is on the plains that the vast majority of the burial mounds occur. Also on the plains, there is to be found a complicated network of low stone walls, whose exact significance is not yet clear.

* EDITORIAL NOTE.—In Vol. 34 (1926) of *Mitteilungen aus der Deutschen Schutzgebieten*, page 57, Dr. Reck states clearly that the people who buried their dead in the Engaruka graves were a hamitic race, and remarks that the age of the ruins "is only a few centuries removed from the present day and that their excellent preservation warns against attributing to them any surprisingly old age."

The site of the Engaruka city seems to have been selected with a view to having a good strategic position for defence, and it was indeed admirably suited for this purpose. In front of the Rift Valley Wall are a number of low hills separated from each other by narrow passes—thus giving a sort of natural front defence, while the steep scarp of the Rift Wall which lies behind the city forms a complete and perfect barrier against any attack from that quarter. The presence of the Engaruka stream as well as of several others which now only run in the wet season, gave an ample water supply to the “city.”

Excavations.—As the time at my disposal was extremely limited, I decided that all I could do was to make a careful examination of one or two selected sites with a view to getting clues as to the age of the ruins and some indication of who made them.

With the aid of my trained staff four excavations were carried out as follows:—

- I. A large burial cairn.
- II. One of the smaller houses of the main city on the scree slopes.
- III. A small burial cairn.
- IV. One of the large houses in the valley.

I. *The large Burial Cairn.*—I have (for convenience) divided up the area covered by the ruins into sections as follows:—

- N.R.—The north ruins, i.e. that part of the main ruined city which lies on the scree slopes north of the Engaruka stream.
- S.R.—The south ruins, i.e. that part of the main ruined city which lies on the scree slope south of the Engaruka stream.
- N.V.R.—The north valley ruins, i.e. the ruins lying in the valley between the foot of the scree slope and the front foothills and to the north of the Engaruka stream.
- C.V.R.—The central valley ruins, i.e. those which lie immediately between the Engaruka stream and a low rocky hill a little to the south of it.
- S.V.R.—The south valley ruins, i.e. those which lie to the south of the low rocky hill just mentioned.

The site of the burial mound first opened by me was just at the junction of the C.V.R. and the S.V.R. group of the ruins. A detailed plane table survey of an area about eighty yards square which includes the burial mound No. 1, and a number of others, shows an extremely complicated network of low stone walls which covers the whole of the valley ruins area.

The burial mound selected was a well-preserved one of more or less rectangular shape having sides about thirteen feet long. The mound consisted of a very carefully constructed stone enclosing wall the inside of which was packed with rubble of small stones and stony soil.

Unfortunately the excavation of this mound did not yield a human skeleton—apparently because the nature of the soil is not such as to preserve

bone—and the only objects of interest found were pot shards in quantity and a small part of a broken iron knife.

II. *The Small House in the Main City on the Scree Slope.*—We next turned our attention to a small house on the scree slopes in the main city. The houses of the main city are all built upon very well made terraces upon the scree slope. The scree slope is at an incline of one in two and a half and the terraces are cut into this and built up with very well made stone walls. The terraces include pathway terraces and house terraces.

The excavation of the house yielded a few beads, some pottery fragments, some animal bones and a small iron "razor" of unusual type. The excavation also revealed the very curious way in which the fireplaces of these houses were built.

III. *The small Burial Cairn.*—Not having succeeded in finding a skeleton in the first burial mound excavated I next decided to open a second one. The cairn chosen was in the central valley ruins area. This was excavated in the same manner as the first one—that is to say it was rebuilt stone for stone a few feet away as excavation proceeded. It was a small cairn, again more or less rectangular in plan and about eight by nine feet. Like the first mound this too did not yield a skeleton and probably for the same reason, but it yielded pottery fragments as before.

IV. *One of the Large Houses in the Valley.*—In all of the valley ruins there are to be found very large circular stone houses with walls up to six feet thick, and although my time by now was very limited I decided to make a quick examination of one of these. The one selected lay about a hundred and eighty-eight feet north-west of the small burial mound. Excavation yielded pottery, beads and a few metal objects and showed that the floor level lay about two feet below the surrounding general ground level.

On the surface of the floor of this house before excavation we found a series of stone walls which, however, do not appear to belong to the original occupation of the house but to some subsequent one (probably by the Masai during the "great famine").

Middens.—Scattered over the whole area are midden deposits into some of which we made small trial trenches and riddled the material. These middens all yielded quantities of beads, bits of iron and copper wire, copper chain work, etc., but all the indications of the evidence obtained by us suggest that the middens are of very recent date indeed and are probably of Masai origin and are not connected with the ruins themselves. Masai tradition (see below) confirms this view.

"Inscriptions."—It was reported to me before I went to Engaruka that there were many "inscriptions" to be found in the ruins. These were supposed to be on stone blocks in the houses.

I found absolutely no trace of any such inscriptions, but the origin of the rumour probably lies in a small number of blocks of stone upon which there are engravings. These engravings cannot by any stretch of imagination be correctly called inscriptions. For the most part they consist of irregular lines

and round "cup marks" and they recall to some extent the "cup and ring" engravings of European archaeology. Their significance at Engaruka is not clear, and will not be clear until the whole of the ruins have been mapped and the exact position of each of these engraved stones noted. I suspect that they are clan marks, and that they indicate the position of clan areas in the city, but this is only conjecture at present.

Masai Tradition.—While at Engaruka I got in touch with a number of very old local Masai natives and ascertained from them that according to their tradition handed down by their forefathers, this city of Engaruka was inhabited by the Mbulu tribe and that the Mbulu were driven out by the Masai about a hundred to a hundred and fifty years ago. The cultural objects found by me in excavation also *seem* to point to an Mbulu origin for these ruins, but until a great deal more work has been done, this cannot be stated to be proved. I am hoping to go shortly to Mbulu country to see if the Mbulu themselves have any traditions which would link them with Engaruka.

Several of the old Masai still living told me that during the great famine they themselves occupied part of the ruins in order to defend themselves from other sections of the Masai, who owing to famine conditions were attacking them and trying to steal their few remaining cattle.

Age of the Ruins and Their Extent.—From the evidence at present available I should say that the ruins are from three hundred to one hundred and fifty years old—and that they were probably made by the ancestors of the Mbulu. If this is true a very interesting problem at once presents itself and that is: Why have the Mbulu now given up building in stone and living in cities?

I estimate that there are about six thousand three hundred houses in the main city on the scree slopes (i.e. in N.R. and S.R. combined) and that there are about five hundred houses in the valley ruins, where burials are far commoner than houses.

The population figure was probably between thirty and forty thousand and I think this may be an under-estimate.

There is a vast mesh of stone walls and terraces in the valley ruins which I take to be connected in some way with cultivation and irrigation, but this is not proved. Should these on future examination prove to be house areas also then the size of the city was very much larger.

In conclusion I would like sincerely to thank the Government of Tanganyika for giving me facilities to make this preliminary examination.

Notes on the Nesting Habits of Some Tanganyika Birds

By N. R. Fuggles-Couchman

ANY ornithologically minded person having interest in the nidification of birds is well supplied with material once he enters the tropics. Whereas birds of the northern and southern latitudes, with their extremes of climatic conditions, are forced by various conditions of food and climate to rear their young during one comparatively short season, it is possible to find nests in this country during each month of the year. This statement, however, must not be taken as applicable to any one species of bird. Except for the few "domesticated" birds such as, *inter alia*, the pied wagtail, the cordon bleu and some swallows, each family or species within a family has its optimum breeding season, and nests will not normally be found outside that period. This is not as surprising as it might seem when one considers the great range of climatic and vegetational conditions which occur in any one district in the Territory and with which various species of birds may be correlated. In Europe the optimum conditions of food, cover and warmth through all types of country are only to be found for about six months of the year, and all nesting is naturally confined to that period. On the other hand, in Africa bird life is naturally affected by such happenings as the bush fires in the dry season, the growth of cover and graminaceous food in the rains, the increase in insect life at that time, the perpetual cover of the rain forests and so forth. Thus, bush-loving birds, such as the fork-tailed drongo and ground nesters such as larks and pipits, do not nest when the bush fires are liable to sweep through their territory to destroy their nests. In dry country the breeding urge is connected with the onset of the rains, or with the advent of other conditions which will create a suitable and sufficient supply of food for the young, so that graminivorous birds such as waxbills, whydahs and some weavers will nest when the rains have brought on a good grass growth and seed is abundant. Further, birds partial to long grass for the support and cover of their nests, e.g. bishop birds, warblers, etc., will be confined to a period after the rains have set in and before the grass is dry enough for firing.

Belcher⁽¹⁾ gives the following times of breeding for the chief families in Nyasaland. They appear to be closely applicable to the various nesting seasons in the Eastern Province of Tanganyika Territory but it is frequently the case that for the same species, at the same level, the further north one proceeds the later is the nesting season. Thus the nesting seasons of families in central and northern Tanganyika would probably be somewhat later, and at any time governed by local climatic conditions. In Nyasaland according to Belcher the short rains, falling in September and October, give great impetus to the nesting of cuckoos, turacous, rollers, kingfishers, bee-eaters, hornbills, hoopoes, owls, nightjars, mousebirds, barbets, honeyguides, woodpeckers, crows,

drongoes, shrikes, starlings, flycatchers, sunbirds, bulbuls, thrushes and chats. The warblers, most of the weavers, whydah birds and waxbills are raintime nesters, together with some finches and most of the pheasant family (guinea-fowl, etc.). The cold months include the breeding season of the doves, quail and all waterfowl, which nest up to August. The birds of prey are stated to nest during the dry season, up to October, while birds of the mountain forests nest between the months of October and March. Belcher gives the wire-tailed swallow as a cold weather nester; the writer has records of its nesting in both the cold and hot weather, and this species together with the stripe-breasted swallow, pied wagtail, cordon bleu and animated plum, cannot be said on present records to have any definite nesting season in eastern Tanganyika. This, as mentioned above, is probably due to their domesticity, shelter being afforded by European buildings, and food being easily obtained near dwelling places. Another of the writer's records which does not agree with Belcher's generalizations given above is that of a yellow-vented bulbul nesting in March, but as this is a solitary record, it may have been one at the extreme end of the species' period. A record earlier than Belcher's is of a hornbill feeding young in July.

To what extent species go in for double broods is not well known; the writer has a record of such in the pied wagtail, and infers it in the stripe-breasted and wire-tailed swallows, all again "domestic" species in which such double brooding might be induced by the favourable conditions. Clutches are generally smaller than is common in England, at any rate amongst the *passerine* birds, two or three being the common number as opposed to the four or five of English birds. The reason for this can only be conjectural; food and nesting conditions may perhaps be more reliable in the tropics leading to less mortality amongst the young. On the other hand one would suppose the enemies of the young birds to be more numerous in the tropics than in Europe, which would necessitate larger clutches. This would be offset if double brooding were the rule and commoner than is appreciated.

The following notes have been collected over four year's residence in the Eastern Province and refer to only a very small proportion of the birds to be found in that area, probably some five hundred species and sub-species. The various species noted have been arranged under the months when their nests were found, the description of nesting habits being given with the first occurrence of the bird on my list. A very brief description of the bird is given to aid identification, together with its habitat. The number of birds recorded for any one month must not be taken as an index of the general breeding activity at that season, rather inferring few records by the writer.

JANUARY.

YELLOW-THROATED TREE SPARROW (*Petronia superciliaris*).

Generally brown in plumage, the size of a European sparrow, with a yellow spot on the breast and some white about the vent and lower abdomen. It is found at the lower levels, frequenting light well-treed bush.

It nests in holes in trees, generally choosing the old nest-hole of a woodpecker. Young were being fed on 6th January, 1931, at Bwakira, Morogoro, in that case the nest being in a cavity behind a piece of bark. Young were also apparently being fed on 21st November, 1934, at Msolwa, Kilosa, the nest being in an old woodpecker's nest-hole in a dead branch, about twenty feet from the ground; both birds were making frequent visits to the nest with insects. The eggs are said to be three in number, heavily clouded and mottled with grey.

WIRE-TAILED SWALLOW (*Hirundo smithi smithi*).

This is the smaller of the two common house swallows which delight to nest in open verandas or under the eaves of European houses. It has white underparts which distinguish it from the stripe-breasted *Hirundo abyssinnica unitatis* and wholly blue-black back, the latter having a chestnut rump. The nest is a shallow cup of mud pellets placed so that there is just room for the bird to enter between the eave, or other overhang, and the nest. It is lined with a few feathers, but sometimes has barely any. A nest found on 18th March, 1931, was attached to mosquito netting, but they are more usually built on to a wall. Usually not more than one or two pairs may be found in a house, but at Uvidunda Mission, in Kilosa, there were over a dozen nests inhabited in one veranda on 3rd January, 1932, one nest of which had young, and another one egg. Other nests have been examined on 15th February and 29th March, 1931, and a much later one on 9th August, 1931. These nests all contained three eggs, which were white in ground colour, thickly speckled with rich brown at the larger end. Another nest with almost fledged young was found on 15th April, 1935.

FEBRUARY.

STRIPED KINGFISHER (*Halcyon chelicuti chelicuti*).

This is one of the bush kingfishers living on insects, and not on fish, as it does not frequent water. It is very common at lower levels in bush and round habitations, where it is most noticeable for its ringing call of "cheerioh" often repeated. The bird has a long red bill, a dark grey back with light blue at the base of the tail, and white underparts. A nest-hole was being excavated in a road bank on 12th February, 1933, at Rufiri, Kiberege. Another shot on 6th March, 1935, at Msowero, Kilosa, was not in breeding condition. The eggs are known to be pure white.

CORDON BLEU (*Uraeginthus angolensis niassensis*).

This is the very common small bird constantly round habitation, the chief colour being a pale dusty blue. They are nearly always seen in pairs, but sometimes in small flocks. This bird builds a bulky nest for its size, a domed structure of fine grasses, usually with the inflorescence, loosely woven together, sometimes with very small twigs included. It is placed in various positions such as in the middle of a citrus tree, at the end of a branch of a thorn tree, as much as twenty feet above the ground, and occasionally in the grass wall of a *banda*, much after the fashion of an English wren's nest, but not as well woven. The birds do not seem to be particular about lining, several nests

having been found without, and one or two with a few small feathers. An interesting point with regard to this bird's nest is that, when it is placed in a tree or thorn bush, it is almost invariably built near a tree-hornet's comb, making the examination of the nest a hazardous business. The frequency of this juxtaposition leads one to believe there must be some underlying reason, perhaps of benefit to the bird in the protection of the nest from animals. The cordon bleu also appropriates the disused nests of the spectacled weaver as one was put out of such a nest in which it had five eggs. No lining had been added. The clutch appears to be five or six, of small pure white eggs. Nests have been recorded amongst others on 20th February, 19th March, 1932, and 3rd April, 1931.

BLACK-HEADED MANIKIN (*Spermestes nigriceps nigriceps*).

A well distributed small bird common round habitations as well as in light bush; it is often seen in small flocks. The back is chestnut, the head and neck black and the underparts white with speckled flanks. A pair were collecting nest material at Mkalimoto, Kiberege, on 20th February, 1933, while a nest was found on 15th March, 1932, with six eggs. The nest was very similar to that of the cordon bleu but had a small veranda of grass heads. This is not, I believe, an infallible difference between the two nests. It was domed, loosely woven of fine grasses, and placed about six feet up in a small thorn bush in dry bush near Mamboya, Kilosa. The eggs were partially incubated and were small, white and more rounded than those of the cordon bleu.

MARCH.

YELLOW-VENTED BULBUL (*Pycnonotus tricolor micrus*).

A common bird, the size of a thrush, to be seen equally in gardens, round houses and in light bush at the lower levels, as well as in the open country on the mountains at four to five thousand feet. It is of a uniform dull grey brown, with a black capped head, lighter underparts and a distinctive yellow patch at the vent. Although this species is a very common one I have only come across one nest, which on 19th March, 1934, contained two eggs. The nest was of very light construction and seemed too small for a bird of this size. Fine grasses and roots were lightly built together into a cup placed in the fork of a branch of a low bush, about five feet from the ground. There was no apparent lining, unless rather finer material in the interior of the cup deserves the term. The eggs were of a pinkish mauve ground colour, with large under-blotchings of grey and over-blotchings of deep red brown. As these birds are practically always to be seen in pairs it is difficult to infer when the main breeding season takes place, but it is probably a little earlier than this, arguing from Belcher's Nyasaland records.

AFRICAN PIED WAGTAIL (*Motacilla aguimp vidua*).

This bird will be readily identified by its similarity to the European form, having the typical black and white plumage and long tail which is in constant motion. It is common round houses or in native villages. There is also a close resemblance between it and the European species in its choice of nesting site, for it favours some suitable nook and crevice in European buildings

or in grass roofs. A pair frequent one of the stores in the Old Boma at Kilosa, gaining access through a broken window pane. On the wall there is a wooden rack for tools attached to the wall by a long beam, there being a secluded cavity between the rack and the wall, on the beam. This is about two inches deep and some five feet in length and is practically filled with the nesting material of what I judge to be one pair of wagtails. There is an astonishing amount of material consisting largely of roots, string, feathers, pieces of wood and other oddments. The nest is a deep cup in this stack of rubbish, partially lined with fine string and rootlets. As each clutch is laid more material is added to the pile. Three young, practically fully fledged, were being fed in March this year (1935). On 11th October, 1934, three young were also being fed in the same place, while on 30th November, 1934, a second brood hatched out. The eggs, three in number, were of a stone-grey ground, very thickly covered with fine brown spots and larger undermarkings of greyish brown. From these records I believe this pair, breeding under favourable conditions, is raising at least two, and perhaps three broods a year.

WIRE-TAILED SWALLOW. See January.

WHITE-BANDED GLOSSY STARLING (*Spreo superbus*).

This beautiful starling is common only in the drier and more open bush, such as Ugogo and on the Mkata Plain, where small flocks of about a dozen birds are frequently seen. The upperparts are a deep metallic blue, while the underparts are a fine chestnut, with a broad white band across the chest.

The nest is a large untidy structure of coarse dry grass-stems built together into a large sphere with a long, more or less horizontal entrance spout. It is placed often quite low, about six feet from the ground, firmly held by the thorns in the ends of the branches of the low thorn trees typical of the country it inhabits. One nest on 18th March, 1932, at Kibedya, Kilosa, had one large egg of an intense green blue, and unspotted. On 17th September, 1932, a pair were apparently building at the same place; one was seen taking a guinea-fowl's feather to the nest, and on another occasion also entered the nest.

SPECTACLED WEAVER (*Ploceus ocularius suahelicus*).

This weaver is well distributed in the lower levels, usually frequenting the more open but well grassed country, near native clearings. The male has an olive green back with a golden crown, a black stripe from the beak through the eye, and a black chin and throat, the rest of the underparts being golden yellow.

It is non-gregarious in nesting habits, building a characteristic nest which is usually attached to the tip of a branch of a small thorn tree, at no great height from the ground. The nest is woven firmly, but openly, so that the eggs can often be seen from below, while it has generally a long entrance spout, although this is recorded as absent by Moreau⁽²⁾ in one case. A nest found on 8th March, 1934, was about seven feet from the ground, woven from the edges of cutting grasses. The male was put off the nest and was probably incubating. The eggs were a clear white, spotted with red brown, and two in number.

GOLDEN WEAVER (*Ploceus aureoflavus* sub-sp.).

This is the common canary-coloured waterside weaver, found along most rivers and on the edge of most swamps where *mitete* abound.

It is essentially gregarious in nesting habits and very noisy, keeping up a constant harsh chatter. The colonies commence to show activity in February when nest building is begun. The nests, domed and without entrance spouts, are hung by the top of the dome from leaves of the *mitete*. It also builds in small thorn trees near the river, but this is not as common a position as in *mitete*. The nests are firmly and closely woven of strips vigorously torn from green *mitete* and other grass leaves. They are horizontally elongated and hang thus, with the entrance on the underside. In building the outside shell is first made, the final addition being a ledge on the inside of the entrance to prevent the eggs from rolling out of the nest. There are traces of lining in the form of fine grass inflorescences. While building the males hang on the entrances of the nests and do a considerable amount of rapid wing fluttering, to the accompaniment of the loud chatter referred to above. The eggs are usually two or three in number, with a blue ground, spotted and blotched with red brown. There also appears to be a white ground colour similarly marked.

FIRE-CROWNED BISHOP (*Euplectes hordacea changanmwensis*).

A very common and conspicuous bird from December to July, during which period the males assume their gorgeous red and black plumage, having an appearance of velvet. The females are sparrow-like, and the males in the non-breeding season revert to a somewhat similar and sober attire. They are most frequently to be seen in open areas round cultivation.

The bishop is particularly fond of elephant grass as a cover and support for its nest, while other tall grasses are also used. It is gregarious in its breeding habits, but each male has been shown to have very definite territory and to be polygamous.* They are very noisy birds at their breeding place, the males making constant display flights just over the grass tops, with their scarlet rump feathers puffed up, and flying with short rapid wing beats, making a loud twittering call. The nest is a domed purse woven from the green stems and inflorescences of the finer grasses; it is loosely put together and attached to two or three stems of grass, which are woven into the structure. There is usually a small hood or veranda of fine grass inflorescences. The entrance is at the side and top of the nest, which is more or less lined with inflorescences apparently stripped of the seeds. The eggs are a fine greenish blue usually without markings, but in April and May a few black-spotted eggs have been found. The clutch is generally three. They have been found slightly incubated in the middle of March, and fresh as late as the middle of April, but nesting is usually over by the end of April.

SPOT-BACKED WEAVER (*Ploceus nigriceps nigriceps*).

The dark back of this weaver, mottled black and yellow, helps to identify it from the lighter-backed species. The crown, cheeks and throat are black,

* VAUGHAN, Ibis 1930; JACK, D.: "Territory and Polygamy in a Bishop bird, *Euplectes hordacea hordacea*," Ibis, Vol. V, No. 4, 1935.

the black on the throat running down to a point in the yellow underparts. There is also a yellow collar at the back of the neck.

This is another of the gregarious weavers, making colonies in the coconut palms, to the leaves of which they do much damage, and in large thorn bushes, *cassia* trees and palms of other sorts. The nests which have small entrance spouts are strongly woven from grass stems and leaves, or from strips torn from the pinnae of the coconut leaves, to the tips of which they are attached. There appears to be some division of the work of collecting nesting material. In a colony watched building the males were making constant flights to patches of a species of *Chloris* from which they tore strips of the leaves by sliding down the stems of the grass, gripping the leaf near the base and tearing upwards. The females made very few flights and all those seen brought in only inflorescences, presumably for the lining. The males were seen with strips of grass only, and never with inflorescences.

Like the golden weaver the spot-backed weavers are noisy inhabitants of their colonies, making an even louder and shriller chatter than the former. While building and nesting is in progress the males will hang under the new nests with wings fully outstretched, fluttering them rapidly and swinging from side to side, chattering all the while. On 9th March, 1933, females were watched taking insects to nests in a coconut palm and apparently feeding the young while on other leaves building was still in progress. The eggs, usually two in number, are heavily blotched with green grey on a dainty green background.

GROSBEAK WEAVER (*Amblyospiza albifrons unicolor*).

This weaver is quite distinct from other members of the family, being an uniform dark brown in colour, with white patches on the wings and having a heavy beak. It is essentially a waterside weaver preferring small swamps to rivers.

The nest is large and again much different from those of other weavers. It is a finely and closely woven sphere, made from very fine strips of waterside grasses, supported by two or more stems of reeds or other strong water grasses, which pass through the sides of the nest and are firmly attached to it. There is a small entrance hole near the top, and no entrance spout or veranda has been seen in nests found by the writer. The two eggs are rather elongate, fairly evenly spotted with red brown on a pale cream ground, with a few lighter undermarkings of a pale red brown in blotches. Nests were being built in March at Msowero, Kilosa, and eggs have been taken on 13th April, 1932.

BLACK-HEADED MANIKIN. See February.

CORDON BLEU. See February.

FIRE-FINCH OR ANIMATED PLUM (*Lagonosticta senegalla* sub-sp.).

This little bird is as noticeable and widely distributed as the cordon bleu, with its dark crimson-lake and maroon colouring, and its cheerful habits. A pair or more are to be seen round most houses and in practically all native villages.

The nest is almost indistinguishable from that of the cordon bleu except that it is not placed near a tree-hornets' comb, and appears to be rather more commonly hidden, grass fences and roofs and walls being more frequented than by the cordon bleu. It is domed and loosely woven from fine grasses, usually with a small entrance veranda of grass heads, the entrance hole being rather above the middle line of the sphere. The birds are very unperturbed by the presence of man, cheerfully going and coming to a nest in an occupied grass *banda*. They also seem very attached to one nesting site. A nest was found with one egg on 21st March, 1932, in a grass fence near the house, in which five more eggs were laid between the 21st and 25th. This nest disappeared on 7th April, 1932. By 18th April another nest had been made six inches above the old site and there was one egg on 19th April. Two more eggs were laid by 21st April after which the writer was unable to observe the nest until 6th May when the eggs had hatched out, incubation having probably taken between twelve and fourteen days. The cock-bird was noticed sitting one evening and the following morning, being relieved by the hen in the morning. On the latter occasion the cock soon returned with a small piece of dry grass and entered the nest, which he left after a short time leaving the grass inside with his mate. There is normally a small amount of lining in the nest, the one in question having a few small feathers. Among other nests found have been one in a *bougainvillea* on 17th April, 1931, one in a *banda* on 20th May, 1935, and a third in a grass fence on 15th July, 1934. Eggs are usually five in number, but six have been seen, very small and pure white, unspotted.

APRIL.

CAPE TURTLE DOVE (*Streptopelia capicola tropica*).

There are three common doves much alike in appearance, having an uniform grey plumage on the back, and most readily identified by their calls. The Cape turtle dove has the characteristic call which may be rendered "kampala" repeated several times. It is common in practically all the lowland areas in cultivations and bush.

A nest was found on 10th April, 1931, in a *Carambola* tree, in Morogoro, about fifteen feet up, placed near the end of one of the branches, flimsily constructed of small twigs, in a platform. There was one newly-hatched bird in the nest together with one egg which was pure white.

LITTLE AFRICAN SWIFT (*Micropus affinis affinis*).

This swift makes itself very noticeable by its habit of flying out in a flock from its nesting colony round some building, with sharp shrilling calls, to split up into its component individuals which commence a wild darting flight as they feed on the wing. It has a white rump which shows up clearly from the rest of its blackish brown plumage. It may be easily mistaken for a closely allied species *M. caffer streubelli* which Moreau(?) records as being "... much the less noisy and gregarious bird of the two."

In nesting habits *M. affinis* is essentially gregarious, attaching its nests in groups, one to another and to the eaves of suitable buildings. They appear to

be made of some glutinous material secreted by the birds themselves which they use to cement together pieces of dry grass stems and feathers in cups and deep bowls, the overhanging eaves or some other nest forming a roof and enclosing the nest. On 13th April, 1932, several nests examined contained young, while on 15th May, 1932, two nests were found with three eggs in each, one clutch quite fresh and the other hard set. The eggs are pure white and elongate, sharply pointed at the smaller end.

While recording this bird mention may well be made of the habits of *M. caffer* which appropriates the retort nest of the stripe-breasted swallow (*q.v.*) after the latter has withdrawn, and lines it with masses of feathers before using it. While having notes of this appropriation I have no record of laying, etc.

PARADISE FLYCATCHER (*Tchitrea perspicillata plumbeiceps*).

The paradise flycatcher is probably the most beautiful of the many flycatchers found in the Territory. The general plumage is a rich chestnut, the head blue-black, the underparts light grey. In the breeding season the male has the central pair of tail feathers very much elongated and somewhat outwardly curved. It is particularly fond of shady gardens and orchards but is also to be found in well watered and shady bush areas.

The nest is a very finely constructed deep cup, placed usually in a small fork of a branch of a tree such as a West Indian cedar or a lime tree, at heights from fifteen to thirty feet from the ground. One nest examined consisted of fine grass stalks lashed with a lichen-like substance to the fork of the branch. Another appeared to be composed wholly of strands of a substance like spiders' web. There appeared to be no lining to these nests, which are small for the size of the bird. The male incubates as well as the female and when seated on the nest his long tail feathers hang over the sides of the nest. A clutch of two eggs found on 17th April, 1931, had a white ground finely speckled with red, especially towards the larger end. Another nest found on 15th December, 1932, contained three eggs, but birds have generally been seen in breeding plumage during March to May.

BLACKCAP TCHAGRA (SHRIKE) (*Antichromus minutus anchietæ*).

I have only recorded this bird from the open bracken and bush covered mountain side of the Uvidunda at five thousand feet but Moreau mentions it as frequenting the East Usambaras especially in the rank vegetation round marshes. In colour the male is uniform light chestnut with black crown and tail, the throat being white, and the rest of the underparts a brownish white.

This bird is included with other April records as a male was shot on 9th May, 1934, feeding an immature male with a large green bug. The young bird was fully fledged and nesting must have taken place early in April.

RED-CHESTED SUNBIRD (*Chalcomitra senegalensis gutturalis*).

The all-black male sunbird with a brilliant scarlet crescent on the lower throat and upper breast, and its duller brown mate are very common, and must be well known to most of us who have flowering shrubs round our houses.

They may be seen hunting from flower to flower on an *hibiscus* or *ipomea*, searching for small insects in the flowers and taking nectar.

Nests are small domed structures hung from the tip of some small branch of a tree, at no great height from the ground. One found on 9th April, 1931, was slung under the pinnate leaf of a West Indian cedar tree, and another found on 10th October, 1934, was being built on the tip of a branch of a *Thuia* in the Old Boma yard at Kilosa, only eight feet from the ground and constantly passed by a lorry, and several people all day long. Fine dry grasses were interwoven with lint of either kapok or cotton, forming a fairly strong nest. The entrance hole was near to the top of the nest and slightly protected by a small overhang. There was a lining of similar kapok or cotton-lint. On 9th April, 1931, the bird was sitting on two small eggs, with blotches and streaks of olive brown on a white ground, overmarked with darker brown and almost black streaks. There appears to be a tendency for the streaks to run lengthwise on the egg. The nest found on 10th October, 1934, was almost completed.

AFRICAN HOUSE SPARROW (*Passer griseus suahelicus*).

This common house sparrow takes the place of the ubiquitous English sparrow, but is not quite as much in evidence as its European relative. It will be readily identified by its somewhat sombre brown plumage, with grey brown head and rather long tail, a bird much the size of the English sparrow, with an almost identical chirp, and living round most dwelling places.

The nest is placed in a suitable cavity under the roofs of houses or huts, being an untidy collection of dry grasses. A nest found on 18th April, 1933, was placed between the top of the wall gable and the corrugated iron roof of a small store, and contained three hard set eggs, of a pale green ground with a thick mottling of pale brown and grey.

GOLDEN-BACK WEAVER (*Ploceus jacksoni*).

This is a river and swamp loving weaver, readily distinguished by the deep golden yellow upperparts with black head and throat, and deep chestnut underparts.

The species is gregarious in nesting habits forming large colonies in the waterside *mitete* in the upper reaches of the Mkondoa river in Kilosa District. The colonies are in company with the golden weaver and the grosbeak weaver (*q.v.*) but this species does not seem to be as noisy as the golden weaver. Nests are domed with a side entrance near the top, slung from the leaves of *mitete* and other tall water-loving grasses. Sometimes the nest takes a form very much like that of the golden weaver. It is woven from strips split from the leaves of the *mitete*, being lined inside with finer grasses. The eggs are two in number, pale blue in ground heavily blotched with reddish brown, with pale mauve undermarkings.

MASKED WEAVER (*Ploceus intermedia cabanisi*).

This species seems to be rather uncommon in Kilosa and I have seen it only in the Mkondoa Valley. The male has olive green back, head and throat, where the black is rounded and not pointed, and yellow underparts.

The nests are somewhat similar to those of the spectacled weaver, but entrance spouts are much narrower, and slightly longer. They are roughly woven. Three nests found on 14th April, 1932, were attached to the leaves of a pawpaw tree, not far from the river, and contained each two eggs, which were pure white, unspotted and somewhat elongated. Another colony was in full-breeding activity on 3rd May, 1932, in a coconut palm near Kidete railway station.

FIRE-CROWNED BISHOP. See above.

CORDON BLEU. " "

ANIMATED PLUM. " "

MAY.

LITTLE AFRICAN SWIFT. See April.

SPARROW-LARK (*Eremopterix leucopareia*).

The male has sandy brown upperparts with a darker nuchal collar. The crown is a rich rufous and there is a black line through the eye and a black chin and throat. The birds are small, crested and essentially ground dwellers, and have only been seen in the dry short-grass country at about two thousand feet.

A pair were watched to a nest on 16th May, 1932, which was merely a hollow in a bare patch of ground, containing a very small collection of pieces of dry grass as nesting material. There were three eggs, blotched with olive brown and grey on a grey white ground, the grey marks forming the under-markings. A female shot on 29th May, 1934, had a developed egg in her ovary.

RUFIOUS GRASS-WARBLER (*Cisticola galactotes suahelica*).

The *Cisticolæ* are a widely distributed and large group of small warblers with a considerable number of species and sub-species, differentiated on characteristics often not distinguishable to the eye in the field, although their various songs are usually very distinct. In general colour the plumage is dull brown, the back either uniform or striped, and the tail noticeably dark-barred just before the tip. The species under notice is common in rank vegetation occurring round the edges of swampy ground and open water, as well as in thick grass.

A nest was found on 22nd May, 1934, small, semi-domed and composed of dried grasses rather loosely woven together and set in a low bushy plant about six inches from the ground. There was a lining of seed down. The eggs were four in number, slightly incubated, well marked with small red brown spots on a white ground.

SPARROW WEAVER (*Plocepasser mahali pectoralis*).

In large areas of *mbuqa*, such as the Wami Plains of Morogoro and the Kilingali-Mkata Plains of Kilosa, this bird is common, but has not been noticed elsewhere. It seems to be partial to open thinly-treed areas, where small thorns supply the necessary nesting sites. The male is somewhat larger than a sparrow, having a light brown back with a noticeable white rump. Over the eye is a broad white stripe and a black line bounds the sides of the

white throat. The underparts are dirty white, the chest feathers having brown triangular markings.

The nests are large untidy globular structures with a downward directed neck; during building there are two entrances but finally one is sealed and the other produced into the neck. The nesting material is entirely dry grass stems, and trees containing nests look as though someone had been throwing grass clods into the branches. The species is gregarious and small colonies fill the outer branches of the small thorn trees with those masses of grass.

The eggs are two in number, large and barely pointed. They have a pinkish white background with heavy concentrated spotting of red, the spots being minute and tending to concentrate in a circle at the larger end. Eggs were found on 8th September, 1931, and nesting material was being carried on 14th May, 1935.

JUNE.

WHITE-BROWED COUCAL (*Centropus superciliosus loandae*).

A member of the cuckoo family, this species is very common at all levels, except in primeval forest; it is not, however, a true cuckoo, neither is it parasitic in its nesting habits. Its presence must have been made noticeable to most people by its long drawn out and mournful call, a succession of deep mellow "coos" uttered on a falling scale and rising again at the end, rather reminiscent of water being poured from a bottle. The bird itself is also very noticeable with its deep brown plumage and long, usually draggled, tail. It has a heavy clumsy flight as it is put up from the ground, or from a clump of thick grasses, where it loves to skulk.

On 3rd June, 1932, a nest was found in a clump of tall elephant grass placed about four feet from the ground. It was a large domed structure, very loosely put together from leaves and stems of large grasses. The entrance was practically the whole of one side. It contained four young birds, which were completely black with a very sparse covering of a narrow hair-like white down. There was also one addled egg, plain dirty white with a matt surface.

PIED KINGFISHER (*Ceryle rudis rudis*).

This conspicuous kingfisher is common to most open stretches of water and rivers, mainly at lower elevations where the rivers have ceased to be torrential. It may also be seen hovering over the shallows of the creeks round Dar es Salaam, or perched on the fish traps waiting for the tide to recede. Its plumage is black and white, there being a black crest. Seen anywhere, either hovering like a kestrel with downpoised beak, or perching on some branch of a riverside tree, it cannot be mistaken for any other kingfisher.

The nest is placed at the end of a tunnel some four feet into an exposed bank of a river, where a small chamber is hollowed out. Two nests examined on 27th June, 1931, contained fully fledged young, one having five and the other four young birds. There were a few fish bones on the floor of the nest chamber itself, but none in the tunnel, and there was a surprising lack of smell from the nest. While the nests were being investigated the parent birds flew round uttering calls rather like the clicking of small metal springs.

JULY.

RED-EYED DOVE (*Streptopelia semitorquata semitorquata*).

This dove is very similar to the Cape turtle dove referred to above, but the note is best rendered as "too too, tootoo tootoo" several times repeated.

A nest with two eggs was found on 10th July, 1932, in a mango tree, a small platform of twigs resting in the tips of some of the upper branches. The eggs, like those of all doves, were pure white and unspotted.

CROWNED HORNBILL (*Lophoceros melanoleucos melanoleucos*).

The crowned hornbill is well distributed through most bush areas, where its black and white plumage, dipping flight and red bill make it very noticeable.

The nesting site is a cavity in some tree, in which the female is walled in with mud when egg laying commences. She is fed by the male through an aperture left for that purpose. When the young are hatched the female emerges and the pair proceed to feed the nestlings. A pair were watched feeding their young in a hole in a baobab tree on 20th July, 1931.

STRIPE-BREASTED SWALLOW (*Hirundo abyssinica unitatis*).

This swallow, in common with the wire-tailed swallow, is very partial to human habitation for nesting. It may be distinguished from the latter by its somewhat larger size and the distinct striping on the breast, together with the rich rufous crown.

The retort-shaped nests which grace the eaves of most houses, and if allowed to remain, the ceilings of many rooms to which the birds can gain access, are built by this swallow. It is characteristic of the bird that the nest construction is spread over a long period. Moreau⁽²⁾ records six weeks as usual, and one I had under observation took just five weeks to completion. A small cup similar to the nest of the wire-tailed swallow is first constructed in a position near to the overhang of a roof. This is used as a sleeping place by the birds, and is eventually formed into a closed chamber by building upwards to the eaves or ceiling. The neck of the retort is then added and a lining of grass and feathers. While nesting round houses is most commonly seen, nests have been observed in their natural position built on to rocks at Turiani. On 26th July, 1932, a nest contained two fresh eggs, but the clutch is more usually three in number. The eggs are plain white, unspotted and somewhat pointed at the smaller end.

ANIMATED PLUM. See March.

AUGUST.

WIRE-TAILED SWALLOW. See January.

SEPTEMBER.

AFRICAN BARN OWL (*Tyto alba affinis*).

This is another and rather unwelcome tenant of European houses, more often heard than seen. It is essentially a night bird, and may be vaguely seen as a dark form gliding along silently on a moonlight night, often round houses where it preys on mice and other nocturnal creatures. It has a series

of ghostly and unpleasant calls, from a harsh scream to a very human snore which would exasperate the owner of its lodging to the point of shooting it, but for the knowledge that it preys on bats, those other and more unwelcome lodgers in East African houses.

Attention was called to its presence in the roof of an office in Morogoro by the increasingly unpleasant smells coming from the ceiling. A native sent up to investigate collected some two dozen beheaded and mummified corpses of rats and mice which surrounded a nest on the ceiling boards. The nest consisted of a few pieces of grass and other oddments on which were laid seven pure white and rounded eggs. This nest was found on 24th September, 1931, and young were being fed under the cover of the overhang of a roof in Kilosa on 14th October, 1934.

WHITE-FRONTED BEE-EATER (*Mellitophagus bullockoides*).

One of the larger bee-eaters, this is usually met with along the sluggish rivers of the lowlands. They are very common on the Kilombero river and a few have been seen on the small river at Morogoro township. The upperparts are mainly green with blue at the base of the tail, and the throat is a distinctive glossy red.

The nesting tunnels are excavated in the low river banks, often in very hard clay such as abounds along the Kilombero. The tunnel is some three and a half feet in length and about three inches in diameter, slightly flattened horizontally. At the end it widens into a large chamber. There is little or no lining to the nest, the two white eggs being laid on the sand and such wings and body cases of insects as are brought in by the birds. There seems to be a tendency to lay the eggs to one side of the nesting chamber. On 8th September, 1932, young were being fed in nests at Malengwe, on a tributary of the Kilombero and one nest had two hard set eggs. On 13th September, 1931, fresh eggs were found in a nest in the river bank at Morogoro. The eggs are glossy and somewhat rounded.

SPARROW WEAVER. See May.

OCTOBER.

WATER WAGTAIL (*Motacilla clara*).

A marked greyiness of plumage readily differentiates this wagtail from the clean black and white pied wagtail. In its habitat it is also somewhat distinct from the latter as this bird is invariably found in rocky streams and rivers, which habitat is less commonly occupied by the pied wagtails.

On 16th October, 1931, a pair were building in a hole left by a broken branch of a tree fallen across the Mvaha river in Morogoro. Rootlets and dried grasses were being used as nesting material. The nest was eventually washed away before the eggs were laid.

PIED WAGTAIL. See March.

PIED CROW (*Corvus alba*).

A great scavenger and common about towns and villages, this crow will be readily recognized, the white collar on its breast and at the back of the neck

relieving the sombre black plumage. It might be confused with the white-naped raven but the latter has no white collar on the breast, and is more frequently met with in mountainous areas.

A pair of crows were busy building on 26th October, 1934, in a *figus* tree near Kidete railway station. The nest had assumed the proportions of a rook's nest, and appeared to be a well-constructed cup consisting outwardly of sticks. One of the pair was seen flying to the nest trailing a long vine of a small wild pumpkin, presumably for the lining.

RED-CHESTED SUNBIRD. See April.

NOVEMBER.

PIED WAGTAIL. See March.

FORK-TAILED DRONGO (*Dicrurus adsimilis divaricatus*).

In all lightly bushed areas and round towns this pugnacious bird is common and well known. Its plumage is wholly black and the tail deeply forked, the bird being about the size of a blackbird.

A nest was found on 18th November, 1934, in a small roadside tree just beginning to throw out new foliage. It was placed in the fork of a slender branch about twelve feet from the ground, directly over the roadway. The material appeared to be fine rootlets bound together with a substance like spiders' web, and attached to the branch with the same material. The nest was very frail in appearance and could be seen through from below, yet it was strongly made. From necessity due to its position the outside of the nest was triangular but in the centre there was a deep circular cup. There were three eggs, slightly incubated, which had a ground colour of very pale pink, marked with scattered heavy blotches of pinkish brown and mauve.

SUPERB STARLING. See March.

YELLOW-THROATED SPARROW. See January.

DECEMBER.

GREY-HEADED GREEN BULBUL (*Arizelocichla nigriceps neumanni*).

This bird is confined to the mountain forests where it is common. In general plumage it is a dull olive green, with grey head and nape.

A nest found on 3rd December, 1931, in the forest below Lukwangule in the Ulugurus was placed about five feet from the ground in straggling bushes and undergrowth. The nest appeared to be of two distinct layers, the lower of moss and dead leaves, with a cup of a very fine hair-like plant substance, which was not roots. I believe this to be comparable with the material mentioned by Moreau⁽³⁾ who states it to be "... the rhizomorphic strands of *Marasmius* spp. which abound through the evergreen forests." There were two fresh eggs in the nest, heavily blotched with sepia on a white ground, which gave a beautiful effect.

PARADISE FLYCATCHER. See April.

I have to thank Mr. R. E. Moreau for many helpful suggestions in the presentation of these notes.

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Native Materia Medica

By W. D. Raymond

I.—THE ARROW POISONS.

"For the arrows . . . are within me, the poison
whereof drinketh up my spirit." JOB, VI, 4.

ALTHOUGH our Celtic ancestors were so skilful in the preparation of their arrow poison, toxicum, that the fame thereof spread to Rome and Greece and still lingers in the word "toxicology," nevertheless the arrow poisons of Africa, and of East Africa in particular, are justly famed as being the most potent of their kind.

The arrows of Africa are not often mentioned by classical writers. Horace⁽¹⁾ makes a brief reference to them but by the middle ages vague reports were in circulation regarding their marvellous properties. As travellers returned from the Dark Continent there crystallized from the nebulous mist of these superstitious rumours more accurate descriptions of arrows that caused instant death to animal or man. The fact that they still figure to-day in legal proceedings of this Territory is sufficient cause for considering in some detail their mode of preparation and action. In a study of the medical resources of the local population arrow poisons are a striking tribute to the efficiency of the lore that has been garnered through the centuries and handed down to the native of to-day.

From various sources of information^(2 3) it is possible to form a fairly clear general picture of the production of this poison. It is usually prepared in great secrecy in the depth of the forest. A native clay pot, suitably arranged over a fire, is partially filled with small broken pieces of the wood or root of the tree named *msunguti*. Water is added and the whole boiled for several hours. The eye of a stranger, particularly a woman, may not fall upon the preparation lest the poison be rendered valueless. More water may be added from time to time until eventually the preparation assumes a gummy consistency. Sometimes the poison is enriched by various tit-bits of other plants and animals, but often it is prepared of the wood alone of the tree *msunguti*⁽⁴⁾. When the preparation has reached this stage control tests are applied. A gash may be cut in the arm until the blood flows out and the pasty mass smeared in the path of the blood. Should the blood congeal then the poison is considered suitable. Sometimes further animal tests are applied. Certain tribes in Masailand⁽⁵⁾ are said to make a trial on an antelope and if urine and droppings are found in its track the poison is deemed too feeble. The poison when ready is smeared on to arrows or spears in various manners or finds its way into local commerce.

If we are to judge the efficiency of the poison by the rapidity with which it causes death then we must hold in high esteem the better brands of the local preparations. The time required to kill an animal not only depends upon the brand of the poison but also on the size and nature of the animal. Antelopes die within a few minutes: elephants are difficult to kill. In laboratory experiments the writer has found the rat to be resistant to the poison whereas the monkey is killed within a few seconds. There is no doubt that it is rapidly fatal to man. Krause⁽⁶⁾ records that two sisters were killed in East Africa by poisoned arrows and died within twenty minutes. The arrows in question were afterwards examined and the poison identified as derived from a species of *Acocanthera* (*msunguti*). I have on record the case of a native who was shot by an arrow in this Territory and was stated to have died within twenty minutes. Last year a native was shot near Dar es Salaam by an arrow which caused a superficial wound on his thigh. The wounded man after exhibiting symptoms of shivering and a slow heart died within two hours. Examination of this arrow by the writer showed it to be poisoned with a preparation probably obtained from *Acocanthera*.

The word *msunguti* is possibly derived from *uchungu*, bitterness and *mti*, a tree. It is the common word applied throughout the Territory to a tree or shrub, *Acocanthera* sp., with a bitter tasting bark, two specimens of which may be found growing in the Dar es Salaam Botanical Gardens. Variants of this word are *mchunguti*, and *msungu* and *mchungu*. Three species⁽¹²⁾ of *Acocanthera* are known to grow in this Territory, namely *A. friesiorum*, Mgf., *A. longiflora*, Stapf., and *A. veneata*, G. Don., var. *typica*, Mgf. Actual botanical specimens of trees used for the preparation of local arrow poison collected and sent to the writer have been identified as *Acocanthera longiflora* (west Usambara, Kiswahili *msunguti*) and as *Acocanthera friesiorum* (Kinata Obosongo).

The first accurate chemical examination of the constituents of these East African arrow poisons was made by Arnaud⁽⁷⁾ who isolated from the wood of the tree *Acocanthera* sp. a crystalline glucoside which he called Ouabain. Glucoside is the generic name applied to an extensive group of chemical substances the characteristic property of which is that of yielding a sugar when hydrolyzed. It is interesting to note that with slight corrections to his arithmetical working the formula given by Arnaud has been verified by recent work⁽⁸⁾. Ouabain is one of the most poisonous substances known to modern science. The maximum medicinal dose of Ouabain is one-sixtieth of a grain (1mgm.). Death is most rapid when it is introduced intravenously, less rapid when it is introduced subcutaneously and much slower when introduced into the stomach. Its use as an arrow poison shows that the native fully understands its proper mode of use.

Although the *Acocanthera* arrow poisons are the most famous, potent and widely used of the arrow poisons of this Territory, it is not correct as suggested by Perrot Vogt⁽⁹⁾ to describe East Africa as an area where these poisons are employed to the exclusion of all others. One of the earliest accurate accounts

we have of the local manufacture of these poisons is due to Emin Pasha⁽¹⁰⁾. He describes the preparation of poison by the Wanyamwezi as follows: "The arrow poison is prepared by a learned man far from the village in the full secrecy of the forest. He boils the bruised root bark of the trees called 'Bungo-bungo' and 'mwelle-mwelle' together and adds thereto lizards, snakes' heads, snakes' teeth and other dismal ingredients. The arising vapours are very deadly." Although Perrot Vogt identifies *mwele-mwele* (variant *mwere-mwere*, compare *mwele*, a sick man) with *Acocanthera* the word is one of the local names for *Strophanthus eminii*⁽¹²⁾. It contains a glucoside closely resembling Ouabain in its chemical and pharmacological properties but rather less toxic. A specimen of *Bungo-bungo* collected near Tabora was found to be *Landolphia parvifolia*. This plant is not known to be poisonous but the sticky latex may confer the necessary adhesive properties to the finished poison. Preparations made by me from the root bark of *Strophanthus eminii* were found closely to resemble other local arrow poisons and were rapidly fatal to small animals. Several independent reports of the use of *Strophanthus* as a source of local arrow poison have been received. Thus, according to information supplied by the District Officer, Masasi, there is reason to suppose that *Strophanthus* is used there by the Magingo tribe for the preparation of their arrow poison.

Although we have a general idea of the manufacture of local arrow poisons, a knowledge of the composition of some of the lesser known brands employed or the precise function of the addition of supplementary substances has not yet been attained. The leafless candelabra *Euphorbia* are thought to be amongst the substances added to the poison to enhance its potency and an interesting report has just been received of the addition of a rare plant growing on the Uмба Steppe⁽¹¹⁾. It is related that the smoke from the leaves of this plant will blind a man and its milky juice raise blisters on the bare skin. When added to the ordinary *Acocanthera* poison it is supposed to render its action more rapid. It is hoped to be able to investigate more fully this report.

I may perhaps fittingly close this brief description of the arrow poisons of Tanganyika with the thought that Ouabain, the active principle of the most active of the arrow poisons has found an application described in the latest edition of the *British Pharmacopæia*, 1932. The secrets of the dreaded poison of the Masai have been read and the reading thereof has proved to be for the benefit of humanity.

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(¹¹) I am indebted to Mr. P. R. Bally for this report and specimens. The plant is *Sapium madagascariense*, (1935).

(¹²) I am indebted to the East African Agricultural Research Station, Amani, for the identification of all botanical specimens and for notes concerning the distribution of *Acocanthera*.

African Good Manners

By R. M. Gibbons

MANNERS MAKYTH MAN," said William of Wykeham, and every good African will applaud the saying with vehement approbation. To an African good manners are of vital importance—much more so than to a European. If an African were to draw up a decalogue or a list of the Seven Deadly Sins the necessity of *adabu* or the lapse therefrom would undoubtedly be high up on the list.

In order to understand the great importance attached to *adabu* (good breeding), it is worth while considering first the categories of the various kinds of offences.

"Sin" to an Englishman means an offence against the holiness of God : this concept is absent from the mind of the primitive African, and is only held rudimentarily and without much real apprehension by many of the African Christians.

Moral obliquity to an Englishman means offences which put the offender outside the pale of decent society and such a person would be ostracized, or at least avoided, by all good people. In this category no Englishman would include bad manners ; but an African would and therein lies the difference.

"It is not done in the best circles" to an Englishman includes those offences against the ordinary rules and conventions of society and he would regard them with pity and perhaps a little contempt ; but hardly, in his estimation, would they imply any moral obliquity or sin.

Now nearly all offences in African eyes fall in two categories : either they are offences against the well-being of the community or tribal or family or social unit or they are offences against property. Adultery, for example, does not convey to Africans the same sense of moral obliquity as it would to a European, but in so far as it is an offence at all (for with many African tribes, a sexual act is sometimes an act of propitiation or a solemn act of consecration, as for instance when a new site is chosen for a village, each adult male member takes any female member of the village and performs a sexual act before entering into possession of his new plot ; or it is an intercessory act to the Power of Fertility) it is because it has lowered the bridal price (in the case of a virgin) or has endangered the family well-being (in the case of a married woman).

There is yet a third category reserved for rareties.

Bishop Weston, who knew Africans well, once told me in discussing a case of sodomy, that this is one of the few sins which Africans regard in much the same sense of moral obliquity as we do. I am convinced that bad manners also fall into this class of offence.

The point of all this is to emphasize that an offence against good manners is regarded with much greater horror by an African than by an Englishman, and with a definite sense of its being a moral fault or vice.

Again, to an African, lapses from bad manners breed inevitably worse things, such as contempt for authority, hatred, pride. Bad manners indicate lack of *upendo* and produce a corresponding reaction of resentment and fear. It is impossible to regard lightly ill-breeding. It strikes at the very root of their social inheritance and tribal homogeneity.

An African once said that whereas no father would beat his child for stealing, lying, disobedience, yet he would assuredly for bad manners.

In a certain tribe, the punishment for bad manners in a child, consists in putting him in a tree, what time the villagers stand below and instruct him in the heinousness of his offence and its remedy, and then take him down and administer a public beating.

In all the old tribal initiatory rites, teaching on good manners was given pride of place, and its rapid decay and disappearance is causing more grief and anxiety to the elders than is any other of the signs of the times.

It must be abundantly clear that it is a positive and insistent duty of every European in this country not only to learn how to recognize and respond to African courtesy, but still more to demand it from their employees and all Africans with whom they come in contact.

Many view with growing and grave concern the increasing contempt of authority in this land, and it is due in a very large degree to the ignorance of many Europeans on this subject and their slackness in demanding and seeing that they get proper courtesy and, furthermore, in according courtesy to Africans. The very best method of dealing with Africans, winning their respect, loyalty and affection (all of which virtues they have in a very high degree) is by being a gentleman and treating them as gentlemen. A true ideal of what a gentleman is will prevent all foolish and sentimental interpretations of this maxim.

As an illustration, consider the ordinary daily greeting which is commonly given and received between European and African, and its response. The commonly expected and accepted one is *Jambo*, *Bwana*, with its answer *Jambo*. This is deplorable, because (a) it is not a greeting at all but only a *possible* continuation of one. (b) It is only, amongst themselves, given, if at all, by equals to equals, and then generally between strangers or children. (c) It is not even good KiSwahili!

Every tribe has its own particular forms of greeting about which they are most punctilious, but amongst all the Swahili-speaking tribes, and especially all the tribes who live near the coast, in fact anywhere where Swahili has penetrated and is accepted as a known tongue, the true and proper greeting from a junior to a senior or an inferior to a superior is *Shikamoo* with its response *mara haba*. Very often also the Mohammedan *Sabalkheri* with its response *Sabalkheri* is used, and is perfectly proper and courteous.

It is true that a courteous man can be courteous, no matter what greeting he uses and it is a great tribute to so many Africans that they continue to use *Jambo Bwana* as a concession because their particular *mzungu* does not know any other, without loss of courtesy or respect but, nevertheless, in far too large a number of cases it is used with the tongue in the cheek, and really signifies "Morning, old cock." (Pardon the vulgarity but it is the nearest one can get to it.)

It is sad and humiliating to enter a European's house and to be greeted by his servants with *Jambo Bwana* when your personal boy (if he is elderly) is given *Shikamoo*.

An Englishman told me that he refused to allow *Shikamoo* to be used in his presence as he imagined it to be derogatory, being of slave origin and therefore degrading, until one day he noticed his houseboy greeted him with *Jambo* and turned to his cook at the doorway and said *Shikamoo*!

Anyone who will take the trouble—taking care not to prejudice the issue—to talk with his servants and ask how they greet one another will find a total absence of *Jambo*. If an African boy greeted his father in the morning with *Jambo* he would get a first-class beating.

One word about the supposed slave-origin of *Shikamoo*. It is said to be derived from *Shika miguu*, i.e. "I hold your feet," and to have been introduced by Arabs to their slaves as a sign of abject submission. This origin is disputed, but even if it is correct, a very careful investigation and questioning of a large number of Africans has failed to betray the slightest sign of any abject or derogatory feeling about it. On the contrary more than one old man has begged me to insist on his sons using *Shikamoo* and implored me to ban absolutely *Jambo Bwana*.

Another origin of this term is possible and interesting. It is that the words are really *nashika miguu* and originated in the small child learning to walk holding on to his father's legs to steady and support himself. It would explain the significance of its being used by younger to elder.

We should regard with great horror the person who arrived for dinner at Government House dressed in engineer's overalls, and who kept his hat on during the meal. The African regards with still greater horror the person who is impolite.

Good manners, of course, do not begin and end with greetings and there are many other African customs and conventions of courtesy which would repay study but space does not permit. A schoolmaster friend of mine told me that when he became aware of the use of *Shikamoo*, he told his class that in future he would expect, require and respond to this greeting only, and he found that in a few months the tone of that class had altered for the better in an amazing degree.

So would it be all over Africa if greater care and study were given to this vital question of good manners. Africans judge us not on the merits of British justice which they hardly understand, nor on our education and abilities, nor on our strength of character, nor on the multitude of other virtues on which we pride ourselves—in secret—but on our courtesy—and for obvious reasons.

A Note on the Tembe at Kwihara, Tabora

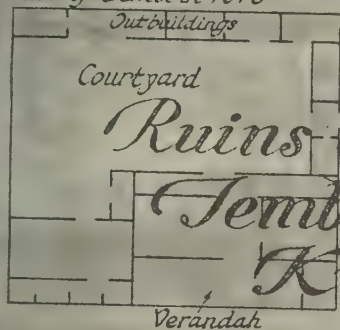
By F. Longland

ON 21st March, 1871, H. M. Stanley left Bagamoyo for such destination in Central Africa as fate should decide. He was "to find Livingstone" and to that end was leader of the "*New York Herald Expedition*" which had been conceived, and what was more important financed, by the manager of the *New York Herald*, Mr. Gordon Bennett, who was interested in Livingstone, and also in the circulation of his paper. For over two years little or nothing had been heard of Livingstone, who had disappeared in the regions of the Great Lakes; both in America and Europe a great many persons were anxious to know his fate. Stanley had with him an ex-ship's officer, John William Shaw. Another member of the expedition, also a ship's officer, W. L. Farquhar, had preceded them in the general direction of Tabora. By June, 1871, Stanley and Shaw reached Kwihara, the journey not having improved their relationship. Unfortunately, Farquhar had been left at Mpwapwa, a sick man, and as they heard later, he had died there. Kwihara (which is the Kinyamwezi for "In the open" or "In the clearing") is still a group of huts, and in 1871 was still a larger place. It lies about three miles south of the township of Tabora. At Kwihara, Said bin Salim, the Arab "Governor" of Tabora, had a house, or "tembe," which Stanley occupied. He was very pleased with his quarters: "On my honour," he writes, "it was a most comfortable place, this." How comfortable a faint idea can be gained from the plan of the ruins of the tembe as they are to-day. Stanley, and presumably Shaw, occupied these quarters for nearly three months. They were delayed in their journeys by the uncertainty of the route to be followed and by lack of porters, also by a war which was being waged between the Arabs of Tabora and Mirambo, a chief who plundered their caravans and burnt their houses, perhaps not entirely without justification. In this small war Stanley joined, somewhat imprudently.

On 20th September, 1871, Stanley and Shaw were able to leave Kwihara and march towards Ujiji where Livingstone was believed to be. They avoided the usual caravan route through Mirambo's territory and marched south for some days before heading west. Shaw, who had been sick at Kwihara, returned probably about a week later, and there, poor fellow, he died even as his friend Farquhar had died at Mpwapwa.

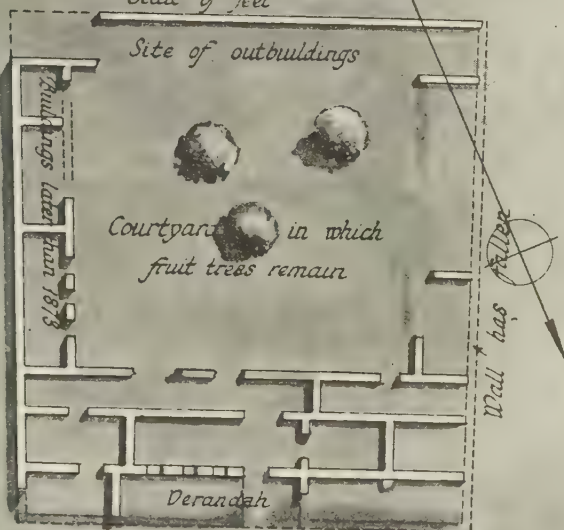
On Friday, 10th November, 1871, Stanley met Livingstone in Ujiji, and after some exploratory work on Lake Tanganyika, they set out in the rains for Kwihara, where they arrived on 18th February, 1872. They took up their quarters in the same tembe which Stanley had occupied. Stanley was

Plan of Tembe in 1873



Ruins of Arab Tembe at Kwihara

0 20 40 60 80 100 feet
Scale of feet



District road

*The sketch represents
the Tembe as it was
in 1872.*



exuberant. He writes: "The myth that I had travelled through Africa proved to be a fact and never was the fact more apparent than when the Living Man walked with me arm in arm to my old room and I said to him, 'Doctor we are at home.' The Doctor himself was much more restrained. He merely noted in his diary: 'The country now opens out and we come to the tembe in the midst of many straggling villages. Unyanyembe. Thanks to Almighty'"

It is remarkable that Said bin Salim's mud brick tembe should have sheltered both Livingstone and Stanley. They lived together at Kwihara for nearly a month! How comfortable the quarters were under these conditions is not known—but one wonders. However, on 14th March, 1872, Stanley left on his return journey to Bagamoyo, where he arrived seven or eight weeks later (6th May, 1872). Meanwhile, Livingstone remained in occupation of the tembe, busy making plans for further explorations, overhauling stores left by Stanley, and calculating how long it would take that energetic man to reach the coast and send to him the equipment and the porters which he needed to carry out his plans. He calculated that Stanley would arrive at Zanzibar on 1st May, and that his own men and stores would arrive at Kwihara on the 10th or 15th of July. Actually they did not arrive until 14th August. Livingstone was depressed. Such entries as "Wearisome waiting," "Weary, weary. Waiting wearily here" occur in his diary far too frequently for a healthy man. On 23rd August the entry in his diary reads: "Cannot get Pagasi, most are sent off to the war" (with Mirambo). But two days later: "Started and went one hour to the village of Manga, or Yuba, by granite ridge . . ." By then Livingstone had been an impatient tenant of Said bin Salim's house for 189 days. He left Kwihara on his last journey on Sunday, 25th August, 1872.

When Stanley arrived at the coast he found that another expedition had been prepared and was about to leave to find Livingstone. This expedition, which was being mobilized in Zanzibar, had been organized by the Royal Geographical Society and placed under the leadership of Lieutenant Henn, R.N. It included, among others, Oswald Livingstone, the son of the man who was waiting at Tabora. Most unwillingly the members of the "Livingstone Search and Relief Expedition," as it was called, came to the conclusion that it was useless to continue; however, some of the native personnel (including one Jacob Wainright, from Nasik near Bombay) were enlisted by Stanley and sent on to Livingstone.

The Royal Geographical Society decided to use the surplus remaining from the subscriptions to Livingstone Search and Relief Expedition in fitting out yet another. It was intended to place this last expedition under the direct orders of Livingstone when it reached him. Meanwhile, Lieutenant, later, Commander Cameron, R.N., was chosen leader, with him went Dr. Dillon, R.N., and Lieutenant Murphy, R.A., and later Mr. Moffat. They arrived at Bagamoyo in February, 1873, and left in March. It was not until August, 1873, that the party arrived at Kwihara, at least Cameron, Dillon and Murphy.

arrived, Moffat died on the road, they had all suffered from fevers, dysentery and inexperience. They put up at the house which had previously been lent to Livingstone and Stanley. Cameron describes it as "a large and substantial building of mud bricks with a flat roof." He himself had a portion of the veranda screened off as a bedroom, Murphy and Dillon occupied the main room immediately behind the veranda. At Kwi-hara they all were sick, and it is not improbable that Cameron had tick fever for he complains that he "has been quite blind and very bad with fever" (14th October, 1873).

On 20th October, 1873, a letter was brought into Kwi-hara from Jacob Wainright, the bearer was Chuma (Juma), Livingstone's own servant. Jacob Wainright supposed that Oswald Livingstone was in the expedition now at Kwi-hara and had written to him telling him of his father's death and how they were bringing in his body.

Cameron writes: "On the arrival of the body a few days later Said bin Salim, Shaykh bin Nassib, Abdullah bin Nassib and the principal Arabs without exception, showed their respect to Livingstone's memory. . . . The askari were drawn up in front of the house in two lines between which the men bearing the body passed: and as the body entered, the colours . . . were shown half mast high." Thus did Livingstone return to Kwi-hara fourteen months after he left it.

Livingstone's death dissolved the expedition. Dillon and Murphy were constrained to return to the coast and on 9th November, 1873, they left with Livingstone's caravan. On the same day, Cameron set out for Ujiji and on his famous journey across Africa. Poor Dillon had appendicitis when he left Kwi-hara, his trouble was followed by an attack of fever and not many marches distant he took his own life. Near the tembe at Kwi-hara, to the west of it is a grave said to be that of Shaw, Stanley's companion. There is an Arab tradition to the effect that it is the grave of the "Bwana Maganga" who could be no other than Dillon. Cameron says that Dillon was buried in "the jungle" at Kasekera, but he was unable to find the grave when he searched for it. On the other hand a picture of the tembe in Stanley's *How I Met Livingstone* (from which the sketch in the plate is taken) shows native huts on the site of the grave. Shaw could hardly be buried there; neither does Cameron mention his grave. Be this as it may, the tembe at Kwi-hara has witnessed tragedy enough, and two early British explorers are buried somewhere near it.

If these notes have been followed it will be clear that Salim bin Said's tembe at Kwi-hara gave shelter to Stanley, Shaw, Livingstone, Cameron, Dillon and Murphy between the years 1871 and 1873. It is quite possible that other early explorers used the place as their headquarters. The mud brick walls which have stood for over sixty years are being slowly destroyed by sun and rain, soon only the stone memorial in front of the place will be left. The inscription on the memorial is not quite correct. Stanley met Livingstone at Ujiji on 10th November, 1871, and not on 28th October, 1871.

It is quite in keeping with all that has taken place that the natives should call the ruin the "Kaburi," i.e. the Grave.

Primitive Native Education in the Bukoba District

By A. W. M. Griffith

IN VIEW of the fact that the present system of school education is intended to create "A Good African" a term which is capable of a different interpretation by every individual creed or tribe, the following description of a primitive system of education which has existed in Bukoba from time immemorial and which is intended to create the type which the native considers to be a good African, may be of interest.

The Mukama (Chief) selected a man of good social standing and recognized ability called Mukungu and he was commissioned to go through the whole country, Gombolola by Gombolola, and gather together all the boys of twelve years of age or even of ten years if precocious. These boys were detained by their respective Gombolola chiefs for a period of ten days during which time they were exhorted to uphold the honour of their Gombolola (Nkungu) and instructed how this should be done.

Subsequently all these boys were taken together to the Mukama's residence where combined sports, jumping, dancing and singing, took place and a collective name was given to the children of that year, such a name as OMULAKIMALA (the men of action). This formal institution of these bands of children into rival companies took two days during which time they were fed at the Mukama's expense. There would be perhaps six hundred children present at this first meeting, and they would form about six companies (in such a country as Kiziba).

A chosen company would then remain for a period of two months at the Mukama's house and others would be sent to their respective Gombolola, to be brought forward in their turn. The syllabus as given by several old men who were present at these schools was as follows:—

(1) The head boy beat the drum at 6 a.m. and any child who did not immediately rise and dress was punished.

(2) All proceeded to the Mukama's hut and cleared out the cattle manure and grass, which was taken to the banana plantations and placed as manure. I would here remark that the Mukama had possibly a hundred serfs who could do this work, but that it was made incumbent upon the children to do so as a part of their education.

(3) By 10 a.m. this was completed and all were compelled to cleanse themselves. This took about an hour. At 11 a.m. half an hour's relaxation for play was permitted. About 11.30 a.m. all would go to the Mukama to get their food. Here they would be detained on grounds of ceremony until 1 p.m. as the Mukama was never easy of access, and 1 p.m. was the hour for food. During this meal it was the duty of the Mukungu through the older boys to instruct the children in table manners and the whole ceremonial procedure of

eating in the presence of superiors. For example, hurried eating or greed were punished. Speaking with the mouth full or unduly staring at another child who was eating were prohibited, as was also chewing food with the mouth open. A short rest was allowed until about 2 p.m. and was followed by races and sports of various kinds until about 4 p.m. when all were again taken to the Mukama with singing and beating of the drum. He would be on his baraza, surrounded by the chiefs who were on duty at his Court.

(4) Shields and sticks (spears) ranging in size according to the age of the child would then be given, and games calculated to show or foster skill in warfare were the order of the day. This portion of the day's proceedings was taken very seriously by the Mukama and his chiefs and definite instruction in the arts of war was given. Promising youngsters were marked out.

This procedure would end at about 6 p.m. and the Mukama would then occasionally allow the boys to eat their food in his presence. This privilege was not given at the 1 o'clock meal which was devoted to instruction. At the end of the meal the children would be taken in an orderly manner to the huts which had been erected for this purpose, each hut to contain a fixed number of boys arranged according to their strength and each under control of a senior child. Where bullying occurred the bully was removed to a hut containing bigger boys than himself who were instructed to check his propensities in that direction.

The above is a description of a typical day. The work done by the boys varied. Some would cut grass for the cattle to lie upon in the huts, or carry grass for the young cattle in the huts, or look after the plantations. (Cattle lie in the huts in Bukoba and fresh bedding is cut every day.)

Each band of children would follow out this proceeding at the Mukama's residence for two months and would then be replaced by the children of another Gombolola.

Those who had completed their two months would return to their Gombolola where instruction would still be carried on, until they were married. As they grew older instruction in the art of building houses and fences would be carried on, and that is why to-day the architecture of some of the native houses with their matete plaiting, regular curves and pillars is a matter for admiration. They have developed a type of architecture in which beauty has not been sacrificed to utility, and which, most unfortunately, is being lost, because these schools no longer exist.

The Muteko (band of children) to which a native belonged in his youth was one of the biggest things in his life. If an old man is asked his age, he will reply: "My Muteko was called so-and-so," and from that he expects the date to be calculated. To return, however, to the subject of instruction, the Muteko served not only as a school for pure education but as a qualifying examination for those boys whose ability showed them to be superior to their fellows. On the third annual visit of the Muteko to remain for its period of two months at the Mukama's residence, the boys being at this time about fifteen years of age, any number from four to ten boys would be chosen out of each Muteko,

perhaps thirty or forty out of the whole district, who would remain permanently at Court. These were kept under the Mukama's direct observation and never left him. These boys were at this time supposed to know all the ceremonial forms of address, and the fact of announcing a visitor without giving his full rank would be sufficient to entail either a severe reprimand or dismissal to his Gombolola. I understand that about half of these would be dismissed in the course of a year.

The boys who passed with credit through this strenuous school were marked down for future honours, and though heredity is the main basis of succession to village or Gombolola chieftainships in Bukoba, they would receive these honours in cases where the succession was broken. They would be the regents for the Mukama's young children who were not yet of age to rule their Gombololas, or the captains in the Mukama's army. The system, calculated in the native mind to educate the boys and fit them for the life they were to lead, was in existence up to 1926, though the growth of mission schools throughout the district had taken away its power, and the children went to the mission schools where discipline was less severe. The Bakama feared the power of the missions with whom they appear to have been at variance on this subject of education, and the Bakama's school disappeared. Tribal authority, courtesy and manliness have suffered owing to their disappearance.

Up to 1923, however, the Bakama were responsible for the building of the government district schools which have been established. They also undertook the feeding and in many cases the clothing of the children who attended them.

In 1923, they were told that their responsibility no longer attached to them and this virtually destroyed their interest in education which they did not quite understand and which was conducted by teachers over whom they had no control. The reversal of this policy which has now taken place has reawakened their interest; without exception they are ready to vote as much money as the Native Treasury can afford towards the purpose of education.

Sukuma Fables

By P. M. Huggins

1. The Story of Kulwa and Doto.

THERE was once upon a time the son of a King who married two wives, and these two wives were exactly alike and they were very beautiful. And after about five years neither of the wives had borne a child and their husband's heart was grieved, for he said: "I love them both exceedingly. There is only one thing lacking. If they should bear me children, I should be overjoyed." So he came to look for a witch who knew of a potion to make his wives fruitful, and he came upon an old woman and told her of his difficulty. After thinking a while she said: "My son, you require a potion because neither of your wives has presented you with a child since you married them. Now do you want them to bear you sons only and not daughters?" And the King's son replied: "As you say, O Mighty Witch." And she replied: "I have a potion I can give for your wives provided you only require male children but you must carry out the following instructions: When you arrive home, call your wives and say: 'This potion will give you sons to help us in the land of our fathers'. You will then remain at home for a month after which you will go on a journey taking leave of your wives saying: 'I am going on a long journey to a far country and I shall stay away three years'. Should you observe that they are likely to bear children you will say: 'My wives I am now about to depart. She who bears me a son will I love all my life and I will make a great feast for her and will slaughter my largest and fattest bull, but she who bears me a daughter will I slay for I do not want a daughter'." And the young man did as the witch told him for he wanted to find out whether she spoke the truth. And he tarried for a month first of all as he was bidden and then set out to such places as he desired to go to wait there for the given period. After he had been absent for one year his first wife gave birth to a son and she was truly grateful saying: "I am delivered from death but you, my companion, are still uncertain for you do not yet know whether you will be delivered of a son." And the other wife replied: "God himself alone knows. Should I bear a daughter he will know, and should I die will it not be because of my husband who has been deceived?" Her companion replied: "These matters no longer concern me but you still have to face them." And the second wife replied: "Leave me that I may weep for I have not yet considered the question of my death;" but in her heart she mused: "Truly my companion is safe and I am left alone; but these matters are all in the hands of Him who created me." A few days after as she was going to the lake to draw water she was overcome with birth pains and before she drew any water she there and then gave birth to twins, the first a girl and the second a boy. And the young wife saw that her

children were radiant like stars and she shone with a wonderful light. And she said : "What shall I do with my poor Kulwa, there is no course left open to me but to throw her in the lake even though she will be eaten by the fishes. I only take this step because I am forced to do so." And she threw Kulwa into the lake out of her necessity and there only remained her son Doto. (I must tell you that amongst the Wasukuna it is customary for twins to be called Kulwa and Doto ; the first to be born is called Kulwa and the second Doto.)

Now the woman continued with her son Doto but her sorrows were great ; and Doto was a big child, and when he had attained his third year the father returned and found both his wives with sons, but she who had thrown her child into the lake did not tell him, nor did she tell her companion ; only herself and Doto knew. And he called his wives and gave them precious gifts and there was much feasting and rejoicing even as the old witch had ordered.

Now the boy Doto together with his brother herded the cattle, and whenever he arrived at the place where his sister was thrown in the lake he was overcome by grief and sang these words : "May whoever cheated my father, causing my sister to be thrown in the lake for the sake of a feast, be cast to the hyana and devoured."

So every time he arrived at this spot he said these same words. And one day his brother asked himself : "How is it that every time we come here he grieves thus out loud? Perhaps there is truly someone in the lake ; I will go and tell my father about it." So when they arrived home he went to his father and said : "Father, listen to me. When I go herding cattle with my brother Doto near the lake, he always bursts into a grievous dirge, and then and there by the lake a lovely voice answers him."

So his father called Doto to him and questioned him gently and the latter gave way and said : "Let us go to the lake, father." So they went together with many neighbours to bear witness and when they came near, the father of Kulwa said to Doto : "Sing, my child, that your sister may come out of the lake, and if she does come I will give you many milch-cows." Thereupon Doto commenced to sing a song so heartrending as to bring tears to the eyes ; and of those that followed some wept out loud but others scoffed saying : "We are being fooled, who has ever heard of a human being living in water like a fish? It is all lies." But lo, they heard a faint voice, and the voice was very beautiful, and it was followed by Kulwa rising from the water. First she appeared very slowly singing but finally she stepped on land. And those poor savages who were standing by said : "She is not a human being, she is a devil ; how is it her countenance is so full of light?" But others said : "She is similar in feature to our Prince, and how is it she is so like his son? Truly she is his child." And they gathered her up and took her home with much rejoicing.

And when the feasting was over the Prince began to meditate on the words of the witch, and he said to himself : "God alone is powerful, none can stand against him." And he stopped his friendship with the witch and instead went to his father the King and accused her. So the witch was sent for to

the King's Court, and when she arrived she was clubbed over the head and killed without trial, and her body was thrown out like a log.

So the Prince came to live in peace with his wives.

One day the son of a very rich man came to court his daughter. His name was Ngunda-Mwiswa, that is to say, "Garden rich in Grass." So when the question of marriage arose the Prince sent his envoys to the place of Ngunda-Mwiswa and they were received right royally and a large ox was slaughtered for the feast. When they had feasted, the marriage dowry was discussed and fifty head of cattle were sent as a present to the Prince's daughter. And on the day of the wedding Ngunda-Mwiswa collected all his friends and went to the abode of his betrothed where they were welcomed exceedingly by her and they mixed freely with her guests.

No words can express the mountain of dust, of which there had never been seen the like, which arose as dancing and feasting progressed. For the Prince caused to be slaughtered three bulls on account of his three children on three consecutive days, and also three bullocks on account of his son-in-law whom he loved.

The friends of Ngunda-Mwiswa remained three days and on the fourth day they bade farewell and went to their homes leaving Ngunda-Mwiswa in peace and happiness with his wife.

Moral:—My young friends: Let us not pay too much heed to the old witch-doctors for much of their advice is empty lies. Let us exercise common-sense. Let us do nothing suddenly or we shall meet with calamity.

2. The Mtama and the Nyama.

THERE was once upon a time a King who ruled the whole world and everything therein came to greet him at dawn at his dwelling. One day the Mtama arose very early that he might go to the King and talk over many matters with him. After he had finished his conversation he took leave of him in order to return home. After proceeding a little on his way he met with the Nyama who was also going early to greet the King. And the Mtama said to the Nyama in a threatening voice: "Let me pass at once!" And the Nyama refused and said: "Who has set you above every one else, or is it that you have set yourself up?" And the Mtama replied: "I have just come from the King and his Councillors and they have all agreed that I am greater than every one else." Then the Nyama replied: "I have not yet seen the King and I refuse to acknowledge that you are greater than I am." And the Mtama was very wrathful and pushed the Nyama, and they quarrelled and struggled and fought until the Mtama was beaten. And he cried out bitterly and said: "Come, let us go to the King that he may settle this matter." And the Nyama agreed and they pushed forward hurriedly. When they arrived before the King they sat down, but the Mtama immediately stood up again to lay his complaint. And he said: "O, Everlasting King, when I left here to-day I met the Nyama and I told him to let me pass, and he refused, and

we fought, and I remembered your words to me when you said 'You, Mtama, come next to me, I only am greater than you.' Now will you please tell him." And the Mtama sat down. Then the Nyama stood up to lay his complaint and he said: "As I was coming here I met this Mtama, and lo and behold he angrily demanded that I should let him by immediately, and I was surprised. For what sort of a person was this who could not even say 'Good morning.' So I refused to let him by in a hurry. So we struggled and fought until I beat him. Then he said 'Let us go before the King,' and I agreed."

When he had finished the Nyama sat down. And the King considered upon this difficult matter and he was puzzled and said to his Councillors: "You decide this matter." The first Councillor then stood up and said: "You, Nyama, are less than Mtama," and the second stood up and delivered the same judgment as the first, and all the others followed suit. Then the Nyama asked: "So I am the lesser, am I; this is news to me; but it is commonly said that I am the greater, for you, O King, wear your Royal Insignia (Kibangu) by virtue of my skin. Now you can return it to me and let the Mtama provide the wherewithal to fasten your Insignia."

And the King stood up before his Councillors and the Nyama ceased speaking. After a little while the Nyama stood up to speak again and he straightened himself and said. "Now, O King, give me back my skin that there may be no more trouble between us." And the King replied: "Lo, you Nyama are the greater." And the Nyama answered him: "I have not yet fully understood, for first you told me that I was the lesser, and now you have corrected yourself; have you anything more to say to me?" And when all the Councillors had heard the demand of the Nyama, they wondered how the King would fasten his Royal Insignia except with a piece of skin, and also with what else he could clothe himself amongst men. So with one voice the assembled multitude said: "You, O Nyama, are greater than all." And the Nyama looked hard at the King saying: "If you agree to this then you agree that you stand in relation to me as a son to a father." And the King agreed and was told: "You will be greeted with the words 'Good morning, Child of the Nyama'." And the King agreed to be greeted as the child of the Nyama. And all present were silent; not one had anything to say in reply.

So from that day all Kings have been saluted with the words "Greetings, O Child of the Nyama," and if any one else is greeted with those words in the hearing of the King all his property is confiscated and he incurs the displeasure of all Kings. This is the end of the story.

Note:—This story was translated from the Kisukuma by Mtemi Mgemera of Magu. The translation into English is by no means literal as had it been so it would have lost such charm as it possesses to Europeans' ears. The sense of the story is, however, as true as I could make it.

The Dance Societies of the Wasukuma, as seen in the Maswa District

By R. de Z. Hall (with acknowledgments to G. T. Wheeler)

AS IN Western Europe, so in Usukuma, one of the manifestations of youth is a love of song and dance, and this in Usukuma is organized within the confines of a few dance societies, two very large and wide-spread, others smaller and in some cases local, in others general.

The main societies are the Bagika and the Bagalu, both of which are organized throughout Usukuma, and probably had their origin therein. The lesser societies are the Bagoyangi and Banunguli, originating in Ufipa, the Bayeye (origin unknown), the Banyaraja (local) Basaji, originating in Southern Usukuma or Nyamwezi, and the Badono originating on the lake shore. All these societies have certain features in common:

(a) They have a hierarchy which apes the tribal organization, with Mtemi, Watwale and Wanangwa. No trace or suggestion has, however, been found that this organization is in any way subversive of government.

(b) They are masonic in character to the extent that mutual help is given under all circumstances: this even extends to assistance in the payment of "nzigu" or blood-money.

(c) Their meetings, even as at the Palais de Dance, provide the regular opportunity for courting.

(d) Few persons keep up with dance after the age of thirty unless connected with the inner circles of the societies.

The Bagika, comprise a third or more of the young men of the District, most of whom do no more than attend the dance meetings. A few become initiated into the inner circle of the society which ensures its continuity. These initiates conduct medico-magical practice of a beneficent type. The distinctive tattooings of the society are a double line of incisions from right shoulder to left waist (occasionally the opposite direction also, an arrow-shaped series of incisions on the left cheek or shoulder, and a zigzag line of incisions up the backs of the arms and across the shoulders.

The dance is almost invariably of the type known as Iginya, where the participants stand in a circle and dance the traditional steps sung to traditional tunes, the words of which vary from year to year and are composed and conducted by the Baringi, who form one section of the inner circle and are not usually concerned with medicine. A distinctive dress has arisen in the form of parti-coloured silk vests: there are various unpleasing but not vicious adornments, such as dark spectacles and a form of hairdressing resembling that used by Swahili women. The Baringi have evolved a sort

of uniform of which the main features are double terai hats, black vests, bead aprons, ostrich feathers, a large number of arm bangles, as well as badges indicative of position in the society. A special mark is the possession of a muzzle-loading gun. There is a sect which dances with wooden clogs, found only in Ntussu.

The *Bagalu*, or Baghunha, after their founder Gunha, are precisely similar in their organization and everyday manifestations to the Bagika. The two societies are, in fact, rivals. They sing the same songs and dance the same dances, and competition often runs to the extent of two rival Baringi conducting their chorus, standing back to back, and by their verve and skill striving to overcome and break up the other's following. The inner circle, however, is not of the high repute of the Bagika, by civilized standards. The main medicine of the society is to enable theft by guile, even conferring invisibility. The actual practitioners are very few, in relation to the total numbers of the society, but it is noteworthy that all the notorious recidivist thieves of the district are Bagalu. The distinctive tattooings of the society are a ring round the left eye, a double ring round the diaphragm, and circles on the left breast and the shoulder-blades.

The *Basaji*, who dance with iron bells attached to the calves, and the *Badono* are similar in organization. They are of small and declining importance, and are only found in the north of the district. The Badono has recently acquired some notoriety, a large proportion of their membership coming from the class of youths who enter service in the Mwanza bazaar for the sole purpose of stealing. But there is also no doubt that the reputation of the society is vilified by the polygamous middle-aged men of Ntussu who find their younger wives being assiduously courted by the dance-members.

The *Banunguli* are a different type of society, their forte being pantomime and active dance rather than song and stationary dance. Membership of the society can only be attained by passing through an arduous initiation ceremony, and for this reason is small. The special medicine of the society is directed to the catching of porcupines, but general practice is also indulged in. The best pantomimists of the society are of a very high order, and can entrance the spectators for as long or longer than the English music-hall turn. The distinctive marks of the society are the hair, which is done up in tufts, and a girdle of incisions with one line above and two below on the abdomen. In this district the society is friendly with the Bagalu, though in Shinyanga they are rivals. The Bayunguli, unlike those previously mentioned, are a drumming society.

The *Bagoyangi*, of whom the Bayeye are a sect, are also a drumming, miming and acrobatic society, with a similar initiation ceremony into the inner circle. Their forte is general medical practice with special reference to the curing of snake bites, and part of their methods of attracting attention consists in the catching of and playing with snakes. The distinctive marks are a girdle of incisions round the waist, another line round the neck and various minor incisions on other parts of the body.

The *Bayeye*, originally a society of elephant hunters, are now of very little importance. They drum and dance apeing the movements of an elephant. Marks are a series of double or triple lines of incisions on the right side of the back, and the back of the right arm.

The *Banyaraja* arose from the safaris to Lake Eyasi, known in Kisukuma as Nyaraja, for salt. These safaris are always accompanied by a small drum, and on their return the young men join together for dancing. Small drums are used, with no singing, and dance steps consisting of a few forward and backward steps are followed. Adornments of ostrich feathers are used.

The dance is somewhat akin to the seasonal dances of the *Lilida* and *Kadiga*, danced only in the North Simiyu area. These have no friend membership.

Besides these societies, there are two of much greater importance, which are not strictly dance societies but medico-magical societies. These are the *Bafumu* and the *Baswezi*. The latter has no following in the Maswa District. Entry to the *Bafumu* is open to anyone, without reference to other societies. Their main functions are in connection with the ancestral spirits, for whom they dance a sacrificial dance, bearing iron rods with bells on them. They charge a considerable fee for their services.

As far as information has been acquired about the *Baswezi*, they are spirit doctors and general practitioners as well. What truth lies in the allegations of sinister rites and tenets practised among them one cannot say, but the suggestion is hazarded that these are to a considerable extent fostered by the *Bafumu*, who find in the *Baswezi* rivals to their vested interests, and make insidious allegations regarding them. Neither society has any tattoo marks, so far as discovered.

The general conclusion I form is that there is nothing anti-social or subversive of Government in the activities of the Sukuma societies: that, on the contrary, they are on the one hand an organized outlet for the desire for self expression among the youth of the country, and on the other, a series of medical councils or practitioners of beneficent medico-magic: that the prevention of tattooing can only drive the societies underground and tend to impart to their proceedings a secret and sinister aspect which is at present lacking, save to a slight extent in the Bagalu and Badono societies whose tendencies can well be corrected by education: and that the suggestion of enthralldom is illusory, since the bulk of society members leave the societies on passing the period of youth.

A Witch-Doctor at Work

By C. P. Lyons

AS AN indication of the extraordinary hold over the people possessed by witch-doctors, "waganga" and self-appointed minor "atemi," it would be interesting to narrate an incident which occurred about three years ago and is still fresh in the minds of the parties concerned. At a village not far from Iambi there lived a notorious "mganga" who combined the functions of witch-doctor and rain-maker. His practice was large and he had amassed considerable wealth in the exercise of his profession and extracting tribute from his neighbours. It came to light, however, that he had neglected to pay his hut and poll tax for a considerable number of years; in fact his name was not even included in the assessment roll of taxpayers. The tax clerk of the area was accordingly instructed to demand immediate payment of his tax.

As time passed and the money was not forthcoming, the clerk visited the mganga's kraal and insisted that he should appear before the chief. Tired of these importunities, the mganga said: "I am not permitted by the spirits to pay to any man. You know my reputation. If you persist in worrying me I shall cause the lightning to strike your womenfolk and children." The clerk was exceedingly afraid but duly reported the threat. He was told to return to the mganga with the assurance that if he did not appear before his chief immediately he would have the Government to contend with.

One morning, a few days later, a large procession of natives bearing three stretchers, was observed approaching the station. The stretchers were carried up the steps leading to the Boma and placed before the Administrative Officer. Two stretchers contained the dead bodies of two young children. In the third was a young girl suffering severely from shock. Down one side of her body was a clear light fern-like impression significant of the effect of lightning on a brown skin. She was treated in hospital and eventually recovered.

No coherent explanation could be elicited from the excited crowd. The tax clerk said: "A large cloud came over my kraal. There was a sudden crash of thunder. The result you see before you now." It was clear that the crowd was curious to learn what action the white man proposed to take against a mganga possessed of such formidable powers. The position was not without difficulty. The arrest of the mganga would have been a tacit admission of his supernatural powers. On the other hand his original threat to exercise witchcraft with malicious intent could not be overlooked.

The court-house was filled on the morning of the trial. The witch-doctor, wearing his trappings and badges of office, stood in the dock and calmly surveyed the witnesses appearing against him. The proceedings were hampered

and hearing made difficult by a sudden and violent local thunder-storm overhead. On being questioned the accused admitted that he had occult powers and could control the elements. To allay the growing uneasiness which was apparent amongst the natives in the court, the magistrate asked: "Can you make the lightning strike me?" After some deliberation the mganga replied, "No, but" and turning he scrutinized the crowd behind him, "I can make it strike the others who are now present."

The room cleared in a trice, and it was with difficulty that order was restored sufficiently for proceedings to continue.

