

TANGANYIKA NOTES AND RECORDS

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[Photos by F.B. Wade]

Grave of James Frederick Elton

[The original thatched roof guarding this grave was removed in November 1938 and replaced by this monument, a pinth surmounted by a broken column to symbolize a career cut short]

(See page 98, Notes and Records, No. 8)

Editorial Notes

MR E. E. Sabben-Clare has relinquished the post of editor on his secondment to the Colonial Office, and has been succeeded by Mr A. Sillery.

* * * *

We regret that owing to an oversight we omitted to acknowledge the authorship of the note on "Salt Production among the Wasambaa" which appeared in *Tanganyika Notes and Records* No. 8. This note was by Mr G. D. Popplewell.

* * * *

We once again appeal to all who are interested in the success of this journal to support it by sending in contributions for publication and also to help us by enrolling new subscribers.

Clouds and Cloudscapes

By C. Gillman, C.B.E.

"Ascend, ye watery clouds, on high,
Daughters of Ocean, climb the sky,
And o'er the mountain's pine-capt brow
Towering your fleecy mantle throw."
(Aristophanes, *The Clouds*)

IN A recent paper on "Landscape Meteorology," *Quarterly Journal, R. Meteorolog. Soc.*, Oct. (1939), L. W. C. BONACINA remarks very judiciously "that the scientific and artistic methods are only different moods of approach to the phenomena of the self-same world, and that each, if cautiously but resolutely coordinated with the other, is bound to open up wider vistas of truth. . . . by enriching the outlook of both." The ancients seem to have differed widely about the effects on man of his contemplating the sky, the writer of Ecclesiastes discouraging such contemplation:

"He that regardeth the clouds shall not reap." (XI, 4),

whilst the more worldly Aristophanes promises us a wide range of benefits through the voice of no less a personage than Socrates:

" . . . clouds celestial, friendly powers
To men of sluggish parts; from these we draw
Sense, apprehension, volubility,
Wit to confute, and cunning to ensnare."

Modern man, brought up in an environment where penetrating into the secrets of Nature has become an ever wider spreading custom, will probably agree with Bonacina that "an open air study of weather stimulates the various faculties of body, mind and soul and is thus of invaluable educative importance." Such study is greatly helped by cloud photography whereby the fleeting impressions, so easily blurred when merely entrusted to our unreliable memory, can be vividly reproduced at any moment for scientific analysis or artistic enjoyment or, better still, for a careful blending of both. For this reason he who devotes part of his time and patience and, probably, a good deal of his ready cash to this luring hobby of the sky should choose his objects for a double purpose; they must be scientifically characteristic and artistically pleasing.

To catch, as far as it is possible, Emerson's

"unstable cloud always and never the same"

series of photographs of the changing aspect taken at a few minutes' interval are most useful to the study of cloudforms developing one from the other, and often in the process delighting or teasing one's fancy:

HAMLET: Do you see yonder cloud that's almost in
shape of a camel?

POLONIUS: By the mass, and 't is like a camel, indeed.

HAMLET: Methinks it is like a weasel.

POLONIUS: It is backed like a weasel.

HAMLET: Or like a whale?

POLONIUS: Very like a whale.

(Act III, Sc. 2)



late 1

Nor should the cloud photographer overlook the intimate relations between skyscape and landscape. For not only does the relief of the land influence volume and shape of the clouds; but the sky in its turn affects the expression of the landscape by rapidly altering the shadows it casts by lighting or darkening one place now, another a little later, and thus providing infinite variety for the admiring eye as well as for the reflecting mind. And again this changing expression reacts on the complexion of the sky in beautiful and instructive interplay.

Although a full knowledge of “Nephelology”—I believe that is what the learned call this fascinating branch of science—greatly enhances the benefits and joys derived from such occupation with the clouds and the weather, the layman can to a considerable extent share in both once he has equipped himself with a few easily grasped fundamental facts and notions; and what is more, by making his pictures and intelligently-taken observations available to the expert, he will often further the latter’s more intricate research.

We all realize, of course, that the clouds, as carriers of vapour from water to land, form an integral link in that great hydrographic cycle without which life on this earth, at least as we know it, would be impossible. Our “celestial friends,” however, are not only the providers of our life-spending water, but at the same time an indispensable and never tiring agent in the production



Plate

of the varying relief of our globe that gladdens the eye wherever we find ourselves. For is it not this same water, disseminated by the clouds, that carves out our lovely hills and mountains, and carries the silt from which our fertile plains are built? And does not this same water, temporarily stored as ice, clothe our Alpine peaks in glittering armour, bury our polar regions under the awe inspiring beauty of the "eternal snow"? Nay, even in our deserts do we find the barren landscape largely modelled by the eroding waters of a former moister climate.

For long has the mind of man, ever anxious to bring order into the maze, the perplexity of his daily experiences, always treading the slippery path of "systematics," endeavoured to classify clouds. An international commission is established at Paris, issuing beautiful atlases of clouds and skylscapes, and compiling systems of classification in Latin. The latest of these shows four "families," ten "genera" and twenty "more important species," many of which are recommended for further subdivision into "subspecies." I trust this formidable list will not deter my readers from persevering, all the more so as it has been epitomized into more manageable dimensions by Mr A. Walter, the Director of our British East African Meteorological Service, for the use of the Kenya Aero Club. If the layman learns to recognize these types he will have gone a long way towards the grasp of fundamentals just advocated. Beginning from the ground, Walter's types are the following :

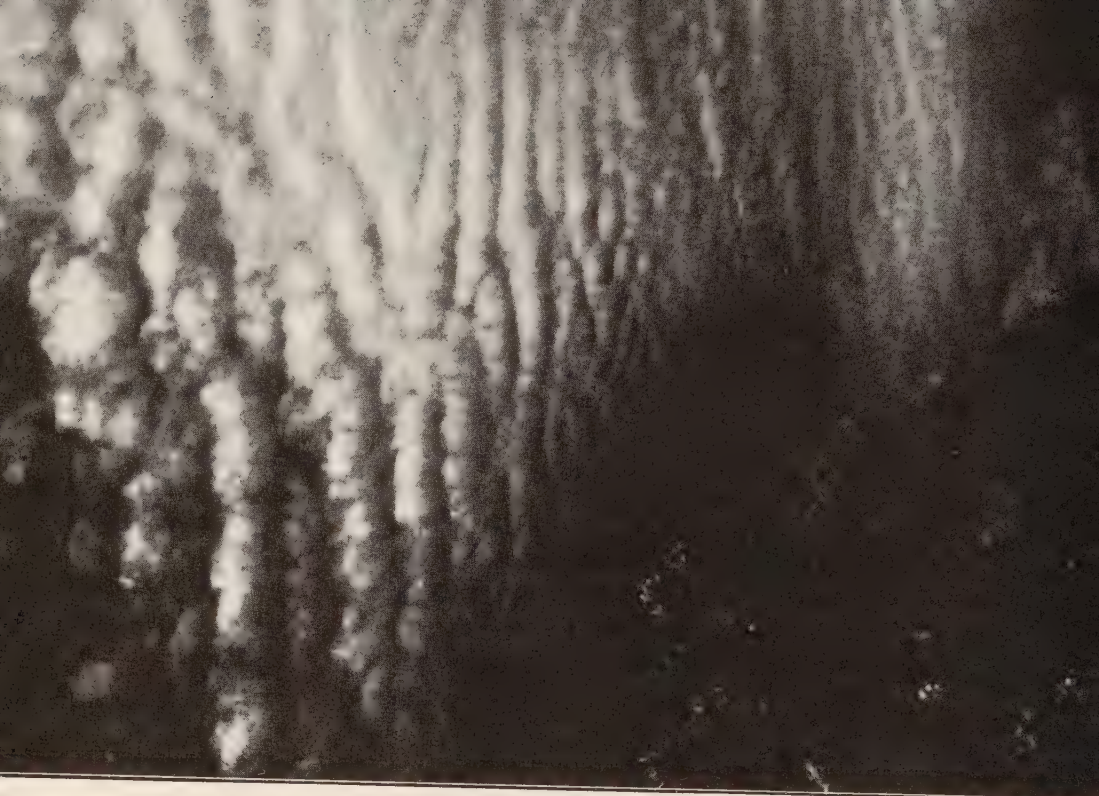
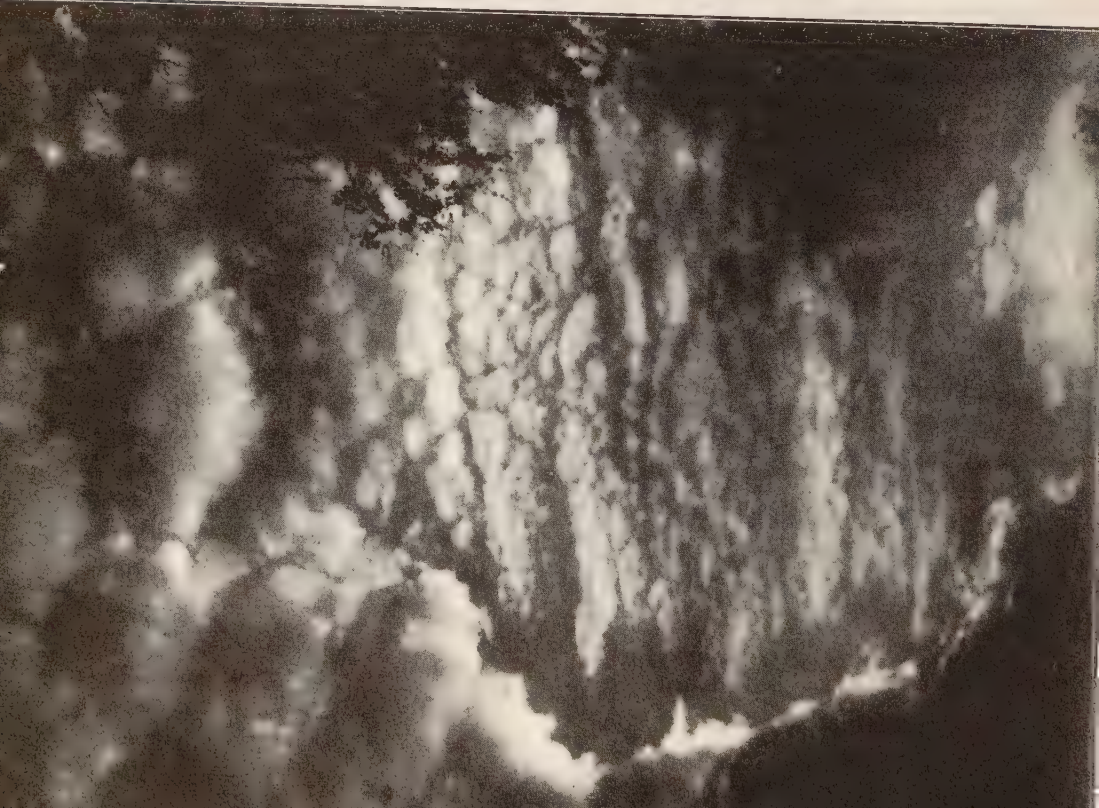


Plate
← 3



- (1) HIGH FOG: Generally known as *stratus* and usually not more than a few hundred metres deep.
- (2) Clouds of diurnal ascending currents, so-called CONVECTION CLOUDS:
 - (a) *Cumulus*, from eight hundred to six thousand metres.
 - (b) *Cumulo-Nimbus*, often with "anvil" tops and reaching to seven thousand metres and more.
- (3) LOWER CLOUDS:
 - (a) *Strato-Cumulus*, rarely more than three hundred metres thick.
 - (b) *Nimbus*, the low, more or less indistinct dark masses usually referred to as "rain sky."
- (4) INTERMEDIATE CLOUDS:
 - (a) *Alto-Cumulus*.
 - (b) *Alto-Stratus*, both always above three thousand and often rising over five thousand metres.
- (5) HIGH CLOUDS:
 - (a) *Cirrus*.
 - (b) *Cirro-Cumulus*.
 - (c) *Cirro-Stratus*, all between ten thousand and fourteen thousand metres.

Where these classes occur in their typical form they are, of course, fairly easy to recognize, although even experts differ as often as not, especially with such bastard types as strato-cumulus. But, alas, they very rarely do and as a rule the sky is a "mixed sky" with all sorts of types intermingling and merging one into the other. This is only natural if one realizes the constant movement of the atmosphere, up and down as well as laterally, whereby conditions of temperature and pressure change rapidly and with them the form and character of the clouds. Classification, so dear to the human mind, then suddenly dissolves into sheer mental misery, and deservedly so: for it is based on the mistaken assumption of a static Nature whereas in reality Nature is always and everywhere highly dynamic, in constant flux. Old Heraclitus, two thousand four hundred years ago, had grasped what our systematists in all branches of science are all too frequently forgetting and put it into probably the shortest and certainly the most truthful uttering of philosophy, his famous "Panta rhei" (All flows)!

And two thousand years later Shakespeare seems to have known or felt the difficulties of cloud classification—what did he *not* know of the things of this world?—when he put the following lines into Antony's mouth:

"Sometime we see a cloud that's dragonish,
 A vapour sometime, like a bear or lion,
 A tower'd citadel, a pendant rock,
 A forked mountain, or blue promontory
 With trees upon't, that nod unto the world,
 And mock our eyes with air: thou hast seen these signs;
 They are black vespers' pageants."
 (*Antony and Cleopatra*, Act VI, Sc. 12)

All of which goes to show that a cloud picture by itself is not enough, however instructive and beautiful it be, and that it should be accompanied by a description which includes the time and space sequence of events. As an attempt to illustrate how I would like cloud photography and sky description to go hand in hand, I shall, in the second part of this essay, give twelve examples culled from my note books and from my collection of well over a thousand camera glimpses of our African sky.

Photographers among my readers may be interested to know that all the pictures were taken with a Leica camera and all except plate four without a filter. In making my choice I have tried to restrict myself mainly to comparatively simple and straightforward cases, only the last three examples dealing with more complicated skies.

Plate one, taken at sixteen hours on the twenty-fifth of April 1938, gives a sector of the north-western sky over Dar es Salaam. The forenoon had been overcast, but at thirteen hours a south-easterly wind sprang up, driving the clouds inland where, in places, they were condensed by convection into high towering cumulo-nimbus. One of these storm centres of mid-afternoon having reached a great height, it was there dissolved into the typical cirrus with its beautiful tufted protuberances which dominate the upper evening sky, whilst very much lower down a few of the afternoon cumuli still linger into the night.

Plate three, looking south-west from Dar es Salaam at seventeen hours and a half on the twenty-second of July 1938, again shows two layers of clouds: a lower of strato-cumulus type, forming the upper, left and lower frame of the picture; and through a "window" in it a higher one of what the meteorologist might call an alto-cumulus translucidus and I usually refer to as a "tortoise-shell sky." Both had developed from a low nimbus which, with occasional drizzles, had prevailed during the forenoon and had gradually been lifted higher and higher by the ascending air currents of the afternoon. On the Central Plateau of Tanganyika Territory these tortoise-shell skies are frequent in the early morning at the beginning of the rainy season, and are of rare beauty when their undersurface is turned into beaten copper by the first rays of dawn.

Plate four, was taken at Mtai camp near the north-western corner of the western Usambara high block at thirteen hours on the nineteenth of October 1938. The day had started at Lushoto, some thirty kilometres further south, with a higher, overcasting strato-cumulus and a thin lower stratus over the footplains, the upper surface of which was a billowing sea of white as seen from probably seven hundred to eight hundred metres above. During the forenoon journey northwards the upper layer was first loosened by ever larger windows under the influence of gradually increasing temperature, and then reduced in mass by quickly rising higher into again lower temperatures, until in the early afternoon rapidly changing fields of "intermediate cloud" filled much of the sky. One of these is shown on this picture: like a huge "judge's wig" this corrugated alto-cumulus, a "fleecy cloud" as



Plate
← 5



Plate
6 →



7

Milton would have called it, rippled at between three thousand and four thousand metres absolute elevation but only one to two thousand metres relatively above the high plateau from which the view was obtained. The sombre tree-tops of evergreen mist-forest form a fine and, to the student of the inter-relations between climate and vegetation, significant foreground. Far out over the low steppe that surrounds the rugged topography of this high block in the north-west floated a few narrow lentils of alto-stratus. At fifteen hours the sky was mostly clear except for a few very loosely spaced fair-weather cumuli and some long-drawn banks of strato-cumulus over the whole sector from north-east to north-west.

The next five plates depict our commonest and, in its infinite variety, most beautiful cloudform, the cumulus. Let us start with plate two, an early stage of the cycle as it is developed day after day in tropical latitudes. It was taken from an Imperial Airways flying boat at nine hours on the first of April 1938, as she raced south at two hundred miles an hour about one thousand nine hundred metres above the mighty delta of the Zambezi. To the north of its many flood channels evaporation had as yet produced only very tiny yellow-grey cumulus fluffs that almost lost themselves over the immense flatness; they grew into denser but still fairly loosely set rows immediately to the south of the main arm's large store of evaporating water and, driven before a forty miles an hour north wind, rapidly thickened inland. It is this delightful aspect, so well known to those privileged to fly over Africa



Plate

in the early morning, that my photograph tries to convey. The ranks of cloud have not yet entirely closed and the black earth still appears through quickly moving windows beneath the glossy white. Here and there, in the middle distance, a few precocious individuals are already preparing for their upward soaring by pushing rounded heads above the general level, obedient to the inseting convection currents. A perfect azure dome stands over it all! From below, this wide stretched field of cloud would probably be termed a thin strato-cumulus.

Later in the day such spreading fields are usually gathered into heavily packed castellated rows as convection increases with rising temperature

“gay castles in the clouds that
pass for ever flushing round
a summer sky.”,

as James Thompson (1700-1748) called them; a poet who was perhaps the first after Pope's and Dryden's fashionable artificialities to deal once more directly and simply with that which is close at hand, to “meditate the book of Nature, ever open”! Plate five shows such a bank of “cumulus castellatus” running parallel with the coast which our pilot was carefully dodging a little north of Beira at thirteen hours forty-five minutes on the fourteenth of April 1938. Its lower edge was about level with the machine flying at a height of nine hundred to one thousand metres. Above it lay a higher sheet of “baggy” strato-cumulus opacus. The meanders and mouth of the river are probably



late 9

those of the Kurome; in front of its surf-edged sand spit lies a smooth, steel-blue sea.

Plate seven represents a further stage of development. Looking north over our Central Plateau from Itigi at the beginning of the rainy season (fifteen hours and a half on the eighteenth of December 1937) it clearly depicts the gradual formation of the "anvil" from typical cumulo-nimbus. The clouds have still their characteristic fair-weather straight base. But vertical convection has already commenced to preponderate over the regular horizontal trade-wind current, so that the ordinary castellations can grow to very great heights where the cumulo-nimbus changes into the anvil's dense cirrus. The cloud on the right has as yet no anvil; that on the left is already widening its top threateningly; whilst the one in the centre shows the final stage with a slight shower dropping from its lower edge. These early rainy season skies over our vast inland plateaux offer to the traveller some of the finest and most characteristic sights of African scenery.

Later in the rainy season such anvil tops frequently produce the terrific late afternoon thunderstorms so well known to the dwellers in the tropics. They are of almost daily occurrence during many months of the year on and around Lake Victoria, plate eight giving a good example from Mwanza, taken at eighteen hours on the twenty-third of December 1937. During mid-afternoon the forerunners of this turmoil had slowly drifted northwards along



Plate I

the narrow Smith Sound, in the shape of loose rows of slightly castellated cumulus or cumulo-nimbus. Over the southern lake shore they became congested, soared up quickly to great heights and from their several anvils developed blue-black cyclonic masses which pushed their arms out across the evening sky over the silver bay of Mwanza and its dark black island fringe. In the centre of the picture, between the main mass and the torn northern edge which merges into an indistinct and hazy cirro-stratus, we can just discern Byron's

"Evening beam that smiles the clouds away"

(*Bride of Abydos*, II, 20)

and an hour later all that remained of this grand pageant of the sky was Milton's

"Sable cloud turning forth her silver lining
to the night."

(*Comus*, line 221)

Another cumulus picture (plate six) though from the artist's point of view a glimpse of Nature's beauty at its best, is not quite as easy to explain as it looks. Taken almost vertically above Samuye at noon on the twenty-seventh of December 1937, just south of a small group of granite hills which rises from the vast peneplain of southern Usukuma, it invites an analysis of the interrelation between sky and topography. Dawn, at Shinyanga, just north of this physiographic obstacle, had been practically cloudless with

Plate
12 ↑

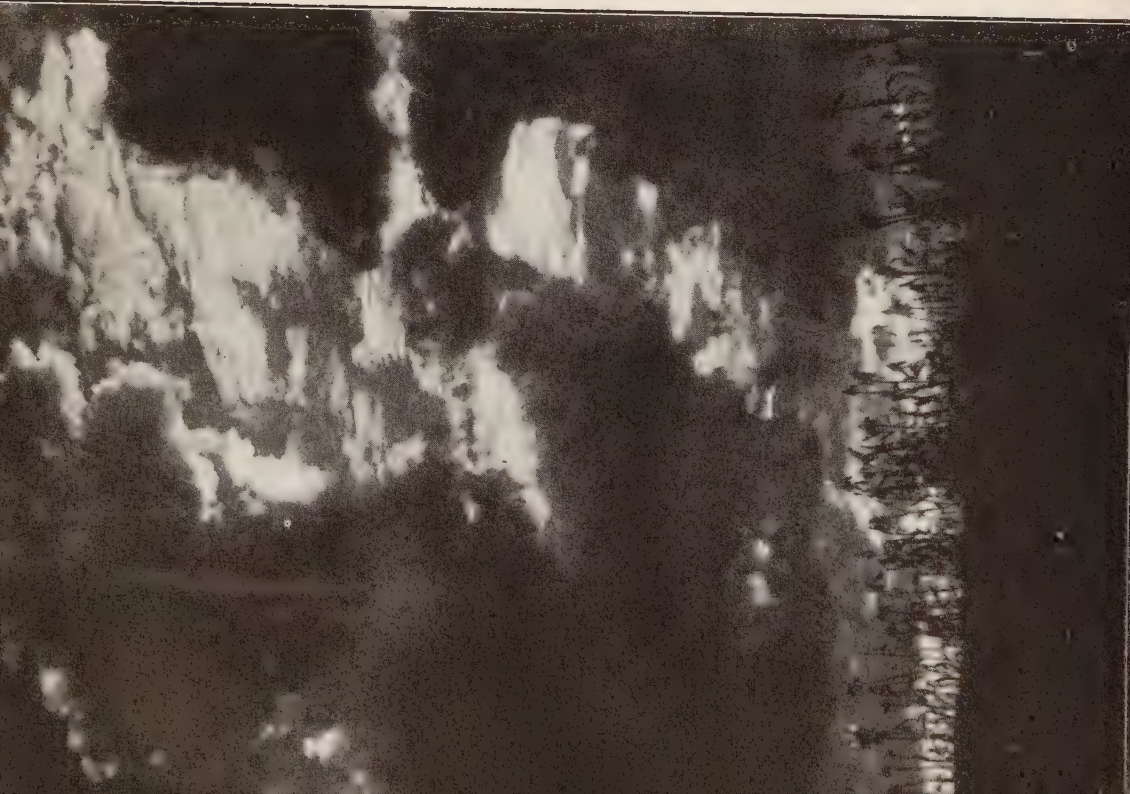
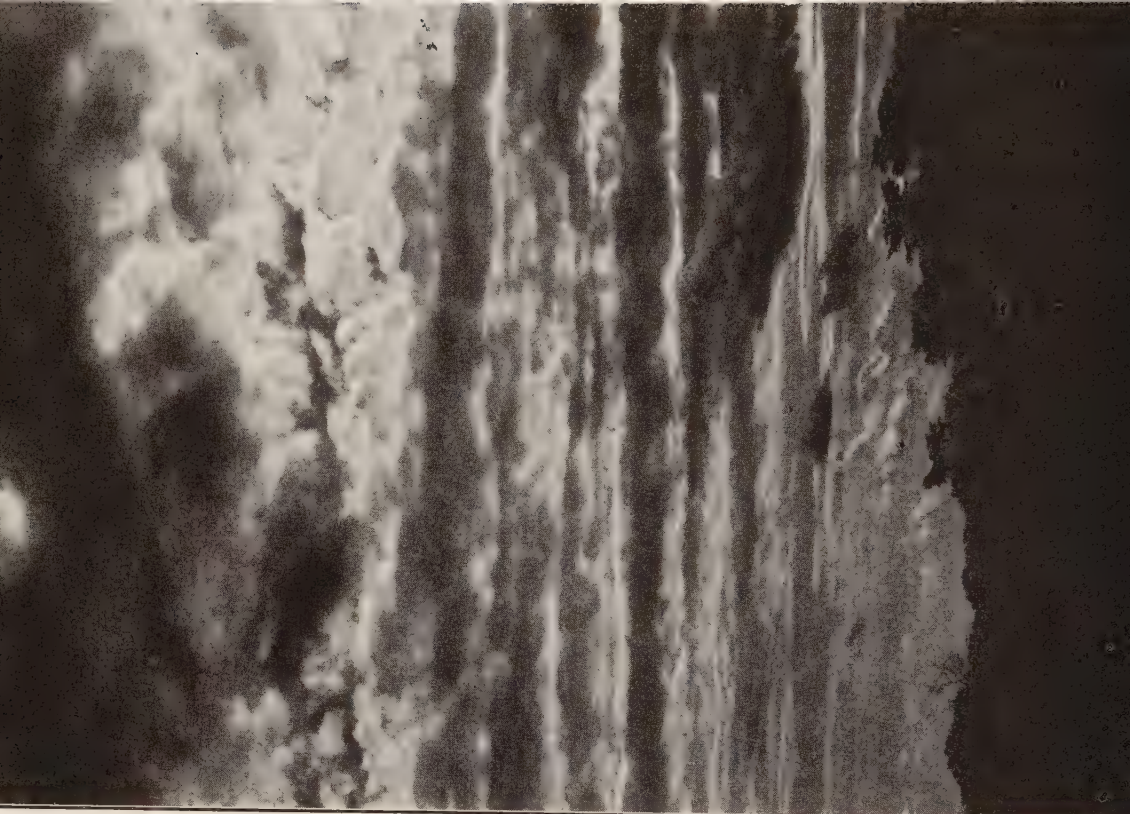


Plate
← 11



only a string of feathery small cumuli lying high over the hills and merging westwards into thicker vapour masses. They increased rapidly in number and size during the forenoon, reinforced by fresh moisture carried by the trade-wind, so that by noon the whole sky was overcast by the beautiful array of cloud in echelon shown on this film. Where they form the edges of narrowly spaced, small shifting windows into the dark blue above they are of dazzling white; this merges into various deepening shades of grey until, as in the top left corner of the picture, the undersides turn almost black. In my opinion this sky is largely composed of cumulo-nimbus—but here we are face to face with the shortcomings of classification. For others might call it a strato-cumulus or even an alto-cumulus. However, “what’s in a name” if the thing itself is so exquisitely beautiful in shape and colour! In the afternoon all this compact mass loosened into far-spaced rows of cauliflower cumuli which thickened once more in the evening over Shinyanga into black storm masses with a lot of lightning but only a few short drizzles. From the geographical point of view the interesting problem is whether the compactness of the clouds at noon over the south-eastern corner of the hills was due to this terrestrial obstacle and whether without it a less congested, more normal northward drift of the clouds would have taken place. Who can tell?

And now a typical, unmistakable stratus. Plate nine gives a view from inside the clouds, so to speak, from the one-thousand-metre level of Amani, down the upper Zigi valley and on to the top of Mninga, the eastern-most foreblock of the Usambaras. It was taken at seventeen hours on the twenty-first of October 1937, after a day in the dancing mists, to show the uniform stratus of the slowly settling evening blanket, only one hundred metres or so above the high ground. These mountain wrappings as a rule do not reach far out from the high blocks and under the south-eastern edge of this particular one the lowland of the pediment and the silver streak of the sea between Tanga and Pangani are still bathed in the golden light of the evening sun. The foreground of rain forest again brings out the dependence of a luxuriant evergreen vegetation on the frequent and almost all-the-year-round condensation of vapour from the near-by sea.

Finally, a few more complicated or doubtful cases. Plate eleven is a “mixed sky” of several layers, such as had formed after a cloudy and calm afternoon over the outer coastal hinterland a little north of Lindi. We are looking west at seventeen hours on the second of July 1939. The heaviness of the lower black cumulo-nimbus stands in beautiful contrast with farther, higher white fields still lit up by the slanting rays of a fast setting sun. Such skies are typical for the earlier stages of those short wet periods which so often interrupt the dry regime of the south-east trade-wind on the East African coast; and though not easily explained, they are of great beauty if one catches them in the right light!

Plate twelve, looking west across the Pangani river at Mkalamo, west of Mombo, at sixteen hours on the third of November 1938, shows the sky which

prevailed over the whole Usambara foreland from soon after dawn, when a thin damp groundmist had lain over the Mkomazi swamps, until sunset when all again was clear except for a flimsy blanket over high central Usambara. At a first guess I might call the upper layer, not a very high one, a typical strato-cumulus; but being afraid of my young meteorological friends I prefer, on second thought, not to name it. The much lower layer of very widely set fair-weather cumuli which reaches far out over the western steppes under a much more open higher canopy is clear. But how is one to account for the fascinating streaky mass above, that rose from nothing, and hung almost motionless for twelve hours in the sky, only to vanish again into nothing?

I leave my trained friends to classify correctly the sky shown on plate ten. A "high sky" no doubt, standing over Dodoma at eight hours on the eighteenth of December 1937. In my field notes I have described it humbly and hesitatingly and with old Heraclitus ever in my mind, thus: At dawn there was a large shapeless covering of dense cirro-stratus which developed quickly along its edges into dense cirrus and undulated cirro-cumulus. It is certainly an aspect that one does not see frequently and that is difficult to hold on the film. It is published here, both for the sake of its rarity and of its weird beauty.

Notes on Land Tenure and Land Rights among the Sonjo of Tanganyika Territory

By J. E. S. Griffiths, M.B.E.

THE Sonjo are an obscure agricultural-pastoral tribe of some two thousand five hundred souls who live in the heart of northern Masailand. They are distinguished as being essentially Bantu in the midst of a Nilo-Hamitic people, and are of sufficient personality to have retained their individuality in the midst of the campaigns of rapine, murder and pillage carried on by their more powerful neighbours in the years gone by.

To-day the Sonjo lead a quiet orderly life, which, if somewhat uneventful, enables them to pursue the customs of their forefathers without let or hindrance.

Among some of the most interesting customs from an administrative point of view are those pertaining to land and the different rights in land. These are divided up into several kinds according as to whether the land is used for building, agricultural or pastoral purposes. In addition there are certain customs observed in connection with land set aside for the preservation of thatching grass and forest or bush land where most of the tribe place their bee-hives.

Let us examine these in detail.

BUILDING PLOTS

The Sonjo have for very many years lived in five large communal villages, of from a hundred to two hundred families each. These villages—Samunge, Digodigo, Kisangiro, Oldonyo Sambu and Sale—are each ruled by a council of elders, of which more anon. Tradition has it that before the village system was adopted, the tribesmen lived scattered throughout the country and even overflowed into parts of what is now northern Masailand. The warlike activities of the Masai, however, drove them into forming fortified villages in which they still live. The site of each village was originally supposed to have been occupied by one man, and tribesmen gradually congregated round him until the village developed. These sites are all on the sides of rocky hills, and so, easily defended.

In the village each man received a plot on which he built his dwelling house, a single hut of perhaps eighteen feet in diameter. A plot is known as an *Mtongo* and varies in size: thus in some cases it is large enough to contain six huts, and in other cases it barely holds two. The boundaries of a plot are only marked by the foundations of the huts which have been built upon it. These plots appear to be the property of a family and are inherited through the eldest son. Where there is no son, they become, on the owner's death, the property of his brother. They can never be inherited by a daughter.

When a man has several sites which he does not require for his own use, his nephews and other similar relations cannot claim the right to build houses on them; permission may be given, but only if the owner so desires. A man will move his hut from one part of his plot to another, as the sites become fouled.

When a man finds he has too big a plot for his own use or the use of his brothers, he may lease a site to another for two goats. This site, however, may be claimed back by the owner or by his sons or even his grandsons by the repayment of the rent plus interest. Such a claim may be prosecuted in the local "court," that is, before the council of village elders. The only case apparently where a family may lose possession of their building site is where a man "sells" or rather leases his site, and then moves to another village where his family lives for several generations. His descendants cannot then return to their forefather's village and claim back the family plot.

Apart from building plots, there are certain spaces set aside in each village for communal use—a space where the village elders gather for their consultations, a dancing ground for the young people of the village, where also certain ceremonies are performed, a number of smaller places for the old men which the latter occupy in the evening while awaiting their evening meal and, finally, a large bush-covered area used by the men as a latrine. As each village is built on the side of a rocky hill, the preparation of most of these sites and spaces involved a certain amount of terracing. Hence each site is carefully preserved.

It has been mentioned that each village is fortified—the fortification consisting of a belt of thick natural bush which surrounds the base of the village, and through which access is obtained via a number of gateways made of logs. The bush round the gateways, *Senge ya Kijome*—the "Forest of the Gate"—is carefully looked after, and was planted in the past with *manyara* in addition to the natural vegetation. The only people entitled to gather firewood in this forest are the elders when they require it for ritual purposes, and the warriors when they require it for their *ngoma* fires at night. The latter may take only the dried branches from the *muhelele* or *muroha* tree—a kind of *Euphorbia*—as these trees are not used by the elders. No plots can be acquired in this forest in any circumstances.

AGRICULTURAL HOLDINGS

Four of the Sonjo villages are abundantly supplied with water and even the fifth has a fairly adequate supply. Agriculture, therefore, can be carried on successfully under irrigation, however poor the rains may be.

There are three types of agricultural holdings or *migonda* :—

(i) The Mugare shambas which are cultivated during and after the rains: these shambas are dependent on irrigation for their water supply, and also upon the annual rains. There are two sets of these shambas, one set being allowed to lie fallow every other year.

(ii) The Hula shambas which are cultivated during the dry season and are all under irrigation.

(iii) The shambas which are entirely dependent on the rains for their water supply. These shambas are usually either too far away from the village spring to be placed under irrigation or are situated above the village water level. These shambas have no particular name other than the name of the place where they are situated.

As in the case of the building plots, each family usually owns a set of holdings and these are inherited in the same way as the house sites in the village. Shambas or parts of shambas may be "bought" and "sold" or rather leased at a rent of a fixed number of goats, for example, the price of a shamba of Hula holdings in the village of Digodigo is fifteen goats, whereas in Samunge where the plots are smaller only five goats are asked.

There is no objection to a man breaking virgin ground for his shambas, but this is not usually done for two reasons. Firstly, it would require hard work and, secondly, all the most suitable sites have already been taken up, that is, sites available for irrigation water.

WATER.—Under the heading of agricultural holdings, the question of water rights might well be discussed for, as among all agricultural African communities, water supplies are most important.

Each village is dependent on one or two perennial springs and the care of this water is in the hands of the elders of the village. The water is, in fact, owned by them. The position of elder appears to be hereditary and dates back to the time when the villages were first formed, for example, in the village of Samunge there are some seventeen elders who are really the "Village Fathers," and they form a sort of water board which decides the days on which its members are to have the rights of using the water for irrigation purposes. During a month of thirty days each two elders are given permission to use the water for twenty-four hours, twice a month beginning at four o'clock in the afternoon and finishing at four o'clock the next afternoon. The rest of the families in the village attach themselves to these elders according to individual whim and fancy and after the elders have taken as much water as they require, their followers are at liberty to use what remains. Here, of course, the irrigation system comes into play, for all the irrigated lands are connected by an intricate system of furrows which may be opened or closed according to the particular holding which is being watered. Water is allowed to flow completely over the holding until it is saturated, and then the furrow is closed, and the water passed on to the next. This irrigation is done both at night and during the day, and is the work of the men of the village in contradistinction to the work of cultivating which is done by the women of the tribe—with digging sticks.

During a month, then, each family relies on watering his shamba twice. For the time that remains during the month people called the "*Wakiama*" have the right of using the water. These *wakiama* are composed of senior

old men of the village who are not of the "Village Fathers" but through paying tribute to the water board have certain water privileges. These *wakiama* are really social climbers, they feel too important to attach themselves to the elders and prefer to pay tribute to the latter in the hope of some recognition by them, for example, permission to sit on the council, in addition to the water privileges they obtain. The possession of the water supply of the village puts the elders in a very strong position for they are able to refuse any person who has transgressed tribal custom, the right to irrigate. This, in fact, is one of the very few punishments known to this primitive tribe.

An elder is always succeeded by his son, but the son cannot take his place on the water board until he has paid to the other elders a fee of thirty goats. No one who is not an elder by family can succeed to the position. (*Note*.—These remarks regarding water may not apply *in toto* to the village of Oldonyo Sambu which is situated near a large river where the water supply is much greater. I have not been able to verify this.)

THATCHING GRASS RESERVES

At each village a piece of land is set aside—usually some little distance from the village so as not to interfere with agricultural and grazing activities. This is for the preservation of the supply of thatching grass for the village huts. Anybody is allowed to cut grass in the reserves without having to ask permission from the elders. The only exception is that in the village of Oldonyo Sambu, priority is given to the cutting of grass for the thatching of the huts used in religious ceremonies. This, it is said, is due to the supply being limited in that particular area. These reserves are known by different names in different villages—in fact, by the name of the locality in which they are situated.

Although a reserve is peculiar to a particular village, there are no restrictions placed upon members of the other villages as to the cutting of grass there. In practice, however, this does not happen owing to the distance the villages are apart.

No burning is allowed in the reserves and any infringement of this rule is severely dealt with by the elders. A transgressor is fined thirty-seven goats—a heavy penalty. There are, however, no restrictions regarding the grazing of small stock in the reserve.

BEE-KEEPING

One of the main Sonjo industries is bee-keeping. Each tribesman usually owns a number of hives which are made from hollowed tree trunks and placed in positions of vantage throughout the country in the hope of attracting wild bees. Hives may be placed in any tree, anywhere; in fact, several hives belonging to different people may be placed in the same tree. No right can be obtained in a whole tree, but only in a branch which has been marked off

in some way, or where the hive has been placed. People from one village may with impunity place their hives at the very doors of another. It is interesting to note that the control of honey hunting is in the hands of the village elders who decide when the hives are to be robbed.

The three villages of Samunge, Digodigo and Sale are well known for their bee-keeping activities and the tribesmen from the villages have placed the majority of their hives in a patch of bush in the Digodigo area, called Bughone, and undertake protective burning to prevent grass fires destroying the bush and ruining the hives. Any burning in Bughone is punished very severely ; the transgressor may be cursed and die. There is again no restriction regarding the pasturing of small stock in the area.

FIREWOOD

There would appear to be no restrictions regarding the gathering of firewood, save in the case of the "Forest of the Gate."

GRAZING

The Sonjo own very large numbers of small stock, principally goats, and it is in these animals that they calculate their wealth : in fact, goats are the currency of the country, and they may be grazed anywhere so long as they do not interfere with agricultural work. There are no special sections of country set aside for pasture, nor yet are there any restrictions on this pasture. During certain seasons of the year, a man will take his stock far afield and build himself a goat-*boma* a fair distance from his village, but this gives him no special right to the grazing round the *boma*.

CONCLUSION

It may be seen then that as regards land, the Sonjo have, theoretically speaking at any rate, a very real appreciation of values, and when these ideas are developed along modern economic lines much should come of them.

Finally, I should like to thank Mr H. A. Fosbrooke for the many kind suggestions made during the compilation of the above material.

The Swahili Life

By Saada Salim bin Omar

*(A lecture delivered before the Cultural Society, Dar es Salaam,
on the 25th November 1939)*

BEFORE I start my lecture I should first thank the chairman and members who have agreed to allow me to stand here to-day. This is the second time I am standing before you to give a lecture on one of the Swahili subjects. I said in my first lecture that it was Mr Desai, the joint secretary of this society, who asked me if I could speak on a Swahili subject. This time, which I consider my second opportunity to speak to you, I have been induced again by certain members of this society to speak on the Swahili life because the knowledge of how an Mswahili leads his domestic life would go a long way to understanding Swahili psychology. If I am right in that sense, I feel that I should suggest that this society, which is open to all without distinction of caste, colour or creed, should welcome information on matters which relate to the sons of this soil.

The word "Swahili" means either an inhabitant of the coast or land south of Arabia or, in the most common sense, refers particularly to Mohammedan African converts and persons who have taken foreign customs to mix with their own. Therefore you will see that Swahili life is not consistent with one but with various forms, some of which were derived from countries outside Africa. However, I will speak of those I know to be the important ones. Of them greeting is the first one. It is customary for Waswahili to greet each other when they meet either during the day or at night. Generally they have "*Salaam-aleikum*" for a Mohammedan and "*Jambo*" for any person including a Mohammedan. There are various other forms also for morning and evening. Some of them are tribal and follow the former ones. At night there is another form of salutation which also conveys a challenge if the person addressed is invisible owing to obscurity caused either by darkness or any other like reason. The word that is used in this case is "*Usiku*"—night.

Night, according to Kiswahili, is a very dangerous time and if the answer to this word which is uttered in an interrogatory manner is entire silence, or "*Usiku*" or "*Wa nyuki*" then the speaker's mind is rather apt to be drawn to the conclusion that he is faced with a danger and that he is bound to use any method or means or avail himself of any chance for his defence. However, if the answer is "*Mchana*" (clear or daylight) then the fear that possessed him subsides and he returns to his normal self. To emphasize the necessity of salutation in the Swahili world it has been lately held and asserted that *Jambo ndyio mwanzo wa kujuana* which means "Greeting is the source of

acquaintance." There is another form of greeting which is addressed to the elders by youngsters or juniors: that is "*Shikamoo*" or "*Mwinyi*." *Shikamoo* means "I humbly touch your feet" while *Mwinyi* means "You are independent." These greetings are indicative of the great respect that a young man owes to an elder when he meets him. The answers to these greetings are: for the former, "*Marahaba*" which is an Arabic word meaning "Welcome," and for the latter "*Ayee*"—"Yes," or "*Mwinyimkuu Saidi*" which means a respect to His Highness the Sultan of Zanzibar who was ruling these coastal areas then. In olden days according to native custom these greetings were made by bowing down and kissing the hand of an elder or kneeling with clapping of hands. However, nowadays, that is only done up-country by women to men and men to chiefs or headmen who still insist on that mark of respect being shown to them. Although some elders would not allow youngsters to use it to them, except amongst themselves, the common and general salutation at present is entirely an Arabic form "*Sabalkheri*" for the morning and "*Msalkheri*" for the evening.

ETHICS

When I was speaking about salutations I said that in olden days a greeting made to an elder was accompanied with either bowing down or kneeling to mark the respect due to him. That idea was consistent with the rules of ethics which play a very important part in the life of a Swahili. I do not think time would allow me to address you fully on the part ethics play in the life of a Swahili. However, I would tell you briefly that the ethical rules play the same role in the life of a Swahili as do the rules of discipline in English life, for a child or youth's liberty of action is always subject to confirmation, revision or ruling by the elder unless the act is very trivial or the actor is alone. That is why you will see many Swahili young men form their own places of amusement so that they may be able to do what they like without a check. I regret to add that a woman, except one of extreme old age, is treated in an ethical sense just like an *mtoto* and I think it is generally due to this view coupled with other reasons that the various rights and titles of women are treated with a less degree of respect than are those of any man. Of course, there is a certain occasion when the prestige or respect of a woman is observed; for instance, unless she prefers it herself she would rarely be given a hard job or outside work to do although ethically she is bound to do it. When on a journey she is not allowed to take a leading position as is the case with a young man unless such a journey is composed of two persons only. She is constantly kept under strong protection which means that she is kept in the middle of the caravan. The idea of letting a woman take the leading position in a journey of two persons has also the background of affording her more protection because it has been assumed that by doing so the man accompanying her is in a better position to defend her. Also women have rarely been allowed to conduct litigation or business without the help of a man. Please note that this does not mean that they cannot do these things by themselves. The rule is observed

purely out of an ethical regard for women and for reasons of chivalry and fairplay. It is true that if you walk round the native quarters in Dar es Salaam or elsewhere you will find some *mamas* and *bimkubwas* doing some small trades such as selling fried fish or *vitumbua* and *maandazis* (fritters or pancakes) without the aid of a man, but some of these *mamas* or *bimkubwas* are independent, having no male member of the family left to intervene in their own affairs. Some are purposely regardless of rules of good social life and some are reluctant to follow these rules, human nature being the same everywhere. The Swahili woman doing business independently of the assistance of a supposedly superior man, if successful in the business, becomes an object of admiration and praise; because then the importance of ethical rules is ignored and the importance of the all-powerful shilling begins to count. At feasts or entertainments women are assigned separate accommodation from men. Shocking and selfish though it appears to a civilized sense of chivalry, at entertainments and feasts men are served before the women.

Ethical rules have gone so far as to disallow even small children to drink or to play about where the elders are holding their reception. During the meal the youngsters are forbidden to eat meat before the elders, to talk loosely or look at what is going on round about them. After the meal, in the event of there being no attendant, they have to get up at once to clean up the place and to provide the elders with necessary requirements for their meal. Thereafter, unless the youngsters are prepared to behave themselves in a dignified manner, they must leave.

LABOUR

Except for cultivation and other domestic work the daily labour is performed by men. Early in the morning, after breakfast, men go out to their work leaving their wives behind to tidy up the home. After having done so the women go to their shambas. Some men accompany their wives to shambas and help them cut down trees and clear bushes that grow in the field, but some do not do so. They go to their jobs from which they earn money and engage a labourer to go and help their wives to cultivate the shambas. Generally, along the coast men occupy themselves with some small trade, fishing, or follow other professions. Formerly, they used to travel far away into the interior either by themselves or with foreigners and undertake big trades or expeditions. Nowadays they prefer to work in towns or in shambas. Up-country where the major part of Swahili life is made up of native customs a man has various things to do. He should first own his shamba and then go on with other work such as hunting, etc. A Swahili from abroad is a bit more industrious than the Swahili of the coast but it is said he is not wiser. There is an adage *Mwerevu wa bara si mjinga wa pwani*—"An intellectual from the interior is not equal even to a fool on the coast." Without digressing any further I had better return to the morning hour. At about eleven o'clock the women go back from their shambas carrying firewood and other things necessary for the preparation of food so that when their husbands return they may find it ready for consumption.

It is now that women are released from doing outside work. They must shut themselves inside the house and perform household work which generally includes plaiting. I am sorry I have forgotten to tell you about elders. Elders are not always compelled to work hard. In addition to their other duties they have to check young men and their wives and see that peace is being well maintained in the homestead. It is the main aim of an Mswahili to bring his child into a position whereby he may be a hard worker. That is why up till now you will see that a shamba father is always forcing his son to come along with him to town carrying a load of either firewood or charcoal for sale so that when the boy is grown up he shall not prove slack in teaching his own family. Outside the towns some boys and girls are required to make small gardens for practice.

HEALTH AND SANITATION

Some of you may have thought that I have omitted to tell you how health and sanitation are being maintained in the Swahili life. I may tell you here and now that that is the principal work a Swahili woman is required to do. If a wife cannot keep her house clean, and is not attentive to her domestic duties, I am afraid she will find her chances of a happy family life considerably marred. Of course, men are supposed to look after their own health and sanitation and that of their homes if they live a bachelor life. Again, even though a woman is responsible for the preservation of the health and sanitation of the house, it is the duty of the man of the house to furnish her with sufficient implements and materials necessary for the execution of her duties.

If an Mswahili is to lead a decent, sanitary and healthy life, as is always his ambition to do, he can hardly save a penny out of his earnings. At present there is no appreciable difference between the diet of an Mswahili, an Arab and an Indian; for at breakfast he generally takes *chapati*, *kitumbua*, bread and butter with a cup of tea or coffee. Those who take *chapati* and *kitumbua* frequently require a relish of either fish or meat or vegetables. For lunch they take many varieties of food, such as bananas, beans, rice, meat, fish, vegetables and also *muhogo*. But *muhogo* is always a kind of food that denotes either strict economy or difficulty in obtaining better food. Some time ago *muhogo* was not part of the staple diet in this part of Africa, nor was it even known to be edible until famine was experienced. It was then that some elders attempted to save their families by giving them wild fruits and plants including *muhogo*. Even to-day some species of *muhogo* are not eaten fresh because they are very bitter in taste. The introduction of *muhogo* as a kind of food is attributed to the Portuguese-Africans. It is since those days of famine that *muhogo* has been recognized as a kind of food because it can be stored or kept in the field for some years without being damaged in any way. Further, it is easy to cook. You will see that in some districts in East Africa *muhogo* is not regarded as a food and is hardly planted at all.

The dinner always consists of rice, meat or fish, fowl, and vegetables. These constitute the real staple diet and they form a great part of the cultiva-

mizimu into which one may not enter. At these you can hear many curious things and see many peculiar happenings.

“*Mwiko*”—TABOO

There are certain things in Swahili life which are taboo. These things vary considerably. Every race has got its own kind of taboo. It is not impossible to find two different races sharing the same taboo, but in such a case they are supposed to have a common origin. The taboo is not of one kind only, some taboos are uneatable and some untouchable. The other taboos originate in actions, customs or diseases and then treatment. The latter kind of taboos are easy to disregard but the former can hardly be so treated. A strict observer of this rule would not like even to hear his taboo being mentioned in his presence. However, one thing I should like to tell you and that is that unless you yourselves are superstitious none of the foregoing can harm you in any way. Of course, if you are sensitive or nervous you are liable to be upset mentally for a while by hearing about these horrible things.

I can hardly go on telling you any more since the time allotted to me is limited. As you know, to describe the life of a race is not a matter of an hour or two. Some authors who have attempted it have taken pages and pages to complete their work, as I think I would do. I shall, however, end here to-day with a hope that from what little I have said to you, you will be able to find out for yourselves what type of human being an Mswahili is and what type of life he normally leads. His contact with the foreigners in this country has inspired in him an ambition to bring his mode of life into consonance with the other civilized races of the world. He thinks he is marching slowly but steadily towards the realization of that ambition. Time will do its work. We cherish the hope that literacy and the enlightenment which comes from it will lead us Africans from the darkness of ignorance and superstition to the invigorating sunshine of knowledge, civilization and culture. If during this long speech I have raised anything of interest to you I will consider my labour to have been well worth while.

The *Ngalawa* of the Kilwa Coast

By J. C. Morgan

SWAHILI PROVERB: *Mtumbwi juu mawimbi chini.*

INTRODUCTION

THE information contained in this paper was collected at Kilwa in 1937, and it deals principally with the construction and use of Kilwa canoes; but certain information obtained from other sources has also been embodied. For this information, and for much assistance and criticism, I am indebted to Messrs Hatchell and Taylor, of Tanga, and to Mr Piggott. Messrs Taylor and Piggott have both been the owners of ngalawas constructed and rigged to their own requirements; Mr Piggott's craft also carried a fore-and-aft rig; Mr Taylor found that the fitting of a movable lee-board, four feet deep, gave extremely good results in the prevention of leeway, which is probably the worst disadvantage of this type of craft.

For Swahili orthography I have followed in general "Kamusi ya Kiswahili" by F. Johnson, and for English technical terms "Notes and Queries on Anthropology." The Swahili technical terms given in the keys are the best I was able to collect at Kilwa. There appear to be numerous variations on different parts of the coast, and there is not even complete agreement as to the correct expressions at Kilwa. I have followed my principal informant, Fundi Hamisi.

The *ngalawa* or double outrigger canoe is in use along the whole length of the East African coast; and a good illustration of one of these craft sailing appears emblematically on the two-shilling Zanzibar stamp. Ngalawas are in constant use for fishing and travelling on the coast at all seasons. Ten or more may be seen any day either at rest or in use in Kilwa Kivinje harbour. In the Kilwa area the natives say that the best canoes are built at Kiswere and Mtumbo and, after that at Mtandura, I believe those built near Kilwa itself to be equally serviceable.

The *ngalawa* has clearly been evolved from the more primitive "dug-out" or *mtumbwi*. These also may be seen frequently on this coast and are usually propelled by paddles or poles, the use of which requires a nice sense of balance. They are more usually used for transport in the mangrove forests, rather than among the reefs or in the open sea. It is noticeable that they are frequently in a poor state of repair, and therefore strengthened by patches and interior ribs. Such a one, about thirty feet in length may be seen on the beach at Matapatapa. It is possible that these craft are now dying out.

Even these craft, however, are sometimes used with a sail, and a remarkable "canoe-yacht," about twenty-five feet in length, may sometimes be

seen at Kilwa Kisiwani, the property of one, Nondo Asumani. In this craft he travels throughout the creeks and even in the open sea.

It is possible that the first stage in the evolutionary process was the raising of the freeboard by means of gunwales (the *tezi ndaraba* and *kasama*—see figure 1). The use of balancing outriggers followed; and this, under Arab or Indian influence, apart from any more primitive cultural diffusion that may be proved* probably led to the rigging of the craft on lines identical in principle with the rigging of the largest dhow (*jahazi*).

The more primitive method of attachment of the gunwales to the shell seems to have been by wooden dowels; and of the rudder (if used at all) by means of lashings. To-day, imported iron nails are used together with iron attachments for the rudder. This, however, is the sole metal used in the craft. The attachments of the outriggers are still by means of rope lashings, except where elbow struts (*karua*) are used to strengthen the attachment of the *ndubi* and *bau* (see figure 2); these are nailed on.

Similarly, at the present stage of the evolution of these craft the sail canvas is, invariably in origin, imported trade material, usually from India, and even the rope material, of coconut fibre, is almost always bought from a shop (which imports the fibre from Zanzibar) although it is twisted or plaited up to convenient sizes on the spot.

II.—CONSTRUCTION

In addition to the use of this imported material, the construction of the *ngalawa* requires, as will be seen, the cooperation of at least three types of craftsmen. The process of construction may take from three to four months and rarely less than two and the total cost may approximate to one hundred shillings according to size.

The following notes, both on construction and sailing qualities, are based on actual observation of all stages of the making of a canoe by one Fundi Hamisi at Kilwa Kivinje. The "capitalist" was a relation of his, for whom he superintended the making and made some parts himself, for instance, the sail; and he now uses this canoe for fishing on behalf of the same relation, who is the owner. This canoe is the subject of the illustrations. The reader is invited first to study the constructional diagrams and key, which are intended to show all the component parts and the manner in which they are put together.

The order and method of construction is as follows: A suitable tree, often a mango in Kilwa district, is selected and felled. The length and proportions of the canoe are then decided in greater detail when the trunk has been cleared; and the trunk is hewn accordingly and roughly trimmed to shape. The initial hollowing or "digging-out" (*kuchimba* is the term used)

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Fig. 1.—General view from Windward
 Note *henza* attached to stern *mrengu* and *sharuti*
 to forward *mrengu*, both in leeward side



Fig. 3.—Close view for details of
 Rigging, *mrengu* and *ndulu* (stem).
 The *chipi* is clearly shown

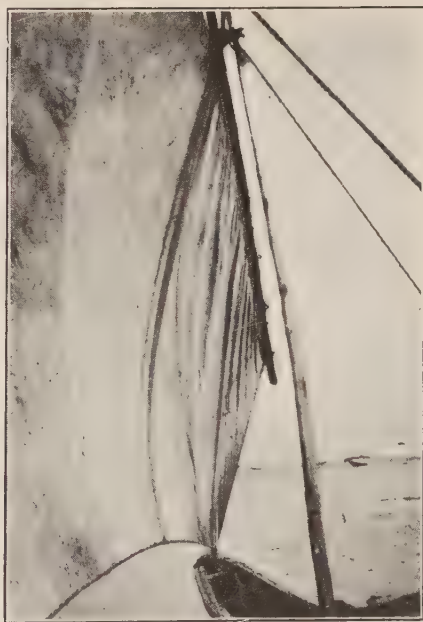


Fig. 4.—Detail of attachment of Yard to
 Mast. See Rigging (diagram C). Also
 showing forward attachment of *joshi*



Fig. 2.—General view from Leeward.
The rail is in position for running across
wind; the *demani* is passed round the
stem of the leeward *ndubi*



Fig. 5.—View from Stern.
Mainly to show "set" of outriggers;
also rigging



Fig. 6.—Detail of attachment of
mrengu and *ndubi*. See Construc-
tion (diagram D1)

is usually now begun. The trunk is then carried down to the shore, where it is wedged up on logs. The process of shaping is then completed and the hollowing continues. This is done in stages, to allow the wood to set between each attack; and the work becomes more careful and difficult as the bottom is approached, and the final stage of smoothing the interior is a delicate process. Although I made particular enquiries, I was informed at Kilwa that fire is not used at all; the work is done entirely by means of various sizes and shapes of adze. But Mr Hatchell informs me that at Tanga the hull is "case hardened" by fire. The hull is half filled with water and a slow fire left lighted beneath it for one or two days. This process kills any worm there may be in the hull and hardens the surface against further attack. I have observed the marks of fire on canoes at Lindi.

CONSTRUCTIONAL DETAILS : KEY

A.—*Elevation :*

1. The Shell or Hull. Approximate dimensions: Length twenty feet, depth two feet six inches. Breadth at each *kibau* one foot six inches. Thickness of shell one inch to one inch and a half. Tapering at stern and bow. Minimum length about ten feet, but other dimensions vary less in proportion.

2. *Kizingiti*, left in solid to strengthen shell.

3. *Mstamu*, left in solid to hold heel of mast.

4. *Tezi*, solid stern piece of stout wood, nailed on. (See B. 1.)

5. *Ndaraba*, gunwale or strake in several pieces, nailed on along the length of top of shell. (See B. 4.)

6. *Kasama*, prow, a solid piece nailed on to bows of shell. (See B. 2.)

7. *Chipi*, strake, nailed on all round outside of *tezi*, *ndaraba* and *kasama*. (See B. 3, 4, 5.)

8. *Kibau*, thwart. (See B. 6.)

9. *Fundo*, stay for mast with hole. (See B. 9.)

10. *Tundu*, holes to accommodate *Wango*. (See B. 7, 10.)

11. *Shukrani* (*Usukani*), rudder, with hole at head for *kana*.

12. *Kana*, tiller. (Note.—Occasionally the hole is in the tiller, which fits over the head of the rudder.)

13. *Rumada*: (a) *Dume*; (b) *Jike*, iron attachments of rudder (which is detached when not in use).

B.—*Section of Shell with Details :*

1. *Tezi*, sternpiece. (A. 4.)

2. *Kasama*, prow. (A. 6.)

3. Section of shell.

4. *Ndaraba*, gunwale or strake. (A. 5.)

5. *Chipi*, strake. (A. 7.)

6. *Kibau*, thwart. (A. 8.)

7. *Wango*, strut. (A. 10.)

8. Part of *mrengu*. (C. 1.)
9. *Fundo*, mast stay. (A. 9.)
10. *Wango*, strut built into *kasama*. (A. 10.)

C.—*Outriggers—Elevation from Stern* :

1. *Mrengu*, outrigger stay. (B. 8.)
2. *Ndubi*, board stays.
3. *Mabau*, boards or outriggers.
4. Lashings.
5. *Wango*, strut to which lashings are attached. (B. 7, A. 10.)
6. Pegs sometimes used to strengthen attachment of *ndubi* and *bau*.
7. *Karua*, elbows sometimes used to strengthen same attachment.

D.—*Outrigger Details* :

1. Detail of lashings of *mrengu* and *ndubi*.
2. Detail of lashings of *Mrengu* to shell. (See also B.)
3. Detail of *Ndubi*.

When the canoe has been finally shaped internally and externally, the gunwales or strakes (*tezi* and *kasama*) are sawn out to shape and nailed on, and the *chipi* is nailed on all round their exterior. No steam or heat is employed to bend it sufficiently. The *vibau* and *fundo* are also sawn out and fitted at this stage.

The canoe is then completely filled with water and left for a week. The purpose of this is to detect leaks and cracks and also to expand the wood to render leakage less possible. This process may be repeated. Should there, unfortunately, be a leak, a neat hole is sawn out of the shell and a patch knocked in and nailed in position.

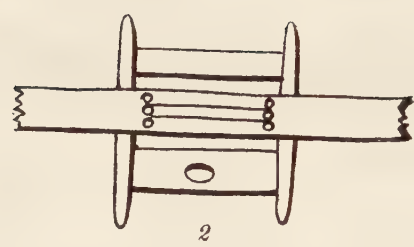
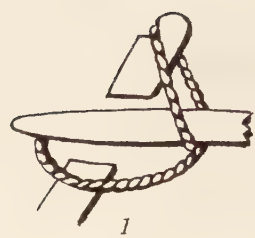
The whole of the shell including the strakes is then painted or rubbed, inside and out, with a viscous and malodorous substance called *sifa*. This is a secretion of the intestines of the shark but may also be made of oil of *dagaa*. Its purpose is to preserve the wood, and this treatment may be repeated several times during the life of the *ngalawa*. The *mabau* are similarly treated when fitted.

The *wango*, and also the rudder and tiller, are now constructed and fitted, the *rumada* of the latter sometimes being made of iron and sometimes, also, fitted by a blacksmith. The various parts of the outriggers are sawn to shape and fitted together, being made of such a size that the *mrengu* will cross the shell near to the *vibau*. Each *mrengu* is about three-quarters of the length of the canoe and this is also approximately the length of the *mabau*. When the outrigger framework has been fitted together it is lashed into place.

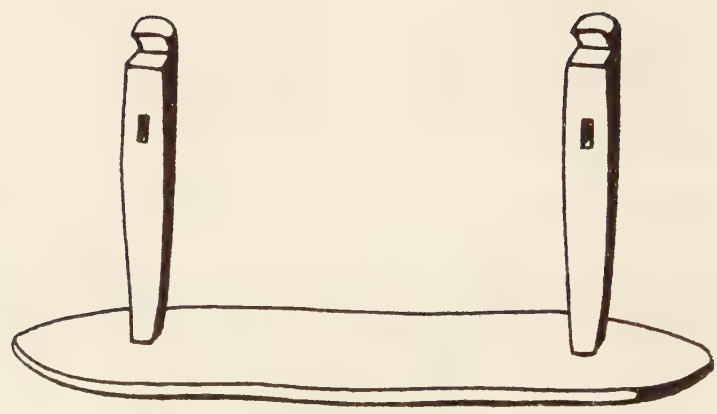
The *ngalawa* is now launched and moored or anchored and left to float idly for a few days in order that any faults may be detected, particularly faults in its trim which may be adjusted by changing the lashing of the outriggers.

Meanwhile, another craftsman has estimated from the length of the canoe the required size of the sail and has sewn it ready, and also prepared the





Outrigger details.



Sketch of complete outrigger.

various ropes. The mast and yard have also been cut and shaped; and all is ready to set up the rigging, all of which, including the mast, is detachable and usually kept in the house.

Finally, the *ngalawa* receives its miscellaneous equipment and is ready for use.

This miscellaneous equipment consists of :—

(1) An anchor, that is a large stone with suitable hole or excrescence for the attachment of the *amari* or cable. The cable is attached to the forward *wango*. The stone is carried in front of the mast.

(2) Two or three paddles, *makafi*. There are persons who make a trade of shaping and selling these.

(3) A pole, *pondo*, for quanting in shallow water and for use as a boathook; it may also be used as a bowsprit; and to drive into sand for anchoring the craft.

(4) A bailer, either half a *kibuyu* (called *upo* at Tanga), or frequently at Kilwa, a coconut shell with a square hole cut in one side.

(5) Occasionally a mat or loose flexible flooring of bamboo poles for the bottom of the craft.

The following table shows the materials used for each component and their place of origin (when the canoe is made in Kilwa Kivinje).

(NOTE.—The orthography, etc., of trees based on "Swahili Dictionary of Plant Names," Greenway.)

Component			Material			Place of origin
The shell	...	...	(1) <i>Mwembe</i> ,	mango tree		Local shamba, often on Singino Hill.
			(2) <i>Mtumbati</i> (tree similar to <i>Mninga</i>) may be used, but royalty has to be paid.			Marendego or Matapatapa.
<i>Tezi</i>	...	...	<i>Mwembe</i>	...	...	Local shamba.
<i>Kasama</i>	...	...	"	...	...	" "
<i>Kibau</i>	...	...	Any local wood.			
<i>Shukrani</i>	...	...				
<i>Kana</i>	...	...				
<i>Mirengu</i>	...	...	Boritis of <i>mkandaa</i>			Mangrove forest.
			(mangrove)			
<i>Ndubi</i>	...	...	<i>Mkunazi</i>	...	...	Local bush.
<i>Mabau</i>	...	...	<i>Mtumbati</i>	...	...	Local shambas
			<i>Mwembe</i> .			or forest.
<i>Karua</i>	...	...	<i>Mchu</i>	...	...	Mangrove forest.
<i>Wango</i>	...	...	Any local wood.			
<i>Mlingoti</i>	...	...	<i>Mliana</i> or <i>muwi</i>		...	Mangrove forest, particularly near Mjengera.

Component	Material	Place of origin
<i>Foromali</i>	(1) Most favoured, <i>mwanzi</i>	Local stands.
	(2) Boriti of <i>mliana</i> ...	Mjengera mangrove forest.
<i>Tunga</i>	Sail canvas of <i>maradufu</i> , imported and bought from a shop is favoured, but improvisations often made from old dhow sails; twine and bodkins also bought.	
<i>Makamba</i>	Rope for lashings and rigging, made of coconut fibre, is bought locally (imported from Zanzibar) plaited up to required sizes. Ropes of sisal fibre are also bought and used.	

Iron nails and iron for *rumada*. Bought locally.

Sifa Either made up for the purpose or bought locally.

Makafi Various woods. Bought from specialist craftsmen.

Other miscellaneous equipment. Either made or bought locally.

The following rough account shows the cost of the canoe and its components, and the various persons employed in the making of it. In the case of the specific canoe the building of which was followed, Fundi Hamisi had the general supervision, and did some of the lighter work, and also made the sails and rigging (his own trade); this work was, therefore, unpaid.

	Shs
1. Cost of <i>mwembe</i> tree	5
2. One carpenter <i>fundi</i> employed over a period of two to three months to shape and hollow the shell, and also to construct and fix the other components. Except where the original <i>mwembe</i> wood is used, the provision of material for some of the components is at his charge, and also the cost of transport to the shore falls under this head—(unless paid for under Miscellaneous). The carpenter is paid from twenty-five to thirty-five shillings for the job, but also has to be fed while it is in progress. This may be reckoned at ten cents per day for three months, that is, nine shillings	35
3. <i>Sifa</i> (if bought and not made), one <i>debe</i>	3
4. Mast and spar bought from specialist <i>fundi</i> at Mjengera ...	2
5. Forging of <i>rumada</i> by blacksmith, including cost of iron and fixing	1
6. Cost of <i>maradufa</i> and sewing of sail by specialist <i>fundi</i> ...	15
7. Cost of rope fibre and plaiting	2
8. Cost of three paddles bought from specialist <i>fundi</i>	4
9. Miscellaneous	3
	—
	Shs. 70
	—

It must be emphasized that this account is merely approximate, since no proper accounts are ever kept, the owner-user may do much of the work himself, old materials may be used and much of the work may be paid for in kind, as, for example, the food of the carpenter. The minor repairs and rigging of a small dinghy cost me over sixty shillings. Between sixty-five and seventy shillings may safely be regarded as the minimum cost of a well-found *ngalawa* twenty feet in length.

Although I made careful enquiries, I was unable to discover whether any special ceremonies, prayers or the like are employed at any stage of the construction. I saw none: and, assisting myself at the launching of Fundi Hamisi's boat, we merely pushed it somewhat furtively into the water. I believe, that, whatever customs may have been followed in the past, centuries of Moslem influence have stripped boat-building on this coast of any religious significance. Mr Taylor informs me that he has heard that sometimes the teacher of the Mosque reads the Sura ya Asili at the launching (his fee is four shillings); and that a witch doctor may receive eight to ten shillings for good luck medicine to smear on the craft. In general although the methods may be, in a sense, "unbusinesslike," the construction of the craft appears to be regarded as merely a business venture.

III.—RIGGING AND PERFORMANCE

The reader is invited first to study the diagrammatic sketches of the rigging with the key. This is intended to explain the various parts of the rigging, the terms used to describe them, the manner in which they are put together and the way in which the sail is hoisted (*kutweka*).

The following terms may also be noted: *Kwenda joshi* is to sail up or close to the wind—but *kwenda joshi nyuma* is to sail straight before the wind "goosewinged": *Kwenda demani* is to run free or sail down-wind: *Kukisi* or *kugeuka* is to go about, either up- or down-wind.

For the description of the sailing properties of the *ngalawa*, it may first be observed that for so small and light a craft there is a considerable expanse of sail; for the length of the yard slightly exceeds the length of the shell and, although about one-third of the body of the sail is forward of the mast, the peak is above the tiller or even aft of it—and although the clew is situated about amidships, that is midway between the forward and aft *mirengu*. The size and elevation of the sail have two consequences: (1) the craft can be sailed successfully in very light airs, and (2) in fresh breezes a considerable speed can be attained. I have seen Fundi Hamisi's boat sailing slightly up-wind in the fresh north-easter blowing in the evenings at the end of the hot season at least as fast as the Kilwa motor boat at "full speed ahead," estimated at about five knots. Down-wind a greater speed is obtainable.

The *mabau*, or outriggers, apart from their primary function of securing balance and rendering the craft comparatively safe even in heavy seas, do not appear to be entirely a hindrance to sailing. When the wind is astern a

state of equilibrium may be attained so that they merely skim the water. On the other hand, when the craft is running across or up into the wind, the leeward *bau* acts instead of a keel or centre-board, for, being pressed down into the water, it gives resistance along its whole surface and thus does something to prevent excessive leeway; the balancing weight of the windward board helps to prevent it from being depressed too far. It is part of the task of the "crew" to assist in preserving this balance.

The principal sailing disadvantage of the *ngalawa* is the leeway which it takes up when sailing across or into the wind. This is due to its essentially flat-bottomed nature coupled with its spread of canvas; the leeward outrigger board gives some assistance, but not enough.

RIGGING : KEY

A.—Diagrammatic plan of rigging :

1. *Mlingoti*, mast.
2. *Foromali*, yard or spar.
3. *Tanga*, sail.

NOTE.—A *dasturi* or bowsprit is sometimes fitted (*tanga*); often the *pondo* or punting pole is used as a bowsprit.

- a. *Upembe*, peak.
- b. *Dasi* or *dasi ya juu*, luff.
- c. *Joshi*, tack.
- d. *Dasi ya chini*, foot.
- e. *Demani*, leech and clew.

Running rigging (ropes)

4. *Henza*, halyard for hoisting yard, passed through *tundu* at head of mast, and attached to stern *mrengu*.

5. *Sharuti* or *shabaa*, combined attachment of yard to mast, and stay, attached to forward *mrengu* on windward side. (See C.)

6. *Demani* or *kamba ya demani*, sheet—attached to stern *mrengu*, either near gunwale when close-hauled, or first passed round the top of the leeward *ndubi* when running free.

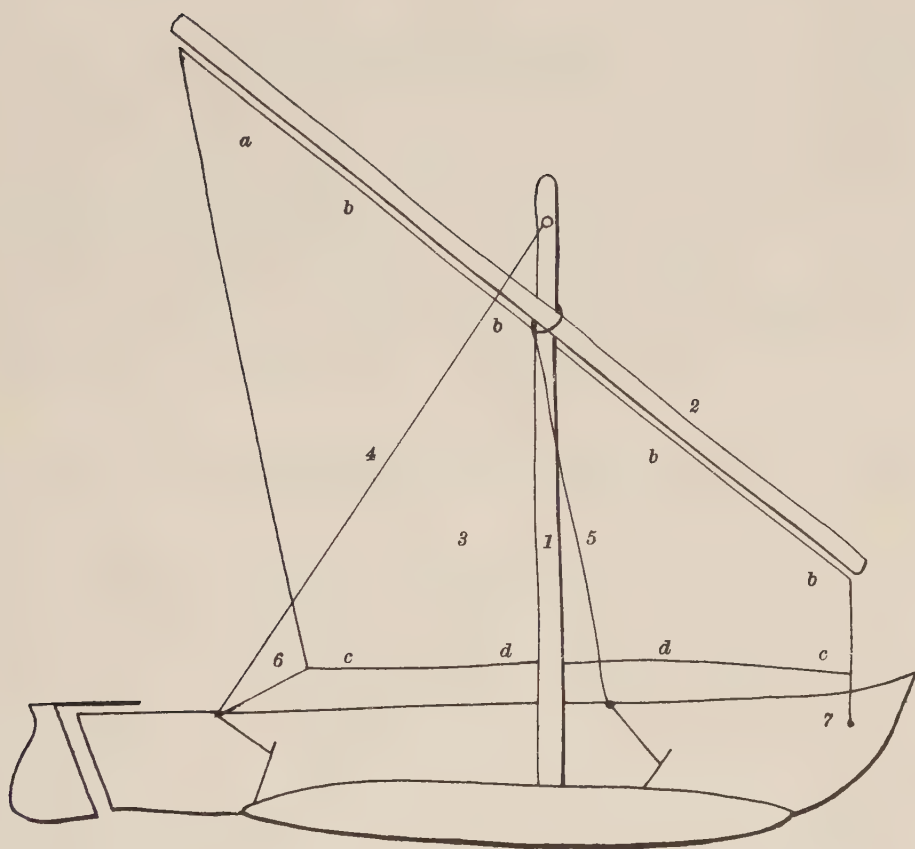
7. *Joshi* or *kamba ya joshi*, fore-sheet, attached to *wango* or *dasturi* in prow, and let out and attached to *pondo* or forward outrigger when running free of before the wind. (*Kwenda joshi nyuma*.)

B.—Fore-shortened diagrammatic sketch of rigging viewed from stern, to accentuate the following points :

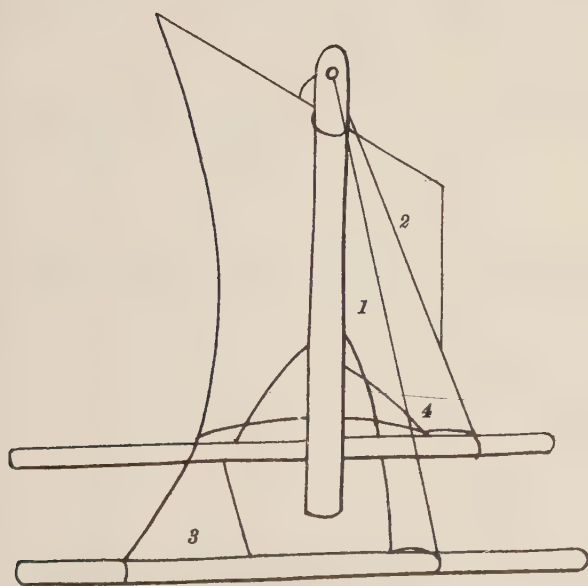
1. *Henza*, halyard, attached to stern *mrengu* near shell on windward side.
2. *Sharuti* attached to forward *mrengu* on windward side.
3. *Kamba ya Demani*, sheet attached to stern *mrengu* on leeward side.
4. *Kamba ya joshi* attached to forward *wango*.

C.—Detail of attachment of yard to mast :

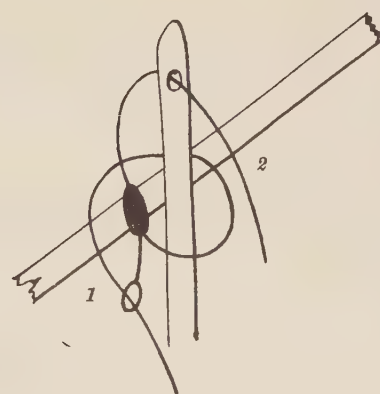
1. The *sharuti* has a hole spliced open at its standing end. The rope



A.



B.



C.

Rigging Details

[to face pag

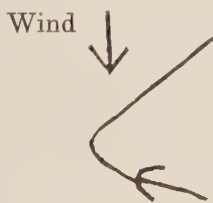
is first wound several times round the yard (to form a buffer) and secured, leaving this hole free: it is then passed *once* round the mast and passed through the hole, and the free end is then led down and attached to the forward *mrengu* on the windward side, thus also acting as a stay. The *sharuti* is only tightened up after the yard has been hoisted.

2. The standing end of the *henza* is attached to the same point on the yard as the *sharuti*. This halyard is then passed through the hole at the top of the mast, and the free end is led down for attachment to the stern *mrengu* on the windward side, thus also acting as a stay.

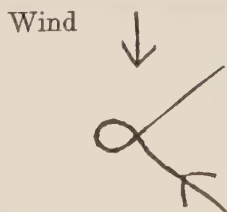
* * * *

Allowing for leeway, the *ngalawa* will sail reasonably close to the wind, but not so close as a vessel rigged fore and aft with a heavy keel or centre-board.

The Arab or Indian style of rigging makes the *ngalawa* less easy to handle than a vessel rigged fore and aft. From the nature of its sail, the *ngalawa* cannot put about through the eye of the wind. It is necessary first to pay off down-wind, to give steerage way and to bring the wind abaft the beam; the sheet is then cast off and the whole sail and sheet is then passed forward and outside of the yard; the yard itself must be pulled parallel to the mast, in order to carry it over to the other side. The *joshi* must be cast loose and resecured in order to avoid twisting the tack of the sail; the *sharuti* must be cast off and resecured on the new leeward side; and in a high wind it is also usual to carry across the *henza* to improve its efficiency as a stay. The sheet is then secured on the new lee side, the vessel is steered round into the wind again, and begins to pay off on the new tack. A vessel rigged fore and aft goes about in one motion thus:—



all types of craft rigged with the leg of mutton sail must go about thus:—



A similar operation must be carried out if it is necessary to change course down-wind or to gibe. This operation can be carried out by one man alone,

who must leave his helm for the purpose, but it is normally regarded as essential to carry a crew of one to handle the sail and yard.

The *ngalawa* cannot be described as a comfortable craft; the helmsman has to perch on the gunwale, and the boy usually stands or squats on the windward side of the forward *mrengu*, holding on to the mast; he is shown standing on the Zanzibar stamp. Yet apart from fishing expeditions in all seasons, which may take a whole day, journeys are made from Kilwa as far as Lindi or even Dar es Salaam.

Preliminary List of some Butterflies taken near Malangali—with Notes

By C. Whybrow

THE following list is not by any means exhaustive. It is reasonable to suppose that there are nearly two hundred species to be found close to Malangali, that is within five or six miles. The country in which these species were taken is stunted dry deciduous bush, four thousand five hundred to five thousand feet, rainfall thirty to thirty-one inches. The species were named at the British Museum (Natural History) and checked by Mr A. G. Gabriel of the Entomological Department.

The following abbreviations are used : F = Form ; WSF = Wet season form ; DSF = Dry season form.

PAPILIONIDS : The Swallowtails

Panilio demodocus, the Lime or Citrus Swallowtail.

This is the common black-and-yellow swallowtail found all over the Territory all the year round. Food plant, citrus of all kinds. The young larvae, from one-eighth to one-half an inch long, resemble the droppings of birds. They then turn green. They have the power, when disturbed, of shooting out from the upper forward part of the thorax a red fleshy appendage resembling the forked tongue of a snake.

PIERIDS : The Whites and Yellows

Herpaenia eriphia (DSF *eriphia* and WSF *nyassae*).

Mylothris agathina. The male is a fairly large white butterfly delicately shaded with orange on the underside of both wings near the body. There are marginal black dots and slight black tips. The female is easily mistaken for a separate species as her wings are orange-yellow with darker shades of orange nearer the body. Black markings are the same as in the male. One of the most beautiful of the common species.

Belenois severina. White, with a black-and-white margin to the wings. Female dirty yellow with black markings. Very common.

Belenois aurota. Rather similar to *B. sevedina* for which it may be mistaken on the wing. Very common. Until recently known as *B. mesentina*.

Belenois picta. Another larger white butterfly with black tips to the wings and delicate orange markings on the underside. Rare.

Calopirris celimene. Mainly white with deep crimson-and-black tips to the front wings.

Colotis vesta.

Colotis aurigeneus (F *venustus* and F *mutans*)

Colotis eris.

Colotis hildebrandti. Mainly white with pale bronze tips.

Colotis achine. The common orange tipped white, but not the species found in England.

Colotis omphale. Similar to *C. achine* but very much smaller. Rare.

Colotis antigone.

Colotis auxo. Yellow with deeper orange tips.

Colotis annae.

The *Colotis* include most of the orange-and-red tipped whites, and some of them are so similar as to be hard to distinguish. In many species there is a marked difference between the wet and dry season forms and also between male and female.

Catopsilia florella. This is the commonest of the large whites. It shows no coloured markings whatever. The female, which is not nearly so common, is an unrelieved brimstone-yellow.

Terias senegalensis. This is the very common small black-tipped yellow. The markings vary considerably according to the season.

Terias desjardinsi. Very similar to *T. senegalensis*, but with heavier black markings which extend right round the margins of both wings.

DANAIDS

Danaïs chrysippus. A common large brown butterfly with black-and-white tips to the front wing and a narrow black-and-white speckled margin to both wings. Small brands on the hind wing. This butterfly is unpalatable to birds, and certain other species, notably *Pseudacraea poggei* and the female of *Hypolimnas misippus*, mimic its shape and colouring as a protection.

Danaïs chrysippus (F *alsippus*). A fairly common form of the above, usually of a rather paler brown and without the heavy black-and-white tips to the fore wings.

SATYRIDS : The Browns

Melanitis leda. A large darkish brown butterfly with subdued peacock eyes near the apex of the front wing. Usually seen flying at dusk. The dry season form is even more subdued in colouring than the wet season form. The underside of the wings gives an unusually good imitation of a dead leaf, so that this butterfly is very hard to spot when at rest.

Gnophodes parmeno (F *diversa*). Another large brown butterfly with a yellow band near the wing tip. Also flies mainly at dusk.

Mycolesis simonsi. Pale brown.

Mycolesis safitza. Dark brown.

Mycolesis perspicula. Dark brown.

Mycolesis dentata. Very dark brown, almost black.

All the *mycolesis* have smallish ocelli (eyes) on the wings.

Ypthima asterope. This is the common little brown butterfly which is seen everywhere. It has numerous forms which are named according to the number of small ocelli (eyes) on the hind wing.

Neocoenyra gregorii.

NYMPHALIDS

Charaxes saturnus. Locally the commonest Charaxes.

Charaxes duceanus.

Charaxes bohemanni. A large very beautiful butterfly with powder blue wings heavily tipped with black. The female has a white band separating the black tip from the blue wing. The underside, as with most of the Charaxes, gives a good imitation of a dead leaf.

Charaxes varanes. Wings white with wide tips and margins of bright brown.

Charaxes etheocles (f. *phaeus*). Very similar to but smaller than *C. bohemanni*.

Charaxes guderiana. The male is the smallest of the local Charaxes. The wings are mainly deep blue marked with black, with a few small white markings. The female is much larger and with totally different markings, her wings being bright brown with black markings. She rather resembles *C. saturnus* or *C. duceanus*, for which she may easily be mistaken when in flight.

The Charaxes are a most attractive group of butterflies and those most likely to interest the beginner. They are capable of very fast flight, especially *C. saturnus*, which I have often watched chasing and actually keeping up with swallows and martins. Chasing moving objects seems to be a pastime of *C. saturnus*, which may often be seen darting out of a tree in pursuit of a bird or another butterfly. The Charaxes are, as far as I know, the only butterflies whose flight can be heard. It sounds like the rustle of dead leaves.

Leucosticha daedalus. A low flying medium-sized butterfly of dark mud colour with numerous white spots.

Cremidomimas concordia. A very artificial looking butterfly, upper side mauve with black markings, underside yellow with black markings.

Neptis agatha. Black with large white markings.

Neptis marpessa. Easily mistaken for *N. agatha* on the wing.

Hypolimnias misippus. The male is a fairly large and very beautiful insect. His wings are a very deep purple, almost black, with one large white mark in the middle of each wing. In certain lights and angles the purple lightens and becomes iridescent. The female, as mentioned above, gives an exceedingly good imitation of *Danais chrysippus*, and is totally different from the male.

Pseudacraea poggei. This butterfly also gives a passable imitation of *Danais chrysippus*.

Byblia acheloia.

Eurytela dryope.

Pyrameis carduae. The "Painted Lady." This is, I believe, the only butterfly common to Great Britain and Tanganyika Territory. Its distribution is almost world wide.

Catacroptera cloanthe.

Precis artaxia.

Precis natalica.

Precis actia.

Precis antiolope.

Precis clelia.

Precis oenone.

Precis orithya.

Precis sesamus (WSF *natalensis* and DSF *sesamus*) was until recently known as *P. octavia*. It is of particular interest because of the remarkable difference between the wet and the dry seasonal forms. The former (*natalensis*) is a brightish brown with narrow black margins and a few other black markings. The dry season form (*sesamus*) may roughly be described as a black butterfly heavily striated with light purple and with small white-and-red markings near the margin. It is considerably larger than the wet season form and seems rather more common. It frequently comes into houses to hibernate temporarily during cold weather.

Phalanta phalantha.

ACRAEIDS

The Acraeids include some of the commonest species in Africa, to which continent, I believe, they are confined. They are mostly delicate little reddish-brown butterflies with black markings and smaller markings, mainly near the body, of white, yellow or red. They are common throughout the year.

Acraea encedon (F *encedon*).

Acraea acrita.

Acraea terpsichore (F *rougeti*).

Acraea cabira (F *cabira*).

Acraea cabira (F *apecidi*).

LYCAENIDS : The Blues and Coppers.

It is often exceedingly difficult to distinguish between the different species of Lycaenids. They are mostly small and most a uniform blue on the upper side of the wing. They are, therefore, best distinguished by the markings on the underside. Some species have one or more "tails" to the hind wing, with yellow-and-black "eyes" just above them. The reason for this is obvious when the butterfly is at rest with its wings closed. The "tails" and "eyes" look much more like a head than does the real head, the tails imitating antennae. A bird swooping on the butterfly would seize it by what appears to be the head, and the butterfly would safely escape with the loss of a small fragment of wing. That this must often actually happen is proved by the number of Lycaenids taken in the net with their "tails" and "eyes" missing.

Hypolycaena phillipus.

Hypolycaena buxtoni.

Loxura ficedula, one of the most beautiful of the blues, with dark brown-tipped iridescent dark blue wings, heavily tailed. Underside reddish-brown.

Flies so quickly as to be almost invisible on the wing.

Iolus silas. Very similar to the above, but with the underside white with a narrow wavy red band.

Axiocerses harpax. A small coppery-red butterfly with red-and-black markings.

Anthene princeps.

Lycaenesthes crawshayi.

Castalius calice. White with black-dotted markings.

Castalius mirza.

Castalius jesous.

Cacyreus lingeus.

Uranothauma nubifer.

Syntarucus plinius.

Lampides boeticus.

Nacaduba sichela.

Neolycaena cissus.

Zizina antanossa.

Zizula gaika.

Chilades trochilus.

Virachola antalus.

Actizera lucida.

Pilodendrix caerulea.

HESPERIDS : The Skippers

The Skippers are mostly small brownish butterflies, some with more brightly coloured markings, and they are exceedingly difficult to identify for the beginner, especially as many species are only distinguishable by the genitalia. Many of them fly at dusk or even in the dark. They are a very numerous but not noticeable group, and Brigadier Evans has noted over fourteen hundred species and forms in his recent book on the African Hesperids. Of these it is probable that well over a hundred are to be found in the Territory, and as the list is continually being added to, there is a very good chance of the beginner discovering a new species. I am indebted to Brigadier Evans for identifying my Hesperids.

Tagiades flesus (WSF *ophelia*).

Eretis djaelaelae (F *maculifer*).

Spialia dromus.

Metisella orientalis (F *zeta*).

Teniorhinus harona (F *harona*).

Platylesches moritili.

Pelopidas mathias.

Gegenes letterstedti (F *brevicornis*).

The Sukuma Homestead

By H. S. Senior

THE following note is written in the hope that it may be of interest to those who wish to know something of the interior economy of the Sukuma household, or *kaya* as it is called in Kisukuma. A knowledge of, and ability to visualize the lay-out of a Sukuma house is often of value in hearing a case in which a crime is committed in the house or compound of a *kaya*. The example given is that of a fairly prosperous citizen owning cattle, with a second wife and married son, all living in one compound. Many houses, of course, are smaller, but the general principles and terminology used are the same. I will start with a short description of the whole compound or *kaya*, as opposed to a description of one house (*numba*) forming part of the *kaya*.

The whole establishment is surrounded by a fence, sometimes fifteen feet high (see figure 1). The outside hedge (all *minyara* hedges are called *lugutu*) encloses the area known as *itunu*. Inside this is a second fence, surrounding an area called *lubigiri*, within which the houses are built, while in the centre of this again is a further enclosure, known as the *ngwalida*, or cattle pen. This is also surrounded by a *minyara* hedge. The outside hedge enclosing the *itunu* is generally lacking in all but the largest establishments. The fence of the *ngwalida* is reinforced by thorns and both entrances are closed at night when the cattle are in (the small stock and calves occupy the veranda of the owner's house) by the expedient of pulling a thorn bush (*isanzu*) into the entrance. The houses are distributed as follows:—

A.—The owner (*Munamugi*) of the *kaya* with his chief wife and her children.

B.—The second wife with her children.

C.—The married son with his wife.

There is generally a further small house in the compound consisting of one room, which is called *maji* and shown as D. In this house the food-bins not in use are stored, and it is also used as a guestroom in which visitors sleep. The front portion of the *itunu* nearest the front entrance (*mita*) is used either for the cultivation of early maize, potatoes or pumpkins and tobacco, or alternatively as pasturage for the calves. The width of the *itunu* varies, but it may be up to fifty yards across. The sanitary arrangements are very primitive, a place on the outside edge of the *minyara* surrounding the establishment is used for the purposes of nature. A site where the *minyara* branches afford some privacy is generally favoured. This spot is known as *igunghu*. All round the *kaya* are the *matongo* or home fields, whose cultivation is chiefly in the hands of the women, while the men pay more attention to the fields at a distance from the *kaya*.

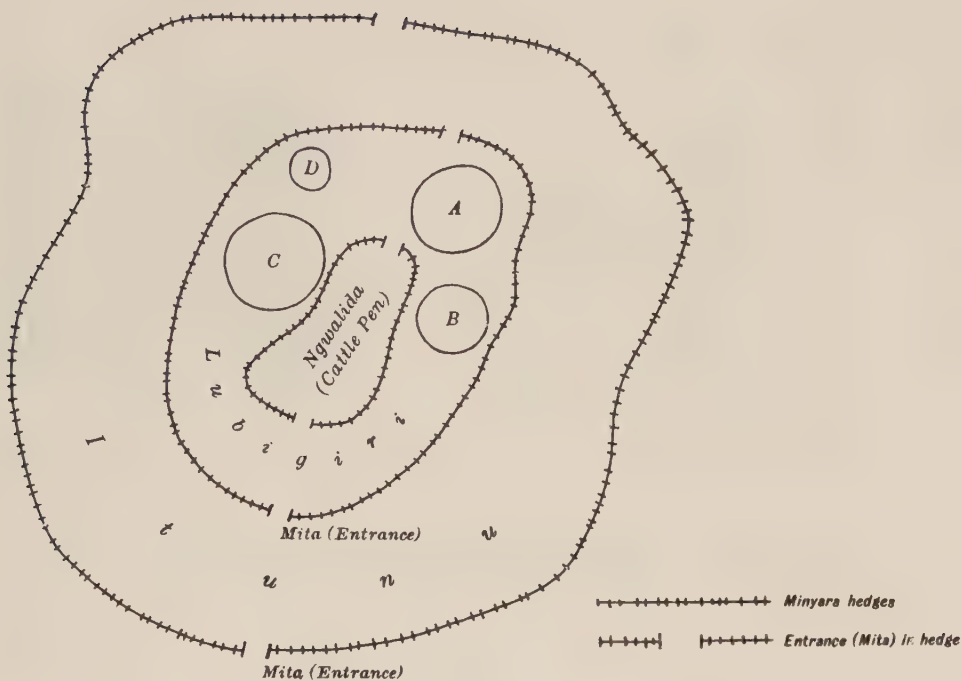


Fig. No.1. A Sukuma Kaya.

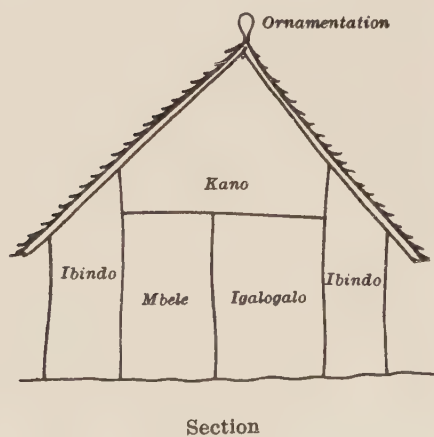
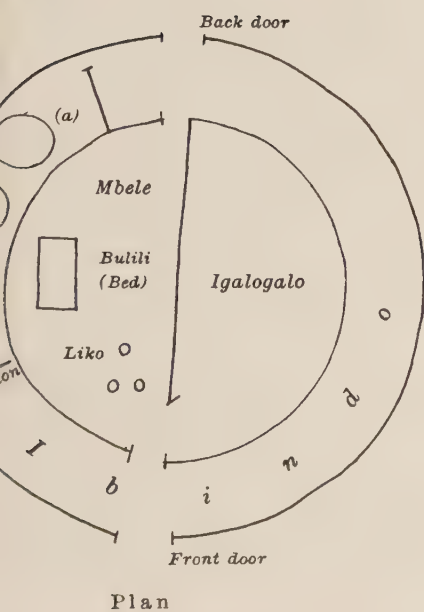


Fig. No.2. A Sukuma Numba.

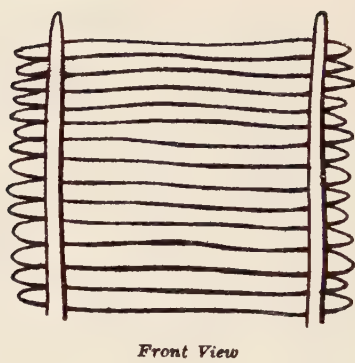
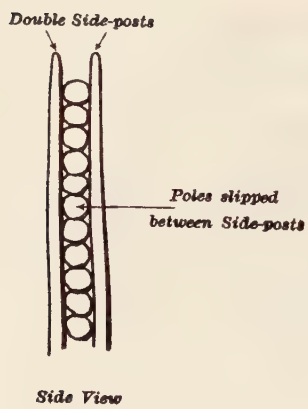


Fig. No.3. Front door of a Sukuma House.

To go on to the actual plan and lay-out of a hut or *numba* in the *kaya* (see figure 2):—

The Sukuma house is practically always round, though a few more sophisticated natives now build the square house, copied from the Swahilis. The houses are all thatched in the typical neat Sukuma style, the angle of the thatch being generally about forty degrees. Sometimes the houses are built of mud brick, especially in South Maswa, where building poles are hard to come by. More usually both the inner wall and that of the veranda are built of poles, reinforced by lathes (*magito*) and laced together with string and then roughly plastered on the inside only. Sometimes the outer wall (that of the veranda) is constructed of the stalks of maize or millet and sometimes it consists of poles without any plastering of mud. Quite often the outer veranda (*ibindo*) is not enclosed at all. Ornamentation in the shape of an ostrich egg, or the shells of land snails are often found on the topmost point of the roof.

The house consists of a veranda running right round and usually, but not invariably, closed in by a wall similar to that of the inner part of the house. In this veranda are the front door (*nyango*) and the back door (*njinga*). A portion of the *ibindo* is usually cut off by two partitions known as *isenge*. In this part of the *ibindo* are stored the *mafuma* and *mabelele* (marked (a)), or the food storage bins (*vilindo*—Kiswahili) of the house. Often the food-bins, or part of the food supply is kept in the *kano* or attic reached by a ladder. In North Maswa food is always kept here. As, however, food thus stored is not so easy to save in the event of the house catching fire, usually only the bin of food in actual current use is kept up there in South Maswa, the main stock being kept in the *ibindo* as described, as being easier to save if the house should catch fire. The rest of the *ibindo*, not used for storing the food-bins, acts as the sleeping place at nights for the calves.

The inner portion of the house is divided into two rooms. It is dark and without ventilation and, save for the light of the fire, it is difficult to see one's way about even at midday. These two rooms are called *mbele*, or the living and sleeping room, the *igalogalo*, in which, if the owner of the house owns smallstock such as sheep and goats (which is the rule rather than the exception), the smallstock are housed at night. The partitioning wall between the *mbele* and *igalogalo* is sometimes constructed of poles, plastered with mud and sometimes merely of poles, through which it is possible to see what is going on in the adjoining room. In the *mbele* is the cooking place, *liko-jiko*, in which is found all the apparatus for cooking, such as pots and the three stones (*mafiga*) within which is the fire and on which the cooking is done. There is also the square bed (*bulili*), of poles driven into the ground, with a skin (*ndili*) stretched across it, for the Basukuma will not sleep on the ground if they can help it. From the roof of the *mbele* hang all the gourds and pots (*shiseme* "Lares and Penates," exactly) while on the walls are hung the owner's bow, arrows and spear and his muzzle-loading gun, if he

has one. The whole of the inner part of the house, excluding the *ibindo*, has a ceiling of poles, the space above which forms the *kano* or attic, already referred to. The house has two outside doors, one at the front and one at the back as well as a door between the *mbele* and the *igalogalo*. The front and back doors can be shut. They are of two types. The first type has double side-posts with a space in between, in which poles of the length of the width of the door are slipped, until the whole space is filled up (*see* figure 3). These poles are known as *magongho*.

The second type of door is known as *lugi* or *lwigi* and consists of a door of maize stalks laced on to a framework of poles. Both types of doors, needless to say, can be shut from the inside.

An interesting point in the lay-out of the house is the amount of space devoted to housing livestock at night, an indication of the value the Basukuma place on them.

Some Notes on Insects as Food

By W. Victor Harris

THERE are a number of insects which are eaten regularly by various tribes in Tanganyika Territory. They form a not unimportant seasonal change in diet and though, as has been stated in a recent report,* their exact dietetic significance is still unknown, there can be little doubt that they are a source of animal protein too often lacking in the native menu. A number of the insects used as food contain fats. Furthermore, since many of them are eaten raw, they are not likely to lose any vitamins they may contain.

Six of the main families of insects are included in these notes, forming a representative cross-section of the order Insecta, and embracing locusts and white-ants, grubs of beetles, caterpillars and even flies. The contribution of insects to the maintenance of man, as opposed to their destructive tendencies, is not limited to the traditional diet of locusts and wild honey.

LOCUSTS AND GRASSHOPPERS

Locusts are perhaps the most widely eaten insects in Tanganyika. The opportunities for this are, unfortunately, only too frequent in many localities, and it would appear that the energy shown by the inhabitants in collecting locusts for food bears a definite relation to the frequency of locust invasions in a particular district. Three species of locust are met with: the red, desert and migratory. Each in turn is eaten, both in the adult and the hopper stage. The adults have their wings and spiny legs removed, and are usually roasted. Fried in butter, they have a mild and not objectionable flavour, reminiscent of shrimps. Flying locusts and, to a greater extent, hoppers are sun-dried for storage purposes, being eaten as a flavouring with porridge.

In the country west and south of Lake Victoria, a green-grasshopper *Homorocoryphus vicinus* is eaten in large numbers. Small boys, out on the grasslands herding cattle, catch them and impale them on skewers, usually grass stems. The insects are eaten fresh or dried, as in the case of locusts.

As a final example of the family Orthoptera, there is the Giant Cricket, a fat yellow insect, from two to three inches in length, which is a common pest of gardens and nurseries. It lives below ground, cutting off the roots of young plants and appears on the surface only at night. These crickets are dug out of the ground by natives in areas where they are numerous and are roasted and eaten as a relish.

*Nutrition in the Colonial Empire, First Report, Part I, 1939.

TERMITES

Termites, or white-ants, as they are commonly called, are preyed on by most living creatures from insects to man. Under certain climatic conditions, mainly dependant on heavy rain, termite colonies send out large numbers of flying adult reproductive forms, after the manner of trees with winged seeds spread by the wind. The larger species only are eaten, and in a casual way, except in the case of the genus *Acanthotermes* which is widely sought after. In the west of Tanganyika, dried termites are offered for sale in the local markets during the season.

The low mounds of *Acanthotermes*, or, where mounds are not built, the emergence holes in a piece of bare ground, are covered with a light frame of branches supporting banana leaves, bark cloth or blankets. Care is taken to make this covering light-tight, except for one end where there is an opening close to ground level about one foot in diameter. On the threshold of this opening a bowl is sunk into the ground. When the termites emerge, usually about two o'clock in the afternoon, they make for the brilliantly-lit opening. Ungainly in their first attempts at flying, bumping each other in the rush for the light, few manage to fly straight out. Those that bump the sides of the opening, or each other, drop their wings and fall into the basin, from which the collector removes them to his gourd or petrol tin. They are eaten raw, often alive, and also dried for storing. The bodies of these winged termites are plump with reserve food stores, adequate for their needs over a period of several weeks while they employ their energies solely in the founding of a new colony.

The queen termite is also sought out as food. Except where excavations accidentally bring to light the nest of one of the genus *Termes*, the queens eaten are normally those of the mound-building genus *Macrotermes*. Some of these queens are five or six inches long, pallid sausage-like egg-producing machines incapable of any movement, other than the tremors of the abdomen accompanying the emergence of an egg a minute, day and night. The queen termites are roasted and are highly appreciated by most natives.

CATERPILLARS

Caterpillars, the young stage of moths and butterflies, are recorded in native dietaries in several parts of the tropics. In several parts of Tanganyika the caterpillars of the wild silk moth *Anaphe infracta*, are sought and eaten. These caterpillars are gregarious and build communal nests of strong yellow silk in the branches of the trees on which they feed, generally, if not exclusively *Bridelia micrantha*. Each nest contains a large number of caterpillars, which may be cooked fresh, or dried and powdered for storage.

A large Saturniid moth, *Bunaea caffraria*, has an ugly black velvet-coated caterpillar some four inches long, armed with numerous conspicuous half-inch spines. But the natives of the Matengo mountains overlooking Lake Nyasa are not deterred by appearances, and search the host plants each



The Giant Cricket, *Brachytrypes membranaceus* (natural size)



Winged Termites ($\times \frac{1}{2}$) *Acanthotermes militaris*



Queen Termite with Soldiers (natural size) *Acanthotermes* sp



Collecting winged termites; framework built over emergence holes



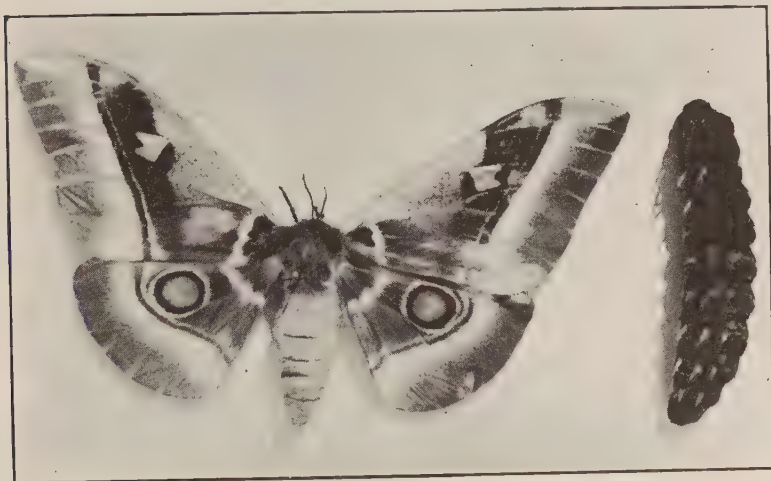
Framework covered with banana leaves and a blanket



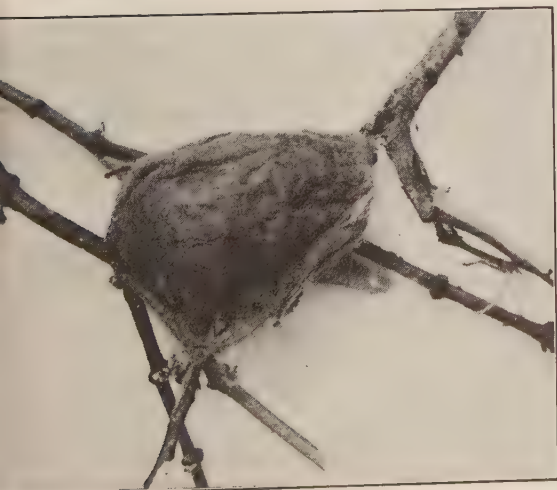
Exit hole to which the termites are attracted by the light; showing the basin let into the ground to collect the termites as they fall after knocking off their wings



Wild Silk Moth (natural size) *Anaphe Infracta*



A Saturniid Moth ($\times \frac{1}{2}$) *Bunias aslauga*



Nest of the Wild Silk Moth ($\times 1/5$ th)



Grubs of the Tree-Boring Weevil, *Sipalus*
(natural size)



Basket for collecting Lake Fly, Ukara Island

season for the Bunias caterpillars, which they collect in large numbers when fully grown and eat after roasting.

BEETLE GRUBS

Beetle grubs are not popular in Tanganyika. The large and no doubt nutritious grubs of the coconut beetle, which are esteemed in some eastern countries, are ignored by our coastal people. In fact, the writer has only found one species which is eaten with regularity and that is a tree-boring weevil, *Sipalus*. This weevil occurs normally in certain indigenous trees, but has found a very convenient food supply in the abandoned ceara-rubber plantations. This convenience is passed on to the native, who has no longer to seek out the scattered wild trees. Old ceara trees, when split up at the proper season, yield a good harvest of grubs which are boiled or roasted.

BEE GRUBS

Honey is in considerable demand, but the bees' contribution to human welfare does not end there, as most natives also have a taste for the grubs or larvae which inhabit the brood combs of a colony. Generally these grubs are eaten raw, being chewed up with the comb they share with the honey. At other times they are shaken out and added with honey to the stiff meal porridge which forms the basis of a native meal.

FLIES

Perhaps the most unlikely insect, to European ideas, to be used as a food is a fly. But the "lake fly" of Lakes Victoria and Nyasa, *Chaoboris edulis*, is thus employed, as its scientific name indicates. The clouds of these gnats which drift in masses like smoke-screens over the lakes are well known phenomena. When they reach the shore, the natives rush into the clouds, whirling about their heads hemispherical baskets on long handles. As a basket is filled, the contents are squashed by hand into solid masses of dead knats, which are then moulded into suitably sized cakes and dried in the sun. Lake fly is an important food in the limited areas in which it occurs.

SUMMARY

The following insects are eaten in quantity by natives in the various parts of Tanganyika where they are seasonably abundant:—

<i>Nomadacris septemfasciata</i>	(Orthoptera)	...	Red locust
<i>Locusta migratorioides</i>	"	...	Migratory locust
<i>Schistocerca gregaria</i>	"	...	Desert locust
<i>Homorocoryphus vicinus</i>	"	...	Green grasshopper
<i>Brachytrypes membranaceus</i>	"	...	Giant cricket
<i>Acanthotermes</i> spp.	(Isoptera)	...	Termites, white ants

<i>Macrotermes</i> spp.	(Isoptera) ...	Termites, white ants
<i>Termes</i> spp.	" ...	" "
<i>Anaphe infracta</i>	(Lepidoptera) ...	Wild silk moth
<i>Bunaea cafraria</i>	" ...	Saturniid moth
<i>Sipalus aloysii-sabaudiae</i>	(Coleoptera) ...	Tree-boring weevil
<i>Apis adansoni</i>	(Hymenoptera) ...	Wild honey bee
<i>Chaoboris edulis</i>	(Diptera) ...	Lake fly

Further Notes on Fishing near Tanga

By G. W. Hatchell

IN APRIL 1939 there appeared in this journal some notes on sea fishing near Tanga and readers may recollect that it was hoped that further information on the subject would be available from time to time. Since January 1937 I have kept a fairly detailed fishing log and am now able to place at the disposal of readers such information as I have been able to gather up to December 1939.

Fishing during the period was carried out from a motor boat and as a general rule one rod and one hand-line were employed at the same time. It was found that a speed of between five and six knots gave the best results and that speed was generally adhered to. In the three years 116 fish were caught with a total weight of 1,384 pounds. The average was thus a low one of just under 12 pounds; nevertheless one or two respectably heavy fish were taken, amongst them being: a shark of 68 pounds, kambisi of 78, 43, 37 and 30 pounds, a barracouda of 24 pounds and a garfish of eight pounds which was three feet four inches long.

I am indebted to Mr Hugh Copley of the Game Department, Nairobi, for the following information regarding records which have been noted there:—

Kambisi:

1914	...	93	pounds	...	Sir Henry Belfield at Mombasa.
1915	...	82	,,	...	Mr Lee at Mombasa.
1915	...	72	,,	...	Sir Northrup McMillan at Mombasa.

Garfish:

1916	...	8	,,	(4 feet long)	...	Dr Small at Mombasa.
1932	...	9½	,,	(4 feet 9 inches long)	...	Mr Copley at Kilifi.

It is probable that heavier fish have been taken in the Mafia channel or in the Zanzibar-Pemba channel and it is hoped that readers having knowledge of them will write to the editor so that they may be permanently recorded in the pages of this journal.

Published as an appendix to these notes will be found tables giving details of results obtained with various bait, at various states of the tide and so on.

Weather Conditions.—It seems to be fairly well established out of the three years' experience that little success can be expected in rough weather with the wind at a force exceeding 4 on the Beaufort Scale. Generally, a sky lightly clouded, a light breeze and a calm sea produce the best results, but it is not clear that there is any difference in them when steaming into or with the wind. Greater success was obtained on an ebb than on a flood tide: 62 fish on 31 days as compared with 40 fish on 41 days.

It will be seen that there was a bad period from September 1937 to June 1938 when the number of days on which no fish were caught was comparatively high. There is no obvious explanation for this; weather conditions were not abnormal and sea water temperatures showed no unusual variation. Native fishermen had much the same experience and complained of poor catches but were unable to suggest any reason for it.

Bait.—Owing to the difficulty of obtaining it when required and of keeping it suitably fresh natural bait was not used. Had it not been for the war I had hoped to give this form of bait an extensive trial for it seems to be used almost exclusively in New Zealand and in the United States and there appears to be no reason to suppose that in our local waters it should not give good results.

The various artificial lures employed and the results obtained are shown in the appendix. The six-inch Nickle Record Spoon has proved very attractive and the Feathered Jig is second in popularity. The latter appears to be very attractive to fish of the mackerel family: all the bonito and four out of the six yellow-finned tunny were taken on it.

Fish Caught.—A list of fish caught during the period will be found in the appendix. I regret that the identity of the *mkokwe*, *tandu* and *rongo* has not been satisfactorily established and I have, therefore, left them their native names in the hope that some reader will be able to provide the information lacking.

I am again indebted to Mr Copley for the identification of the *kifimbo* as the *Rastrelliger Microlepidotus*. This fish is of the mackerel family and is usually to be found cruising alone in deep water. Those taken by me were found in a deep channel between two reefs and in ninety fathoms of water a mile or so off the reef.

It will be noted that more *kambisi* than any other fish were caught. This fish seems to be partial to almost any kind of lure and to be a most energetic feeder. There is a great similarity between him and the *kole-kole* and so far as I have been able to discover they can best be distinguished by the fact that the *kambisi* has teeth whereas the *kole-kole* has not.

Mention should be made of the sixty-eight-pound shark which was taken on a six-inch Record spoon for, I believe, that it is unusual for a shark to take a spoon. This fish was a female and six young were found in the womb and the remains of a large barracouda in the stomach.

Localities.—Reference to the appendix and to the chart published with the earlier notes will show where the best fishing was obtained. While the channel between Yambe Island and Neuli reef and the grounds east of Neuli and Karange have produced good results it seems clear that off the Wambawamba reefs prospects are much better. It was there that a local fisherman killed six bonito of 30 pounds a few years ago while in five visits I killed twenty fish which included 78, 68 and 43 pounders. Unfortunately, these

grounds are some distance from Tanga and a visit entails a full day's absence and can thus be undertaken, by most fishermen, only on public holidays.

The results obtained in three years' fishing are scarcely good enough to attract fishermen from abroad but I still believe that there are "big fellows" to be had in these waters once we can hit on the right methods. As evidence of this, four sizeable sail fish were taken a mile or two off Wamba-wamba by native fishermen using squid bait and drifting with the tide, while another of 67½ pounds was caught on a spoon near Pangani.

Owing to the war, fishing is no longer possible, but it is hoped that at some later date we will be able to resume the game and to demonstrate that Tanga waters are comparable with those of the Mafia channel and, perhaps, with those of Southern California.

TABLE SHOWING DETAILS OF RESULTS OBTAINED IN VARIOUS LOCALITIES USING DIFFERENT BAIT

LOCALITY	Visits	King Fish	Barraconda	Kambisi	Garfish	Rock Cod	Kole-kole	Kungu (Snapper)	Sehenu (Albacore)	Jodari (Bonito)	Feleusi (Dolphin)	Kifumbo	Tandu	Queen Fish	Rongo	Shark	Nyombo (see Bass)	Mkokwe	TOTAL
Yambe Channel, North End ...	16	4	4	2	1	—	—	—	1	—	—	—	—	—	—	—	—	—	12
Yambe Channel, South End ...	15	—	2	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
East of Neuli ...	16	2	3	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
East of Karange ...	5	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
No. 1 Buoy ...	20	5	3	11	—	1	—	1	—	4	—	—	—	—	1	—	1	—	27
East of Fungo Nyama ...	12	2	3	2	—	—	—	—	2	2	4	—	—	—	—	1	—	—	15
East of Wamba-wamba ...	5	1	2	12	—	—	—	—	1	1	2	—	—	—	—	—	—	—	20
Kwale Bay ...	3	—	—	—	—	—	2	—	1	1	1	1	—	—	—	—	—	—	2
Fungo Tongoni ...	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Kwale Bank ...	3	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Inside Neuli ...	5	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Tanga Bay ...	4	3	1	—	1	—	—	—	1	—	—	—	1	—	—	—	—	1	8
																			5
BAIT USED																			
6-inch Hardy Herring ...	...	2	1	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	5
6 " Brass Spoon ...	...	2	2	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	6
6 " Record Spoon (Nickle) ...	...	10	11	22	—	1	—	—	—	—	5	2	1	1	1	1	—	1	56
6 " Chum Spoon ...	...	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
5 " Record Blue Spoon ...	...	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2
4 " Record Spoon (Nickle) ...	...	2	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
4 " Wilson Spoon ...	...	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2
4 " Hardy Diving and Darting Bait ...	...	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
5 " Trixoreno ...	...	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Feathered Jig ...	...	3	2	6	2	—	—	1	4	8	2	—	—	—	—	—	1	—	29
TOTALS	...	21	19	40	2	1	2	1	6	8	8	2	1	1	1	1	1	1	116

TABLE SHOWING DETAILS OF RESULTS OBTAINED AT VARIOUS STATES OF THE TIDE

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Mkungwe Mountain

By C. C. O'Hagan

MKUNGWE MOUNTAIN which lies on the shore of Lake Tanganyika, some one hundred miles south of Kigoma, is a gneiss promontory jutting prominently into the lake. The lower slopes are densely forested but the upper two thousand feet are covered with grass or are bare.

Native legend is rife concerning the mountain which is said to house the ancestral spirit or *mzimu* of the people whose villages cluster in the little indentations at its foot, while a similar outcrop on the western shore of Lake Tanganyika is connected with it by legend.

Mkungwe it is said,* had a nephew and once in a quarrel with him was so enraged that he picked up his nephew and threw him across the lake. The effort was so great that Mkungwe lay down and in the early morning he can be clearly made out from the north lying on his back, his head towards the water, his knees raised with his hands clasped over his stomach. He himself has never risen again and his nephew, who was killed by the shock of his fall, disintegrated so that only his bulk but not his form can now be made out. In more recent times European endeavour and misadventure have strengthened the prestige enjoyed by the mountain spirit. Native legend states that in German times a European leaving from Kitumbi due north of Mkungwe climbed the hill and having reached a place some two-thirds of the way up where the natives conducted their rites of propitiation and fertility he destroyed it, breaking everything he could find and then deterred by the sheer face of Mkungwe above him, he returned. On his return journey he contracted some severe form of dysentery, was carried into camp and died a few days later.

The late Mr Grey gave out his intention of climbing Mkungwe but before he did so he is stated to have gone out to shoot a buffalo to provide rations for his trip up the mountain; he was killed by the buffalo and the mountain's prestige enhanced. Mr Grant, the District Officer at Kigoma, next attempted the Kitumbi route from the north. According to his porters, after some hours climbing he reached a razor back so sharp that in order to traverse it he had to sit down astride and his porters becoming frightened he was forced to return. The popular version of the story, however, is much more picturesque. The party arrived one morning within striking distance of the top and after deciding to proceed they one by one fell asleep, waking at five o'clock. All that night they tossed restlessly, unable to sleep, but after they had eaten in the morning they all slept again until evening. After this double demonstration of miraculous powers by the mountain the district officer decided to retreat,

*Compare Dr Kirschstein's version of this story in *T.N.R.* No. 4 (1937) p. 82.

instructing his porters to tell the story of the impassable ridge. I imagine myself, it was a question of time and an unfortunate choice of route which prevented this attempt from reaching the top.

I had been on tour before in this area and in close contact with many of the inhabitants and when in May 1939 an opportunity to climb it occurred I decided to do so. It was obvious that if I was to be successful great care would have to be taken in the selection of porters. I decided to take five with me, one to carry a whimper tent without poles, one to carry a roll of bedding, one to carry my food, one to carry the men's food and one to carry the water and, if necessary, clear the way.

During a recent dispute which involved most of those prominent in the Buholoholo area three men had impressed me with their vigour. They belonged to the three parties contending for the throne and I decided to take them with me should they consent to go.

Rashidi Kabolola, one of them, was a cousin of the recently deposed ruler of Buholoholo. A taciturn porter, he was with me on a long safari I had recently taken through the sparsely populated country south of Uvinza. At one tiny village I was presented with a cane. I was swishing this through the air one morning while camp was being packed, when I called out that I would give anyone a shilling who would take six there and then on the buttocks. A laugh went up when Rashidi came forward, demanded to see the colour of my money and a moment later was lying before me, his tail bare, and muscles taughened to take his medicine. I gave him his shilling but did not exact my pound of flesh and later I got to know him well over the *bau* board and became impressed with his reliability and strength of character.

The second, Abdallah Kisila, was a young giant from the foot of Mkungwe itself. His successful appeal from the late ruler's decision in a case, charging him with resisting arrest and with using his spears against messengers of the chief, had resulted in an enquiry which, in its turn, had lead to that ruler's eventual deposition. I had been impressed by his assurance and tenacity during the long and complicated proceedings and his physical ability was self-evident.

The third, the spokesman of the present ruler, was unable to come with me as he was ill but he deputed his son, a boy of twenty. He looked so young that I did not want to take him but his father insisted. I asked the boy, Mohamed, if he would go the whole way, as otherwise I had no use for him. He was indignant, denying the possibility of his being frightened.

As we skirted the mountain on my way south I had studied the possibilities of the climb from the deck of the s.s. *Liemba* and had decided that it was most probably practicable from due west. I finished my work at Kalya south of the mountain as early as possible and at midnight on Wednesday, the tenth of June, set off by canoe to travel northwards up the coast to the little village of Kasoge due west of Mkungwe's peak. We travelled all night and early next morning enough wind arose to enable us to put up sail and to

arrive at two o'clock in the afternoon at a village called Rubungwe, where we landed, cooked and ate. We slept for a couple of hours and at seven that evening we arrived at Kasoge.

The villages of Mkungwe, each of which is only to be reached by canoe, are isolated. Each consists of some ten or fifteen families clustered about a little river, fishing and growing its own food-stuffs, with high masses of gneiss cutting it off from its neighbours.

I decided to take Sudi, the canoe's young helmsman and a friend of Mohamed, with me as the fourth porter and at Kasoge I engaged a fifth, a local native called Junge.

Locally the idea was laughed at. The elders shook their heads and said I was wasting my time; no one ever had or ever would climb Mkungwe. But as the old gentlemen had none of them made any attempt to do so, I was able to start my five men off with some optimism. We left early the following morning, with extra men to carry the loads for the first few hours. While passing through a small thicket we met our first setback; a large blue hornet-type fly flew out of the bush and having stung Abdallah in the buttocks buzzed infuriated down the line of porters, clung a second to my ear stung me and departed. The pain was excruciating and both Abdallah and I yelled. I was sincerely thankful that Abdallah had received the first injection. Those of the local inhabitants who were still with us became even more like Cassandra. I countered this with the claim that we had used up our fair share of bad luck and after some argument from Abdallah and Junge we set off again. The incident served to show me how my forces were likely to divide; Abdallah and Junge both wished to give up the expedition, Mohamed was discreetly silent and Sudi followed this lead, only Rashidi wishing to go on.

After walking for half an hour through rice and cassava, we arrived at the river up whose bed I intended to start the climb. Some thirty to forty yards wide, the river was of cold clear water, flowing down a rocky bed over which it broke and boiled in long stretches of rapid, divided from each other by deep pools, waterfalls and steep smooth faces of rock. Both banks were thickly forested and with a brilliant sun striking through the trees the river presented one beautiful vista after another.

The going was comparatively straightforward though care had to be exercised as some of the rocks were slippery and others loose; from time to time when faced with a waterfall we were forced to leave the river and cut our way round it through the bush. As we advanced the banks became more and more precipitous and it became more and more difficult to work round obstacles we encountered; so that we found it easier on most occasions to make our attack up the actual face of the waterfalls whenever good hand- and foot-holds existed.

I had considered taking my own district office messenger with me and he accompanied us to the river. He proved singularly futile and when at one o'clock I sent back the extra porters, he was only too relieved to accompany

them to Kasoge. When they had left we rested and cooked a meal; I fried half a tin of sausages while the men cooked some cassava flour.

Three-quarters of an hour later we went on again and found that the river led to an exceptionally large pool. It was about a hundred yards long and twenty yards wide and so clear that although it must have been between fifteen and twenty feet deep one could see fish, three- or four-pounders, swimming slowly on the bottom.

We all bathed and Abdallah produced a small net some two feet six inches long and a foot deep, each end of which was sewn on to a cane, while a long string with a float was attached to one end. He swam down to the bottom of the pool and stuck the two canes in the sand so that the net stood like a pingpong net on the bottom. He then came to the surface and ordered us all out of the water until the fish came out of the corners in which they had hidden. We all collected at the bottom of the pool and dived in with as much splashing as possible; the fish darted away along the bottom, one drove straight into the net and Abdallah, who was down by the net incredibly quickly, caught it before it could escape. Abdallah, who on land was so big that he looked a little clumsy, was transformed in the water. The light flashed in silver streaks off his glistening body, the long line from waist to ankle glinting with every movement of the muscles under his skin.

The waterfall at the top of this pool was our first major obstacle and we spent over an hour hacking our way through the bush before we got round it. The banks had now closed in and overhung the river so that one walked as in a passage with tall trees, their height enhanced by the almost perpendicular banks on either side.

These trees were covered with creepers many of which were buffalo beans. As there was no wind and as they were so high that they could not be disturbed by our passing, we hoped we would not find them very troublesome. The river was passing over smooth ridges of gneiss lying like gigantic steps across its course; the only way we could get over them was for Abdallah to stand braced with his back against the foot of each western slope (every one of which was nearly vertical), for me to stand on his shoulders, face to the rock, for Rashidi to climb up the two of us and somehow scramble to the top. Either Mohamed or Sudi would then get on to my shoulders and taking the loads one by one from the other, hand them up to Rashidi, following them himself. The man on the ground having climbed over Abdallah and me, was helped up by Rashidi to the top whereupon they reached down and pulled me up; lastly we let down a rope for Abdallah. This sounds a complicated manoeuvre but as we met at least ten such obstacles we became expert at it.

The eastern slopes of these ridges were not nearly so steep and the obvious way to get down, for an inexperienced climber like myself, was to sit and work one's way down on one's haunches, hands and feet. The ridges were at such an angle that it was just possible to walk down, but the risks of a fall were considerable and a fall would have been extremely painful, even dangerous,

as it involved a rolling uncontrolled termination to one's descent. The sitting method would have been simple save for the fact that the smooth rock was carpeted with hairs of buffalo beans which had drifted down to it. These hairs are barbed and cause an intense itching; they work their way through the thickest clothes and cause acute discomfort, the first slope I slid down on my trousers and filled the seat with hairs; my companions did the same then removed their trousers and laughed at my furious scratchings.

At the next slope they went down on their bare skin, I tried to walk, slipped so suddenly that I fell on the side of my jaw and rolled to the bottom, slightly wrenching my wrist. I was not seriously hurt but I decided that if we were to get to the top I could not risk another fall. The porters sat in the river and washed off most of the hairs before they had had time to penetrate. For that evening and next day I followed their example and walked in my shirt until we left the river; even then it took a definite effort to launch one's delicate posterior down that smooth fur-sprinkled rock, but the fur, if tackled at once, washed easily off our skins: At one place I tried to toboggan down on the tent, but we went far too fast and it was only deep water at the bottom which prevented an accident.

That evening we arrived at the junction of the two streams which flow down the valleys to the north and south of a little peak which lies due north of Mkungwe and between Mkungwe and the big northern peak of Pasagulo. It was this little peak, Mkungwe's son, which I had decided to climb before making the attempt on Mkungwe itself. We decided to continue up the southern branch and after climbing round the first waterfall we found a small open space suitable for a camp.

We cut small leafy branches, laid them on the ground and pitched the whimper tent over them; its canvas floor made an excellent bed. After cooking a meal and indulging in half an hour's talk round the fire we turned in, the men first and myself, to get the fresh air, across the doorway. Next morning we ate again before starting and discovered a mishap. I had brought as rations for the porters cassava flour and smoked fish. We discovered at breakfast that half the fish was riddled with maggots and quite unfit for consumption. This was serious as it meant that our time would be curtailed not only by the necessity for my return but also by the protein-less rations of the men which, while it would have little effect on their physical capacity, would, I knew, effect their willingness and enjoyment of the expedition.

The river was much narrower now and its bed considerably steeper but while we had to use our hands more frequently major obstacles such as waterfalls and sheer faces of rock of any size were rarer.

Just before lunch Sudi slipped on to a jagged stone and cut through the hard sole of his right foot across its whole breadth an inch behind the toes. He could not be left behind alone and I could not afford anyone to stay with him so he made the best of things and came with us. This meant, however, that I had to take over the mattock with which we were clearing the way

and that Junge had to take Sudi's load. At about two o'clock we came to a place where there had been a recent and extensive landslide; great piles of rock, trees and loose earth blocked the valley and none of us had the courage to attempt climbing over them for fear of starting the whole mass moving again.

Abdallah and I left the others and tried to find our way round to the north; to the south the face was vertical and quite impossible. We came to a short stretch of vertical rock some four hundred feet high but provided with good hand-holds. This is visible from the lake but I had hoped to get round it up the blocked valley. We climbed it but both decided that it would be impossible for the others to do so with the loads and that the only thing to do was to go on as far as we could and to return home on the following day.

We climbed until about four-thirty but failed to get out of the trees. When we returned to the top of the vertical slope we found that the others had managed to get three of the loads and Sudi to the top of it; the fourth load, the tent, had been dropped and could be seen in the top of a tree far below us. While Rashidi helped Sudi up the face the others had tried to bring the four loads up in two trips. While on their second journey Mohamed, who was carrying my blankets, had tried to park them in a cleft, they rolled out and fell on to Junge who dropped the tent, caught them and, in saving himself, badly strained his knee. The tent landed in a tree below them. As it was getting dark and the slope looked no more pleasant from the top, I suggested leaving the tent but Abdallah started down after it and I felt bound to follow him. It was nearly dark when we reached the top again and I was heartily thankful to be safely up.

We could not, however, find a place where six of us could possibly lie down together without danger of rolling away down the slope. We gave up looking in the end and felled two trees so that their tops made a kind of platform which increased the space available and allowed us to pitch the tent and to sleep in a line feet downwards.

Next morning Junge was lame from his knee. I suggested leaving him and Sudi to wait for us on our way back; they chose however to come with us, but portorage with only four unhurt became more difficult.

However we continued up to the top of Mkungwe's son and that night we reached a camp by a stream under the shoulder of Mkungwe Peak itself. We camped under two enormous podocarpus trees and found there a piece of broken clay pot. Abdallah and Junge told a story of a party of men who had come many generations ago to climb Mkungwe. They had come a long way up and had decided to burn part of the bush to help them on their way. Some of the faces to be climbed would be quite impossible to the inexperienced climber were it not for the tough creeping grass which grows on them. This gets dry as tinder at some times of the year and on the journey in question the fire somehow came round a shoulder on to the climbers as they were on the face and only two of the party escaped death and returned to the foot of Mkungwe.

The story was well told with vivid detail and was just sufficiently possible to be plausible : besides there was the potsherd to bear it out. Mohamed and Sudi caught each other's eyes and even I looking up at Mkungwe could imagine the fire licking across the face before us with tiny figures scrambling frantically away from it only to be caught and to fall writhing to its foot. I tried to laugh it off but I was not very effective.

Next morning Abdallah announced that Mkungwe was his father. To sit on his father's shoulder was a filial act, to stand on his head would be disrespectful, to rape his wife an abomination and he was going no further. Persuasion was useless ; Junge and Sudi could obviously not go any further. Sudi's foot must have been agonizing to him.

Mohamed wavered, remembered his father and decided to come ; Rashidi was never in doubt. Rashidi leading in one place started a small shower of stones one of which cut deeply into Mohamed's cheek which bled profusely ; on another occasion a stone from under Mohamed's foot weighing quite fifty pounds crashed past me a foot away but in the main the rock was sound.

Near the top we came on a ledge stretching the whole way across the face we were on. It was shaped like the rounded ledge of a billiard table and at first sight appeared impassible, but we found a place where an enormous boulder was lying on the ledge's edge. We were able to throw one end of our rope with a stone on it so that we could get hold of the rope on both sides of the boulder. After pulling on both ends with all our strength to see if the boulder would come off I made the other two hold one end, swung out on the other over the face and managed to clamber on top from whence I could help up the others.

Two hours later we reached the top of the mountain. The view was immense to the west, the lake lying peculiarly deeply in its basin and to the east ridge after ridge disappearing into the *miombo* wilderness. Banks of clouds rushed up past us, at times obscuring all the view, at times disclosing stretches of sunlit shore and forest. To the east the face was sheer for two thousand feet and the Kitumbi route ending on a razor-like ridge was obviously unpleasantly difficult.

Rashidi and I were pleased with ourselves and made a flag of his loin cloth and my staff which we imbedded in a huge cairn, but Mohamed, with blood still dripping slowly from his cheek, was strangely silent. It was not until we had got back over the ledge that he cheered up and confessed that his arrival at the summit had been ruined by the thought of having to climb down over the ledge again. We reached the camp about four o'clock very tired but happy.

Next day we managed to get down to Kasoge. On the way while climbing down a steep face an eagle dived past us only a few feet away, disappeared between some trees in the forest below us and appeared again carrying a small baboon effortlessly out of sight.

At Kasoge I bought them beer and a fat goat and the night was passed round a fire "boozing and boasting." Next morning we left again before a good wind and sailing round two sides of the massif arrived at Mgambo as the sun setting across the lake lit every detail of the peak, while the mountain's mass lay blurred below it in the dusk.

Water Gipsies of the Malagarasi

By C. Macquarie, M.B.E.

YEARS ago, while we were sitting round a camp fire in the Uha country, one of our party mentioned a people to whom he referred as the "Water Gipsies." He said he had been told repeatedly by natives of the existence of a small tribe of most retiring habits, living among the lagoons and swamps of the Malagarasi water system. He was informed that they were completely nomadic—they sowed not, neither did they reap, nor dwell in houses. So far as the narrator knew, neither native nor European has seen these people in their native fastnesses; though doubtless odd stragglers of the tribe visited places where Europeans lived.

My curiosity was roused and, when on safari anywhere near the place where they were supposed to live, I made a point of enquiring about them. Apart from ascertaining that the tribe actually existed and were known as the "Wakiko," I was for some years unable to add anything to what my friend had told me.

In 1935, at Ussoke, an area about fifty miles west of Tabora, I heard there was an Mkiko resident in one of the villages. I saw him, but it turned out that he had been abandoned there as a baby and knew nothing of his tribe or people. In appearance he was similar to other local natives, except that his face was unusually narrow.

In the spring of 1937 when touring the area of the Usaguzi federation, which borders on part of the Malagarasi water system, I was more fortunate. One day, after walking for hours through endless thick bush in almost dead flat country, I suddenly turned a corner to find myself near the edge of a wide expanse of open water.

Tasselled papyrus waved in the breeze, waterlilies, white and purple, spread themselves out almost to where I stood, while countless water-hens danced joyously from lily to lily. Uncommon water-fowl of many varieties circled around, rested for a moment on open patches of water, to rise again screaming, repeating the process as my bearers marched round the turn in two's and three's. The scene, with its marvellous and restful blending of colours was delightful after many days in close forest. I stood entranced for some minutes, then walked on to find myself a little later at the village of Buzongwe, where Sub-Chief Lembeli had assembled all her people to welcome her first European guest. Having exchanged salutations, she and I sat under a tree and watched her people celebrate the event with dance and song.

In the course of conversation I asked if there were any fish in her beautiful river and, if so, would I be able to buy any? She said the river was the Mtamba and that it teemed with fish, though her people, not being fish-eaters,

never tried to catch any. She added, however, with great pride, that she had a colony of Wakiko in her country not very far away and that these people spent most of their time fishing.

I was alert at once and begged her to put me in touch with them. I told her of my long search and that I had formed the impression that the Wakiko never settled down anywhere. She agreed that this was usually so, but said that years ago an old Mkiko had got into the habit of camping every year near her village. He and his wife became familiar with many of her people and finally built a little hut on the shore where they settled down, though they never attempted any cultivation. Each year their friends came to see them, spending some weeks fishing the river and adjacent lagoons. These also became friendly with her and her people and, at last, though the old man and his wife had died, about twenty of them had made more or less permanent homes beside her. They were now quite at home and their women visited her frequently; in fact, said she, "two of them are dancing among my people now." She called them up and introduced them. They were well dressed in brightly coloured clothes, but so shy and frightened that even their clothes showed the trembling of their bodies. I spoke to them, but they did not respond to either Kiswahili or Kinyamwezi greetings. Lembeli talked to them and coaxed them into doing an Mkiko dance for my special entertainment.

When this was over, Lembeli, who I noticed had been very preoccupied for a time, announced that she had thought of a plan for visiting the colony. She said it would hardly be the thing for her to bring a European unannounced into their village. She would like to send for their headman, and after he had seen and talked to me, she might be able to arrange the visit; perhaps if I sent one of her messengers for some fish the headman would come back with him.

I sent a verbal message to the *Mkubwa* to say I wanted to buy the whole of the day's catch and that if he would come up with it, I would pay him for all and he could apportion the money afterwards among the fishermen. Some time later a man arrived accompanied by two porters laden with fish. He said he was the *Mkubwa* of the Wakiko. The fish were *tilapia*, similar to those common in Lake Victoria, though of smaller average size.

The *Mkubwa* spoke Kiswahili fluently and when I enquired the price of the fish he embarked on a long story about having to charge me what would doubtless appear exorbitant, but having contracted the season's take to a Swahili trader, he could not in fairness to his people make me a present of them as he would like to do, or even sell them for less than the trader's price. I said I was prepared to pay whatever he asked. Off he went again, amplifying his apologies and regrets, but winding up finally with—"Well, Sir, I am truly sorry but I am afraid you will have to pay two cents for each fish."

We arranged the fish in rows and I laid two single cents (fortunately I had plenty) on each fish; he said that was correct and was about to pick up the money when I told him to wait a minute. I then added so many more

cents on each fish, telling him that was the price I paid for fish on the lake shore and that I was delighted to pay it to him and his men. The fishermen were overjoyed and spent a pleasant few minutes handling the money, arguing how to divide it and how much somebody in the village should get. The problem was, however, too profound for immediate settlement, so they tied the money up in a loin cloth and postponed the share-out to a more convenient season.

Relations were now easy. Lembeli joined us and chattered freely to the men. She explained how anxious I had been to see them and told them how much I wanted to visit their village and take photographs, assuring them that they had no reason to be afraid of me as I was quite harmless and only wanted to be friendly.

We all talked for a while. The headman explained that he learnt Kiswahili in Kigoma where he had worked for a short time, but that only one or two of the others knew a few words. When they rose to leave the headman said they would all be glad to welcome me at the village. I emphasized that my call was a social one and that I wished to meet all the people in the village, not merely himself and a few elders. He promised to arrange everything and agreed to meet us outside the village at about four o'clock. When I arrived I found only this man and his family awaiting me, the village was otherwise deserted. He said he was sorry the other people had been too shy to meet a European and had all run away.

After a good deal of coaxing, I managed to make friends with his two children; I showed them a pocketful of cents I had brought along for distribution among the children and gave them some.

They disappeared in a hurry, but soon returned bringing quite a few more children with them. These also were shy, but soon started playing with the cents and talking among themselves. Presently some men joined them, and old women crept up to the edge of the group.

It now started to drizzle and as the light was beginning to fade I suggested it was time to take a few photographs. Some of the men posed holding various fish spears, then I took a man and woman in a canoe; after that I hoped the women would allow me to take some snaps of them turning and modelling their pottery, but they could not be persuaded. In the end the *Mkubwa* ordered his wife to sit down beside a water pot she was making, where, after more argument, another woman and child joined her. That was the only photograph I got of the women in the village and the drizzle rather spoiled the result. Fortunately, the snap of the two dancers I had taken earlier in the day came out rather well.

By now all were more at their ease and I had quite a little group round me. I put the camera away and suggested it was time they showed me the sights. First, I was shown the canoes, fish nets and spears. They explained the purpose of each type of spear, demonstrating the method of using each. Then they took me to see the pottery and one or two of the huts; the latter were

very primitive. Their shyness by this time had worn off completely and they became very friendly. The women brought babies and other treasures out of the huts to show me, but none of them understood anything I said directly to them.

It was now dark, supper was cooked and waiting, so, somewhat reluctantly, I said "Good-bye." I was followed some distance by the whole community. The headman and several others insisted on seeing me safely back to camp.

My visit was too rushed to afford much opportunity for acquiring any but the most easily obtainable information. I was also handicapped by fear of giving offence through appearing too inquisitive. I therefore confined my questions to such matters of general interest as fishing, pottery and so on, intermixed with conversation on other topics.

The headman, a very talkative fellow, was, however, anxious to be communicative and quite unasked volunteered considerable information as to tribal customs. The only occasion on which he appeared annoyed was when I complimented him on the well clothed and smart appearance of himself and his people. He said, rather heatedly, "that many people spread falsehoods about them and that the common story that they went about unclothed was quite untrue. In his day at any rate they were as decently clothed as any of their neighbours. I had seen for myself that day that their women were better dressed than any of the local ladies." When I asked Lembeli about this afterwards, she said it was true that they went about their work very lightly clothed; but that the women were always well turned out when they attended the local dances, adding that they were fond of dancing and usually joined her people at any festivities.

The following notes may be of interest.

The tribal name is Wanahoza and they consider Wakiko a term of contempt or insult. Until quite recently they were entirely pagan. Lately, the Mohammedan trader who buys their fish and who lives with, or beside them for a period of the year, has made some converts to Islam, including the headman.

The tribe are all fishermen and spend most of their lives afloat. Men and women are trained to handle canoes almost from infancy and, of course, become expert. They fish over a wide area each year, visiting practically all the lagoons and navigable waters east of Uvinza, and north of the central railway.

The Mtamba, near Buzongwe, is a long stretch of water (possibly the River Igombe) from one mile and a half to two miles wide when I was there, but is said to extend much further after a good rainy season. A lagoon, Mkwassi, which I passed next day on safari was about three miles long and a mile broad—there were the remains of many little grass shelters on the shore and I was told this was the site of one of the tribe's annual fishing camps.

They said that downstream, before the water joined the Malagarasi river, there was a large open area of water called Katamaguru and most of the Wanahoza were settled along its shores. They move about with all their belongings in canoes and when on passage build no shelters ashore. They said that when fishing a large stretch of water they had to have shelters for curing and storing the fish.

Fishing is their principal industry, but the women are famous potters and turn out large numbers of pots, water jars and many other articles.

Among themselves they speak a dialect which they claim few natives can follow, but most of them (nearly all men) can speak the languages of the shore tribes with whom they come in contact.

There is no inter-marriage with other tribes. Marriage is by consent of the bride's parents without payment of a bride-price.

Children are the property of the mother; should a marriage be dissolved, the woman returns with her children to her father. The husband is entitled to appear before her father to claim all the children for whom he is prepared to pay an agreed price. He takes these away and so renounces any further claim on the woman or remaining children; the woman then ceases to have any rights, present or future, over the redeemed children.

I saw about eight men, more women, and a lot of children in the Buzongwe settlement. They did not appear unlike the local Wagalla or Wagaragansa. Men and women were stocky and muscular, the men perhaps under average height. The headman, however, is lean and tall, five feet nine or ten inches; his facial features are narrow and his general appearance much more Hamitic than any of the others, so much so that I considered the possibility of his being an interloper. Lembeli says he came with the other settlers but she has no knowledge of his previous history.

I noticed none of the over developed chests, and spindle legs apparent among some of the islanders of Lake Victoria.

Nearly all the huts are of the Uha beehive grass pattern and very small. One man had completed a tiny round wattle-and-daub hut, and another was building one. All were situated on a little rise, just above the shore.

The canoes I saw were made of bark, somewhat roughly constructed, but roomy and serviceable.

Generally speaking each family does its own fishing. At the time of my visit this was done mostly with spears, but that may have been seasonal. They showed me several splash nets, well made of bark twine. None of these had been in recent use. I concluded they were reserved for some variety of fish which moved in shoals periodically. When spear fishing from a canoe the woman paddles slowly along, the man stands or sits in the bow, holding a long light spear poised ready for instant action. In the clear still water of the lagoons moving fish are easily discernible. The thrust is downwards and forwards, strongly made, so that the victim is impaled. The spear is then lifted upwards and backwards over the canoe into which the fish drops.

This spear consists of two parts. The striking iron is round, tapering from half an inch in diameter at the top to a long thin point, almost as sharp as a sack needle. There are no barbs. There is a hammered out hollow for the haft at the top. The haft is longer than the iron, the whole length being from seven to eight feet. Both iron and haft are well made, polished and, of course, correctly balanced.

Various types of spears are used; a much heavier one, with a strong broad blade is for harpooning large fish resting on the bottom. Another, somewhat similar, but fitted with a short heavy haft is for killing large cat-fish (*siluridae*), after they have been pinned down with a strong forked stick. Apparently they find these among the reeds in shallow water as both stick and spear are less than four feet long.

I suggested they should try spearing by torchlight, but they ridiculed the idea and apparently had never heard of it. I was much surprised, as torchlight fishing is popular on Lake Tanganyika. Possibly it is employed for varieties of fish which do not frequent these waters.

The fish are gutted and cured over a smoke pit in the usual manner.

As already mentioned, the women are industrious potters. They manufacture pots of all sorts and sizes. I was disappointed to find all were of the usual round shape with wide mouths and the common decoration. I saw no long necked jars, or any vases, and could not ascertain whether they make them. The method of manufacture is the ordinary one from a mixture of puddled clay and pounded disintegrated granite. They have, however, evolved a system of marketing which I thought unique: they are too shy to peddle their wares or even to barter should they by chance meet a customer and as the tribe has no fixed home customers cannot visit them. They have, therefore, established, doubtless over a long period of years, a regular kind of annual trade route. All the people living near the shores of these waters, and even many distant ones, are familiar with the routine. As the time draws near housewives take stock and decide what replacements are required for the next twelve months. The food exchange value of each requirement is then prepared and packed ready in separate units. A large company of Wakiko women and girls set off laden with pots of all descriptions, in time to arrive near the selected village during the dark hours. They arrange their wares on the ground near the spot where paths converge on that leading to the huts. When all are ready they wail in concert for a few minutes and then disappear into the bush. This signal is recognized and immediately all intending purchasers snatch up what they have to offer in exchange and hurry to the showroom. As each pot is selected, its value in food-stuffs is placed exactly on the spot from which the pot had been removed. I had heard of the market before I met the Wanahoza but they corroborated it, adding that they had never been swindled. A village not very far from Usunge railway station is one of their "beats" and I was told there that no one had ever seen or heard an Mkiko woman moving while the goods were being examined and selected. I think, however, it is

rather a point of honour for the purchasers not to show undue curiosity on these occasions. So far as I could ascertain from ten to fifteen miles inland is the limit of their peregrinations.

The above exhausts all the information of general interest that I managed to collect; and in recording it I must emphasize that most of it was related by one man, for whose reliability I cannot vouch.

Chief Lembeli confirmed the statement that there was no inter-marriage with her people and that she had never heard of any elsewhere. "Who would marry an Mkiko, who did not know either how to hoe or cook?"

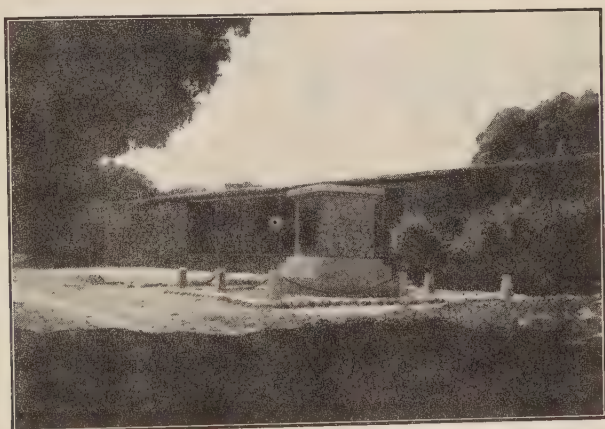
NOTES

Livingstone's *Tembe* at Kwihara, Tabora*By R. B. Richardson*

IN THE first number of this publication an interesting article was contributed by Mr Longland on the house in which Livingstone and Stanley lived near Tabora. It holds a notable place amongst historical relics in Central and East Africa, and may be said to form the most substantial connection that exists with the greatest of British explorers to this part of Africa. The house, therefore, is a valuable memorial to preserve.

As Mr Longland stated in his article the mud brick walls of the building which have stood for over sixty years were being slowly disintegrated by sun and rain and, in a short time, only the stone memorial in front would have remained. Now that the unique historical value of the house has been recognized, efforts to preserve it have been made during the year 1938. The walls have been reroofed to resemble its appearance during Livingstone's time, namely, a flat *tembe* roof with a slight camber in the centre, the grass thatch of it having an earth covering. The building has been restored to its original dimensions as shown in the plan of the *tembe* included in Mr Longland's article, that is, the parts of the building added after 1873 have been removed and certain walls which had fallen have been rebuilt to their former height.

The veranda posts have been replaced as shown in the sketch. Unfortunately, the original front door, of Arab design and vouched by an aged local inhabitant to have been *in situ* when Livingstone was resident, had been removed some years previously and presented, it is understood, to a museum in South Africa. If this door could be procured, it would greatly add to the completeness of the house as a memorial as well as to its appearance.



BOOK REVIEWS

Mining and Metallurgy in Negro Africa, by Walter Cline. *General Series in Anthropology*, No. 5, edited by Leslie Spier. 155 pages, 16 figures, tribal sectional maps, etc., George Banta Publishing Co., Menasha, Wisconsin, U.S.A. Price two dollars. 1937.

The preparation of this work occupied the author for five years. It supplies a long felt want by all interested in African culture and history. Most of the papers hitherto published by anthropologists leave the reader who has lived in Africa with what may be a false impression. The tendency to make comparisons and identify cultures with ancient Egypt, Hamitic, Moslem, autochthonous negro art, etc., influenced by the bias of the writer seems to be more important than a correct statement of fact. Mr Cline has not attempted to trace origins or the diffusion of culture as he considers that the lack of reliable archaeological data for the periods between the prehistoric stone ages cultures and the proto-metallic are not sufficient to base any opinion upon. The various processes, implements, etc., used by negroes to extract metals from ore are clearly and concisely explained without any unnecessary details likely to confuse the layman. The tables of the technical processes and apparatus given on pages 44 to 51 and pages 91 to 101 are invaluable for any future writer, curator of ethnographical museum or field archaeologist. A classified table is given on pages 128 to 139 which shows the sociological and religious aspect of metallurgy among over eighty African tribes or peoples. The illustrations of the types of furnaces, etc., are clear and the site maps of great value. There is a most extensive bibliography and practically every paragraph of this *multum in parvu* is documented.

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Those interested in the metallurgy of ancient Europe and the Near East are recommended to read an article by E. Wyndham Hulme, B.A., "Prehistoric and Primitive Iron Smelting" (*Engineering*, June 3, 1938), an abridged paper read before the Newcomen Society for the Study of the History of Engineering and Technology on Wednesday the 30th April 1938, should be read *after* Mr Cline's work. The parallels in the present methods in Africa with those described by Mr Hulme are obvious.—A.E.R.

"*East Africa and its Invaders from the earliest times to the death of Seyyid Said in 1856*," by R. Coupland, Oxford, Clarendon Press, 1938, 30/- net.

"*Africa Emergent—A Survey of Social, Political and Economic trends in British Africa*," by W. M. Macmillan, Faber and Faber, 1938, 15/- net.

It will be a pity if, owing to the war, these two fine books are passed over without the attention they deserve. Professor Coupland some years ago wrote a chapter of East African history in his interesting *Kirk on the Zambezi*, a description of Livingstone's expedition to the Zambezi in 1858-1864, which though

it was marred by dissensions between Livingstone and nearly all his European companions except Kirk himself and though it completely failed to fulfil Livingstone's hope that a river highway would be found into the interior of Africa by way of the Zambezi or the Rovuma, yet led to the discovery of the Shire Highlands, the eventual acquisition of Nyasaland, and the first settlements of the U.M.C.A. in Nyasaland and then in Zanzibar. He has now done much more and in the volume reviewed here, and its successor which appeared this year, has given us for the first time a detailed and accurate history of East Africa as far as it can be written down to the adjustment of boundary differences in the East African mainland and the exchange of Zanzibar for Heligoland arranged between Germany and Great Britain by the treaty of 1890. As far as can be written is a necessary qualification, for all the sources till recent times dealt only with the settlements on the coasts and the invaders who in turn conquered them. Of the history of the African peoples before the mid-nineteenth century in, for instance, what is now the interior of Tanganyika, Professor Coupland has little to say and nothing beyond a few generalities will ever be known unless archaeological research manages to fill in the blank spaces of our ignorance. Professor Coupland pays a generous acknowledgment to the many who helped him in East Africa and elsewhere by making available sources of information but it is doubtful whether anyone was as well qualified to do this work as he himself, since he is an acknowledged authority on that most important section of all East African history down to the most recent times—the slave trade.

The trade was even in existence, Professor Coupland thinks, at the time when we first hear something of the East African coast in the "Periplus of the Erythrean Sea," written by a Greek of the Egyptian Red Sea coast in about A.D. 80. Slaves were exported from Ras Hafun, one hundred miles south of Cape Guardafui, and negroid chiefs under Arab suzerainty reigned down the coast in places as yet unidentified and probably unidentifiable, for it is extremely unlikely that anyone at this date is going to prove whether "Menouthias," an island mentioned by the author of the Periplus, is Zanzibar or somewhere else and whether Rhapta is really on the site of Pangani or not.

The author next describes the Arab settlements on the East African coast during the sixth to the sixteenth centuries when asiatic supremacy in the Indian Ocean was unchallenged. He points out the early contacts with China, India and Persia as well as Arabia, and gives a general description of the small Arab coastal city states which in some cases absorbed earlier Persian elements and men seldom united for any length of time. Kilwa (of whose civilization there is a description by M. H. Dorman in *Tanganyika Notes and Records*, No. 6), had perhaps the longest hegemony. These small settlements seem, if travellers like Ibn Battuta can be trusted, to have enjoyed a high standard of living as far at any rate as their Arab inhabitants were concerned, but have left behind them no signs to show that they possessed any of the Arabic culture that during the earlier part of the Middle Ages led Europe in science, in mathematics, in medicine, in geography and in architecture. Such chronicles as are left of that age are dry and lifeless annals of sultans and kings; no explorers, if they ever existed, left a map or a story behind to tell of their travels: there seems to have been not even a fervent campaign to convert the people of the interior to Islam, though the Arabs' long period of settlement is, of course, the reason for the whole coast being mainly Mohammedan to this day. The Arabs came in fact only to live a comfortable life and trade in slaves and ivory. Other commercial transactions they left to the Indian community, whose history on the East African coast is not yet written. It seems at any rate probable that there are sources in Bombay and elsewhere which have not been seen by Professor Coupland or other European scholars, and I hope that some Indian scholar may feel inclined to research on

this subject and fill in the details of a largely blank chapter of East African history.

Slaves, of course, went to India and Persia as well as to Arabia, but it is the Arab settlements which were primarily responsible for the East African slave trade. Professor Coupland attributes the low population of Tanganyika and East Africa in general to-day largely to the constant drain the trade imposed on the fittest males and females for perhaps nearly two thousand years. It is the more tragic that Africans themselves must have contributed to this mutilation of their own country. The few Arabs of the coast or of later settlements such as Tabora could never have taken slaves in any quantity without the active aid of African soldiers to help them and African chiefs to bring them captives for sale.

Of the Portuguese conquest of the coast at the beginning of the sixteenth century and their uneasy dominance over it for two centuries, Professor Coupland has little to say. The Portuguese simply had not the resources in men to develop their coastal settlements or the scientific knowledge to penetrate into the interior without disaster. They regarded the Kenya and Tanganyika Territory coast as primarily useful for providing harbours for ships on the way to Goa and the Far East, and when their power crumbled it left practically no traces behind, except the various useful crops they introduced. The small but flourishing Goan communities in Tanganyika remind us here of the Portuguese past, but when the Portuguese World Exhibition is held at Lisbon in 1940, I doubt if there will be a single Tanganyika exhibit to show of the Portuguese conquests except perhaps some photographs of the ruined walls of the fort of Sao Tiago, Kilwa.

But the description of the Arab and Portuguese settlements is only an introduction to Professor Coupland's main theme in this volume, which is the rise of the rulers of Oman to increasing influence over the East African coast, culminating in Sultan Seyyid Said's move of his court to Zanzibar in 1840 and the remaining seventeen successful years of his reign during which he built up a greater influence over the East African coast than any of his predecessors. Bound up with this scheme is that of the British attack on the slave trade which extracted from Said two treaties first in 1822 forbidding the trade with Christians, etc., and then in 1845 finally prohibiting the export of any slaves at all from Said's East African dominions. It is to Said's great credit that he loyally and against the will of his subjects held to these treaties believing that only by so doing could he retain the friendship of Britain, which, rather than any other power, he thought did not look on his possessions with a grasping eye. Britain indeed was, unlike France, not interested to any extent in obtaining territory on the East African coast or in the interior, unless there was some definite strategic end to be served as at Aden. Nor was the British consul at Zanzibar interested in promoting British trade with East Africa which, throughout this period, lagged a very long way behind that with America, Germany and France, though the trade with British India was, of course, large. (The Zanzibar export and import figures for 1859 were approximately as follows: American, £345,000; British-Indian, £205,000; French, £170,000; German, £137,000; British, £5,000.)

The sections dealing with this Zanzibar trade are incidentally one of the most interesting of Professor Coupland's book and the accounts of the resurrection of the little port of Salem which did a great trade in cloth with East Africa for thirty years before the American Civil War and made the word "merikani" part of the Swahili language will be novel to most readers. As Salem declined with the temporary ruin to the cotton trade brought about by the Civil War, the German firms rose, especially that of O'Swald and Company and the close connection of the East African coast with Hamburg firms began; British trade only started to grow rapidly later.

The British were primarily interested in the suppression of the slave trade,

for which they needed Said's assistance and friendship; they were concerned to see that the French and no one else got a foothold on the coast, but provided they could keep Said to themselves, they had no intention whatever of annexing any part of his dominions. Nor was Hamerton, the British Consul at Zanzibar from 1841 to 1857, long enthusiastic on the missionary work of the first Church Missionary Society settlement in East Africa at Rabai in Kenya founded by Krapf and Rebmann, for Krapf was rash enough in Hamerton's eyes to talk politics with the French Consul Belligny, tell him of the native kingdom of Kimweri in the Usambaras and its real independence of Seyyid. Krapf added that Seyyid's coastal Swahili cheated the Kimweri's traders: and that it would help these traders if European merchants traded with them direct. Hamerton was filled with the fear that the French might obtain a protectorate over his Usambara country. But though Hamerton and Said were annoyed at Krapf's perhaps tactless truth telling, that should not blind us to the merits of perhaps the greatest of all the white men that figure in Professor Coupland's book.

For Krapf was the leader of what Professor Coupland calls "the Missionary Invasion" in East Africa and since the modest beginnings of his small C.M.S. settlement at Rabai (for Krapf and Rebmann, though Germans, were both employed by a British society) missionary work in East Africa has steadily increased and many devoted workers, Protestant and Catholic, have come to spend their lives in these territories since Krapf arrived at Zanzibar in 1844 as "the first Christian minister since the fall of the Portuguese empire to come to mid-East Africa with the intention of making his home there." Professor Coupland gives a full account of Krapf's story, of Rebmann's journeys to Chaggaland and his first sight of Kilimanjaro, of Krapf's travels to the court of Kimweri, in the Usambaras, his unsuccessful attempt to found a mission in Ukamba which ended with an attack on his party by unfriendly natives not far from the site where Nairobi now stands, his journey to the Rovuma, and so on till his final departure from missionary work in Africa owing to ill-health in 1855 and his return to Germany "steadily pursuing the linguistic studies which were to form the basis of our modern knowledge of East African speech." It might seem that this linguistic work of Krapf's culminating in his Swahili dictionary was a more successful accomplishment than the preaching and slow process of conversion at Rabai, and more useful than Krapf's unrealized idea of a chain of mission stations across the equatorial belt. But Professor Coupland considers Krapf and his fellow-workers' toil left after all far-reaching impressions on the African mind by the influence of their personal conduct. And, in coming to this conclusion, he pays a welcome tribute to these first missionaries and their successors that I quote here in full. "But if the Africans may not have been impressed by what those first missionaries said, they must have been impressed by what they were. Hitherto, the natives of the coast had seen no white men since the Portuguese except passing traders and sailors and Owen's garrison. The natives of the interior had never seen a white man at all. They were to see many of them in due course of time, white men of all sorts, coming to their country with various and mingled motives. But these first 'invaders'—and others of the same kind were to follow them—had one motive only. They did not seek to make money from the natives. They did not covet their land or its produce. They did not even want to govern them. They only wanted to give them a new God and thereby make them better men. Though missionaries in Africa or elsewhere have not all been as wise as Krapf, though by bigotry or meddling or factiousness they have sometimes done more harm than good, all, or almost all, of them have been thus disinterested; and the knowledge of that in native minds has been not the least important factor in the slow and complicated process of adjusting the relations between white men and black."

But missionaries and other white men had played little part throughout Seyyid's dominions when the sultan died in 1856. I wish to close this review by trying to give some picture of that part of those dominions which most concerns us—the part that is now Tanganyika Territory—in around 1860, the period reached in the end of this volume. There was, of course, no unit corresponding to the present Tanganyika Territory or the old *Deutsche Ost-Afrika*; this country in which we live has no ancient name or corporate unity. Along the coast at various stations such as Kilwa and Bagamoyo and Tanga there were town-governors appointed by the sultan who, with a few troops, saw that order was kept and the Zanzibar Government dues paid. Inland the Arab influence of Zanzibar was strongest along these great trade-routes, increasingly frequented thanks to the prosperity of Seyyid's reign.

The first started from Bagamoyo, ran south-west to Kisaki or Zungomero and then north-west towards Tabora and Ujiji. The second led from Kilwa towards Lake Nyasa, the third from Tanga past Kilimanjaro towards Lake Victoria. The greatest of all the Arab settlements on these trade-routes was, of course, Tabora, founded about 1830, where probably there was a governor or representative appointed by Zanzibar. In these settlements the authority of the sultan was comparable to his power on the coast, but it extended little outside them. The traders regularly paid transit tolls long after Burton and Speke's day and the Arabs made no attempt to rule directly over any part of the interior. What was to become Tanganyika in fact mainly "stood by itself" in 1860, protected by the white man's comparative ignorance at the time of tropical medicine and the comparatively rudimentary state of European weapons. There were political states of some organization in existence in the Usambaras and in Karagwe, and the Masai, the Wagogo, the Waha and, even at that date, the Wazaramu were regarded as formidable tribes for traders wishing to pass through their country with their caravans.

These traders did not, of course, pay for their goods in money but in goods such as cloth, beads and brass wire. Prices were naturally very much higher in the interior to which goods had to be brought by head portorage than at the coast but the following list of prices from Burton and Speke's "Lake Regions of Central Africa" (1860) and Stanley's "How I found Livingstone" (1871) give some idea of usual prices:—

One shuka Americani	One shilling on the coast to four shillings in the remote interior
(twelve feet unbleached shirt- ing of various width).	
" "	= Thirty pints of milk (Tabora)
" "	= One hundred and twenty pounds of paddy (Tabora)
" "	= Twenty-five pounds of maize (Tabora)
" "	= Sixty pounds of sorghum (Tabora)
One to two shukas	= One sheep or goat (Tabora)
Four shukas	= One fat bullock (Tabora)
Six to twelve shukas	= One cow (Tabora)
One khete of coral or pink	= One hen or four to five eggs (Tabora)
porcelain beads (length twice round throat).	
" "	= Usual <i>posho</i> (ration allowance) for African porter in addition to his pay
Ten khete=one fundo	= One large bundle of plantains
One frasila (thirty-five pounds) cheapest beads (round white).	= Approximately seven dollars (Zanzibar)

One frasila most expensive ... = Approximately thirteen to sixteen dollars
(red coral samesam). (Zanzibar)

One frasila ivory ... = Approximately fifty dollars (Tabora)

There was no organized export trade except by the Arab and Wanyamwezi caravans, bringing down to the coast slaves, ivory and gum. European trading stations did not exist, for Burton and Speke and Stanley had not come to East Africa for commercial reasons. Nor were there any inducements to come to Tanganyika. Burton and Speke both thought of the African inhabitants with contempt, and the climate and the bad food of the country perhaps had a lot to do with their bitter and childish quarrel over the question whether Lake Victoria was the source of the Nile or not. And though the Tanganyika climate failed to kill Stanley, both his European companions died very soon after coming to the country. There is an incident in Stanley's "How I found Livingstone" which sums up the Tanganyika of 1870 as it was for Europeans. Farquhar, one of Stanley's two European followers, was sick with swollen legs but no pain. Stanley looked in "a little medical book" he had. He found there that "a swelling of the legs, and sometimes of the body, might result from heart, liver or kidney disease." He treated Farquhar accordingly, but could not save his life.

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From *that* Tanganyika, Professor Macmillan takes us on to the Africa of 1939, and what he has to say about it, though far more controversial than anything in Professor Coupland's book, is equally well worth reading. For Professor Macmillan raises all those awkward questions that in our preoccupations with work in hand we like to forget. "... the whole Empire is now assumed to be transmuted into a commonwealth, with an extraordinary failure to distinguish between the status of the Dominions and the dependent residue. The immature and undeveloped colonies of the Empire remain as they were, with no lot or part in the privileges of the Commonwealth to which they are complacently assumed to belong. The antithesis of empire and democracy has not been resolved" "The institution of mandates admits by implication the universality of the principle of self-government and shows a dim awareness that empire in any form is its direct contrary. The colonial status is an inheritance from an older, baser, epoch which recognized no such right. The control of one people by another is justifiable only till they are able to control themselves, and only if the principle enshrined in the institution of mandates is truly effective. The pious form of words enunciated in 1919 could not be bettered, if only the trustee is, in fact, the active agent of a 'sacred civilization'." The author sees no solution to this problem, well set out recently in Mr R. W. Emerson's *Malaysia* by the mere conferring of self-government on the African colonies. "... Many Labour men, with equally little inquiry into the practical consequences of greater devolution, and probably an exaggerated over-confident idea of what unaided backward peoples can do for themselves, would broaden the colonial franchise and throw the whole onus of self-government on almost helpless people as soon as possible." "... I see no reason to unlearn the lesson of the politically free West Indies, that before votes can be of full value there must be thorough economic rehabilitation."

In short, before tropical Africa can hope to be free she must become less miserably poor. And though Professor Macmillan has a respect for Indirect Rule's achievements he fails to see how some of the necessary changes to bring about that decrease in poverty, in agriculture, in health or in education are going to be furthered in any way by using these two words as if they were a panacea. Progress in such matters can only come first from the centre. The Chagga coffee

industry round Kilimanjaro, for instance, says the author, was built up mainly because the district officer's advice was mistaken for an order, and enterprising schemes such as the building up of large native plantations cannot come up from native authorities fettered by custom and small financial resources, and a government financial policy which although it lays it "as a duty on the district authorities (the native authority) to accumulate a local reserve, but rarely allows them to budget for a regular loan account as they normally do for current expenditure."

If the native authorities cannot make the great progress necessary in these departments, then the central Government must. And how can it make up the enormous leeway in education, for instance? Professor Macmillan allows no complacency regarding the work still to do. ". . . . All highfalutin about the method and content of African education is irrelevant beside the brute fact of its quantitative defects." ". . . . A total of ten in every thousand Africans reach or pass the *minimum* educational requirements of all citizens in Great Britain (approximately standard VI). In all other parts of Africa this educated minority is a definitely smaller one still." Achimota, Professor Macmillan describes as, in the whole of Africa before the expansion of Makerere, "the one deliberate attempt to make available, for at least some Africans, education of a standard demanded as of course by middle-class Europeans and under approximately the same conditions."

The poor governments of the tropical colonies, Professor Macmillan says, have not the means to make, with any chances of success, the great and necessary attack on African ignorance and poverty. Large sums for development are necessary and in the end they can only come out of the British taxpayer's pocket. This is, I think, the most important theme of *Africa Emergent* and its logic, bitter as it may be to the sections of the British public which care little for colonies, and is surely incontestable to those who have seen anything of Africa outside the Union. It rests, it is true, on a theory of empire that rejects the old imperialist idea which in 1776 brought us to disaster, but is still strong in 1939—namely, that colonies exist purely for the benefit of the mother country. Professor Macmillan's very different theory might be summed up as follows:—You have taken colonies in the past, no matter how and by what means. You have, since the great war, said that you regard holding of the colonies as well as of the war mandates as a trust and that when their peoples can stand by themselves you will allow them to do so. It is up to you to take steps not within millennia but within a short space of time to carry your words into effect and to merge the dependent empire into the commonwealth of nations. In the process you will have to spend heavily perhaps without return. But if you get no material benefits, you will have created an empire the like of which has not yet been seen, in which the weakest parts were free and not in any way exploited for the benefit of the strong.

It is not a theory which would appeal to our present enemies.

But Professor Macmillan is far from thinking that there are not plenty of ways in which tropical governments can use better the resources they now have—especially their mineral resources. With his knowledge of South Africa it is not surprising that he makes a plea for government efforts to encourage mining and holds up the South African mining industry and government mines departments as models for the younger African colonies. Professor Macmillan has the greatest respect for the reputable mining companies as employers, and creators of wealth not only for themselves but for the African and the State. For the amateur small digger he has less use. ". . . . It is only common sense that no one should be entitled to embark on any mining venture without first affording better proof than a prospector's licence costing five pounds or less, or even a

five-pound digger's certificate, that he possesses both technical skill for the work he undertakes and financial resources in some degree adequate for its efficient accomplishment." The book is full of other stimulating arguments, some of them familiar to readers of *Warning from the West Indies* and Professor Macmillan's early South African books; there is space to quote only a few of them here. The author insists on the necessity of building up African's internal trade and of greater local consumption. "It is an almost universal mistake to judge the wealth of a colony solely by its exports." He will have none of the theory that the black prospers most in Africa where whites are fewest. "... The presence of an ordered white society, in spite of their small share in its privileges, has given South African natives advantages none of the less mixed communities possess." "... The life of South Africa is more complete than that of the small and unrepresentative European segments of a tropical town could ever be, and South African society, with its artistic, cultural and educational influences, gives even Africans a wider background and a better knowledge and understanding of the outside world." Professor Macmillan pays high tribute to the Colonial Service but considers it needs broadening. In 1927-1929 there were 927 colonial appointments of all kinds of which only 409 were from Oxford and Cambridge; but among those for the administrative service during those years Oxford and Cambridge supplied 79 out of 83 in 1927, 84 out of 88 in 1928, 73 out of 89 in 1929. The overlapping of departmental relationship requires the widest sympathy for all points of view. "... It should be set policy to give the administrative service this broader basis by finding a larger proportion of recruits from Scottish and provincial universities." Broadening is needed for our attitude to authority. "... But the tradition of the modern Colonial Service would seem to be less of the Army than of the unwritten code of the Public School in which the authorities so implicitly put their faith. The regiment is at least a great family. The subaltern meets his colonel in the mess on more intimate terms than the district officer is usually allowed by his seniors at the Station Club or Government House. In the isolated, if not independent, work of administration distinctions of rank are at once less necessary and more difficult to overcome." "... But even the junior official in Africa is one of a tiny ruling caste, living a life apart, seldom answered back in his private any more than in his public capacity." The whole chapter on "The Rulers of British Africa" is especially interesting. Finally anthropologists come in for the hit Professor Macmillan has made at them before—they bolster up our dislike of troublesome change. Their "specialists depart from their own high standards of precision when, refusing to pass judgment on the institutions they set out to describe, they end by pronouncing in effect that whatever is essentially African is right."

These are some of the author's judgments and they may provoke some readers to violent disagreement. But few will, I think, leave this book without strengthened realization that it is not enough for us in Africa to plod on at our daily work without thought for the future in the hopes that work alone undirected to a definite end will solve Africa's problems and without making some intellectual effort at thinking out the means to create the Africa of the future according to our own desire.—E.E.S.C.

"Spears and Staffs, with two or more points, in Africa," by K. G. Lindblom. Publication of the Ethnographical Museum of Sweden, Stockholm, No. 14. Forty-six pages, eleven full page plates and two distribution maps.

The labour and scholarship necessary to produce this publication can only be appreciated by those who have done similar research. The documentation is most

extensive and the illustrations are numerous and well produced. Over one hundred types are described. The author has had to accept much at the face value of his informants and does not indulge in unsupported and speculative theories. It is unfortunate that so many writers describe a bident (two-pronged spear) as a trident (three-pronged spear). The bident spear butts of the twenty-sixth dynasty are peculiar to Egypt and Petrie has illustrated similar spear heads (bronze and iron) of Lykaonian origin of the seventh century B.C. Spears with more than one prong are in common use in Africa for fishing. Figure 17, page 54 (Shaiba) is a Bashi Bazuk gun rest, in the opinion of the present writer. The late Mr Thomas has illustrated one from the Sudan in his catalogue of the ethnographical exhibits in the Egyptian Royal Geographical Society (Cairo). Copies of this little known and valuable record of Sudan ethnography can be purchased in Cairo. It is well illustrated and should be consulted by all who may write upon the ethnography of the Nile Valley.—A.E.R.

"Education in the Colonial Empire," by Arthur Mayhew, Longmans, 6s. 6d.

A book by the Joint Secretary to the Advisory Committee on Education in the Colonies will naturally be widely read by those interested or professing an interest in his subject. It is of particular interest to readers in this Territory, as nearly half the book deals with education in British tropical Africa.

The first part of the book deals with the fundamentals of education, and contains a good deal of controversial matter. Many definitions have from time to time been attempted of the aims of education, and here Mr Mayhew gives an exhaustive survey of these aims. Briefly, the aim is to improve the standard of living of the individual as a member of a community. But, unfortunately, this superficially simple definition involves us in a whole series of subsidiary enquiries and definitions. For instance, what is a community? In its widest sense it should undoubtedly be the human race, and it is therefore necessary, when planning the education of a particular group, to consider its relations with the rest of the world. Neglect to do so may have disastrous effects, not only on the group concerned, but on a large part of the world, as witness recent educational aims in Germany.

A definition of the aims of education leads naturally to a résumé of educational policy in the Colonial Empire, and in the second part of the book Mr Mayhew gives an enheartening explanation of what frequently appears, even to the worker in the educational field, to be an ever-changing series of policies. In practice it is practically impossible to follow a hidebound long-term policy. It is beyond human power to foresee all future developments of social life, and it follows that educationists cannot know exactly for what they must be prepared. Unless, therefore, education is to remain static and unprogressive, its policy, as opposed to its general principles, must change with the times. In this second part of the book, therefore, the necessity for and methods of coordinating education with the other social services and with economic development are explained.

The third part is that which is most likely to interest the general reader, as it describes the systems, especially those in use in tropical Africa, designed to give effect to the aims and policies set forth in the first two sections. It would seem that Mr Mayhew has drawn mainly on the annual reports of the various education departments—in some cases not very recent reports—and the stereo-

typed form of these prevents them from being surpassingly interesting. Mr Mayhew has, however, done his best to reduce them to readable form, and his comparison of different systems all aimed at the same end is of value. It is not, however, so clear as the comparable section of Lord Hailey's "African Survey."—C.W.

"*A Contribution to the study of Anomalous Dentition and its Ritual significance in Africa*," by S. Lagercrantz. Publication of the Royal Ethnographical Museum of Sweden, No. 16. Forty-three pages and four distribution maps. Price four kroners.

This is a valuable contribution to the study of medical and applied anthropology. It throws much light on infanticide practised among African tribes through a belief in magic. A copy should be in the hands or available to all medical practitioners as it is clear from the text that sympathetic advice or, if necessary, a minor surgical operation might save the life of the infant.

It illustrates one of the many cases where any legislation would be futile and the personal influence of a medical officer or medical missionary would be effective.

Sudan Notes and Records and *Tanganyika Notes and Records* are among the authorities cited for some of the cases noted.—A.E.R.

"*A Standard Swahili-English Dictionary*" (founded on Madan's *Swahili-English Dictionary*), by the Inter-Territorial Language Committee for the East African Dependencies, under the direction of the late Frederick Johnson. Oxford University Press, 1939. Shs 9/50.

"*A Standard English-Swahili Dictionary*" (founded on Madan's *Swahili-English Dictionary*), by the Inter-Territorial Language Committee for the East African Dependencies, under the direction of the late Frederick Johnson. Oxford University Press, 1939. Shs 9/50.

At last this long awaited Standard Dictionary has appeared in print. It surpasses in excellence the very high expectations of even those who, having had the privilege of knowing Frederick Johnson, were aware of his penetrating scholarship and of his untiring devotion to a task which to him was one of love.

The work which is published with the authority of the Inter-Territorial Language Committee of the East African Dependencies had been practically completed when, in February 1937, death called its author away far too soon. The final editing had, thus, to be done by his successor as secretary of the committee, the Rev. B. J. Ratcliffe. Although founded on Madan's Swahili dictionaries of 1903 the present volumes, of 548 and 635 pages respectively, are in fact quite a new work and contain an astounding number of words, many of them due to the rapid recent adaptation of our East African *lingua franca* to the demands of spreading civilization and education which have of late included an ever-growing number of school text-books and other literary achievements written in Swahili. Full use has also been made of Krapf's old "classic" of nearly a hundred years ago, still to some of us a wonderful source of information, its trying old-world spelling notwithstanding. But no reference seems to have been made to the intensive and in many ways interesting work of Dr C. Velten, the outstanding German authority on Swahili and other Bantu languages.

The Bishop of Zanzibar finishes his short foreword thus: "This conspectus of the Swahili language will therefore help us all to find that the language is more worthy of our serious study than perhaps we had previously considered." Very

true, and I may add, without exaggeration, that I have probably learnt more of the "soul" of this rich and highly adaptable language during a few months of delightful random browsing through the pages of this dictionary than in all the thirty-four years which have elapsed since I first started stammering Swahili.

This much from the white man's point of view. Perhaps more important, however, is the great aid given by the work, and more particularly by the English-Swahili part, to the African in his study of English. Countless words, including even such as "optimist" and "pessimist," which have as yet no equivalent in Swahili—and probably never will have—and which the educated African constantly meets in the more advanced English text-books prepared for his professional education, are lucidly and concisely explained, not in English but in his own language. One example, chosen at random, must suffice: "RADIUM, *madini ya thamani kubwa inayotoa nuru na nguvu za umeme*," which may be rendered into English as "a metal of great value which yields light and electric force."

Nouns, adjectives, etc., derived from verbs are given under the appropriate verb, a reference to the verb being made with the word when it appears in alphabetical order; an arrangement which greatly increases one's insight into the meaning of words and into the often subtle structure of the language. Synonyms are amply dealt with, so much so that in a limited sense the dictionary almost resembles ROGET's famous *Thesaurus*. Take for instance "Beauty": the English-Swahili part refers one to *uzuri*, *uremba* and *haiba*; and in turning to the Swahili-English part one learns that *uzuri* means primarily external beauty, appealing to the senses, and so often also of things concrete; but also of "excellence" and even "moral goodness"; *urembo* is adornment, display, and is also used for the glorious work of God, that is, the Universe; whereas *haiba* is more particularly beauty of character though also used for beauty of countenance. One misses among these synonyms the word *nuru* which originally means, of course, "light" but is not infrequently applied to female beauty; on turning it up one actually finds it translated in this sense as "good looking".

One should also note with satisfaction that those parts and functions of the human body which a mistaken prudery so often bans from dictionaries are frankly admitted into this account of a language spoken by people who, fortunately, have not as yet evolved such affectation.

It would be easy to fill pages with cullings to illustrate the many-sided use to which this work can, and ought to be, put for purposes of everyday life and work, in the study, and chiefly for those more intimate conversations with Africans that aim at a closer mutual understanding. The space at my disposal only permits of a few examples:

Rutuba, a term so often misused for general fertility of the soil, is clearly shown to mean solely, and not only primarily, dampness and moisture and, when used in connection with soil to refer merely to the latter's humidity. Administrators and agricultural officers please note!

Kafiri is defined as "one who is not of the Mohammedan religion, an infidel, atheist, pagan, apostate." To my mind the first of these definitions does not tally with the usual interpretation by the more sophisticated Swahili Mohammedan. An old servant of mine, a Zanzibari of Yao extraction and a pious and practising Mohammedan, insists that a Christian is not a *kafiri*; for as long as he lives there is hope of his conversion to the "faith"; but should he die still an infidel the term *kafiri* could then be properly applied to him. In this connection a note by Sir Richmond Palmer in a recent number of *East Africa and Rhodesia* is of interest. He says: "All Moslems regard Jews and Christians as 'people of the book', and therefore civilized and potentially worthy, though misguided; they regard all persons who do not believe in 'The God' identified with 'Allah' as *kafirin* or

heathen and as such beyond the pale. 'We might differ', a Moslem might say, 'about dogma but on the subject of the existence of the God there can be no disagreement'."

A short phonetic table indicating the correct pronunciation of the adopted spelling, which differs so markedly from customary English, would be useful in a future edition. The type used is pleasing and clear, the arrangement of the letterpress helpful to quick orientation, and paper, format and binding just what they should be. The price—nine shillings and fifty cents each volume—though by no means exorbitant for the rich value offered is, unfortunately so high as to prevent many who ought to possess this work from buying it; and unless a much cheaper edition can be produced most Africans will be debarred from the many benefits that this splendid Standard Dictionary of their own language holds in store for them.—C.G.

"The Journal of the Entomological Society of South Africa."

The publication of the first two volumes (March and October 1939) of the *Journal of the Entomological Society of South Africa* adds another title to the vast list of entomological periodicals. It is, however, fitting that South African entomology should be represented by a journal worthy of a country of such importance in the Empire. It was, no doubt, with this in view, that the Society produced these volumes and it is to be hoped that the high standard they set will be maintained in future issues.

The entomologist who is not a systematist invariably regards the overburdening of entomological journals with taxonomic descriptions of new species as a regrettable necessity. The present journal is no exception in having quite half its space thus occupied and, unfortunately for the reviewer, articles devoted to such descriptions are not amenable to ordinary criticism. Their value can only be tested by the expert in the course of his work and the reviewer must devote a disproportionately large space to the non-systematic articles. It is worth noting, however, that in centralizing the publication of African entomological taxonomy, this journal will serve a very valuable purpose, for the indiscriminate scattering of descriptions of new species in a multitude of periodicals has created a minor chaos in an already sufficiently chaotic world.

One admirable feature of this journal is the attempt made to encourage the interest of the layman and, incidentally, as W. E. MARRIOTT (an amateur) remarks in a short article on fruit flies, to "indicate to professional entomologists the possibilities there are in cooperation with suitable laymen." In point of fact entomology owes more to amateurs than any other branch of biology, and there are many problems, especially of an ecological nature, which can only be solved by the cooperation of many workers. A perusal of, for example, the *Journal of Animal Ecology*, will prove the very valuable part that is played by laymen in modern biology. There is a useful article by A. J. T. JANSE on the collection and preservation of *Lepidoptera* and the same author contributes another paper which has for object the encouragement of the study of larvae. The example taken for illustration provided the most remarkable example of commercial entomology that the writer has met. JANSE remarks that "what is known of the life history by one local family is kept secret, with a view to restricting the market of this beautiful moth and thus keeping up the price. As far as I know all specimens known have been bred by this family, none having been captured flying about." There is, after all, some justification for the contempt of the professional entomologist for the butterfly collector!

It is not possible to mention every article, but the journal embraces a wide field. In physiology there are articles on insect body temperature (OOST-HUIZEN) and on the control of humidity in small cabinets (IMMELMAN); in phylogeny J. OMER-COOPER contributes an interesting paper on the classification of insects; three papers deal with various aspects of the locust problem and NOLTE has an interesting study of some species of *Acridiidae*, with especial reference to the chromosome complex. This last paper is remarkable as an indication of the throwing down of the barriers which, until recently, have existed between the various branches of biology. Mr NOLTE devotes part of his paper to the ecology of the species he studied. A few years ago a cytologist could hardly have thought of ecology as having any interest for him and the same might be said of an ecologist with reference to cytology. To those who are aware of this widening of the biological outlook, the names of Smuts, Bews, Phillips and others, will be recalled among those South Africans who have played so large a part in it.

In conclusion it may be said that the editors have made a most admirable job of this publication and there is no doubt that it should find a place in any library which attempts to cover the field of African biology.—J.F.

Tanganyika Notes and Records

is a Journal published twice yearly containing information dealing with Tanganyika Territory; with the flora and fauna, the fishes, the shells, the birds, the tribal traditions and history; customs, superstitions and beliefs; boat-buildings and designs; types of native buildings, cultivation, irrigation and husbandry; the journeys of the great explorers; stories of the slave-running days; history of places of historic interest, coastal harbours and ancient settlements; occurrences of stone implements and pottery; systems of land tenure; native lore, secret societies and witchcraft; geological formations and mineral development, etc., etc.

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March 1936

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June 1939

All members of the Tanganyika public are invited to send in articles and pictures, remembering that the scope of *Notes and Records* is intended to be as wide as possible and that contributions of general interest are as welcome as those on more specialist topics.

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October 1937

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December 1939

Copies of the Journal can be obtained from the Editor, The Secretariat, Dar es Salaam. The first five numbers are being sold at Shs 2/50 (two shillings and sixpence each (plus postage 30 cents)). ¶Numbers six, seven and eight are sold at Shs 5/- (plus postage 30 cts). ¶Subscription forms are obtainable on application to the Editor.

