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CHIEF KALABA'S VILLAGE
A Preliminary Survey of Economic Life
in an Ushi Village, Northern Rhodesia

BY
GEORGE KAY

*Leverhulme Fellow in Commonwealth Studies in the University of Hull,
Sometime Research Officer of the Rhodes-Livingstone Institute*

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G. K.

INTRODUCTION

THIS survey of village life was conceived as part of the research phase of the Health and Nutrition Scheme. The aim of the Scheme was to improve the standard of living in the Fort Rosebery region by a 'combined operation of agricultural and health activity' and it was hoped that progress could be effected within the framework of the indigenous society and economy. The widespread ramifications of this object were generally realized and a comprehensive survey of living conditions was regarded as an essential preliminary. The research was to be conducted by specialists in the fields of health, nutrition and agriculture together with a representative of the social sciences, but the desired team approach was not always possible and only the social and economic surveys were conducted in Chief Kalaba's village. This survey of village life, though designed as part of a team research project, must therefore stand on its own.

On being granted permission to work in the village a census of the entire population was taken (Appendix A). At the same time research workers and villagers became acquainted with each other and every opportunity was taken to propagate the proposed intensive survey of village life during the following twelve months. Eventually a representative group of twenty-one households was selected and invited to co-operate in this survey. For each of these households two sets of records were completed daily by an African Research Assistant living in the village (Appendix A). Details of all income and expenditure in cash and in kind were entered in a *Household Accounts Book* and details of all economic activity were entered in a *Daily Record of Activities*. *Economic activity* was broadly defined as any action which affected the material well-being of the villagers, and ranged from cultivating gardens to washing plates. A group of activities termed 'Domestic chores and food preparation' were found to be repetitive and they were not recorded for four periods—a total of 22 weeks—in order to relieve the pressure of routine work and allow time for other studies. A third set of records constitutes a *Village Diary* which provides a daily account of some 300 words of general life in the village. It contains qualitative data on economic activities and provides much material on social life. During the year other surveys were conducted when time permitted; the first of these was of 'eating groups'—an interesting aspect of social organization; others were concerned with village and local history, with methods of cultivation, hunting and fishing, and with customary laws and land rights. The sum total is a vast and varied collection of data which in its complexity reflects something of the rich variety of village life. Yet these data are far from comprehensive. No quantitative data are available on areas cultivated, crop yields, and

food intake, nor on the state of health of the people. It was hoped to extend work in Chief Kalaba's village, particularly to measure and map the village gardens, but circumstances rendered this impossible. This Paper presents some of the results—those concerned with economic life—of the survey of life in Chief Kalaba's village. Only a minimum of social material has been included, and it is hoped that a more adequate account of social life in the village will be presented at a later date.

Detailed data are satisfying because of their intensity and depth, but they are exceptionally trying because of numerous inevitable limitations and the necessity to condense and summarize individual items of information to make the whole body of data readily intelligible. Some knowledge of the methods of presentation and of the major limitations of the material will facilitate study of the main body of this Paper, which falls into three parts. The first (Chapters 1 and 2) describes the physical and human settings of Chief Kalaba's village. The second (Chapters 3-6) examines the use of time in the village as revealed in the Daily Record of Activities, and the third (Chapter 7) examines some aspects of living standards using data recorded in the Household Accounts Book. This type of study inevitably makes much use of numerical data, but to avoid over-burdening the Paper with a multitude of figures and tables, diagrams have been used wherever possible. Some numerical data are given in tables and appendices, and the diagrams are so designed that those who wish may, with little difficulty, extract further quantitative material from them.

The Daily Record of Activities

The records provide an account of the economic life of forty-six adults on every day they were present in the village from 14 December 1959 to 13 December 1960 inclusive. All but two of them spent some days (i.e. day and night) away from the village, and as a group they spent 3,906 man-days, or 23·8 per cent of their time, in other places. For these days no detailed data are available, though the reasons for each person's absence are known. Four main reasons appear. 2,257 days were spent in paid employment or in search of employment, mostly within the Fort Rosebery District. When a woman accompanied her husband in search of work her absence was attributed to the same cause as his. Social visits, including those made on ritual and ceremonial occasions, accounted for 888 days of absence, and polygamously married men spent 587 days away from the village with their other wives. Finally, 174 days were devoted to hunting, collecting, and buying fish in distant places.

The length of time spent away from the village varied very considerably between individuals and groups of individuals according to age and sex (Fig. 1 and Appendix B). Four age-sex groups have been defined:

Young men	(less than 45 years old)	13 members
Young women	(less than 45 years old)	16 members
Old men	(more than 45 years old)	8 members
Old women	(more than 45 years old)	9 members

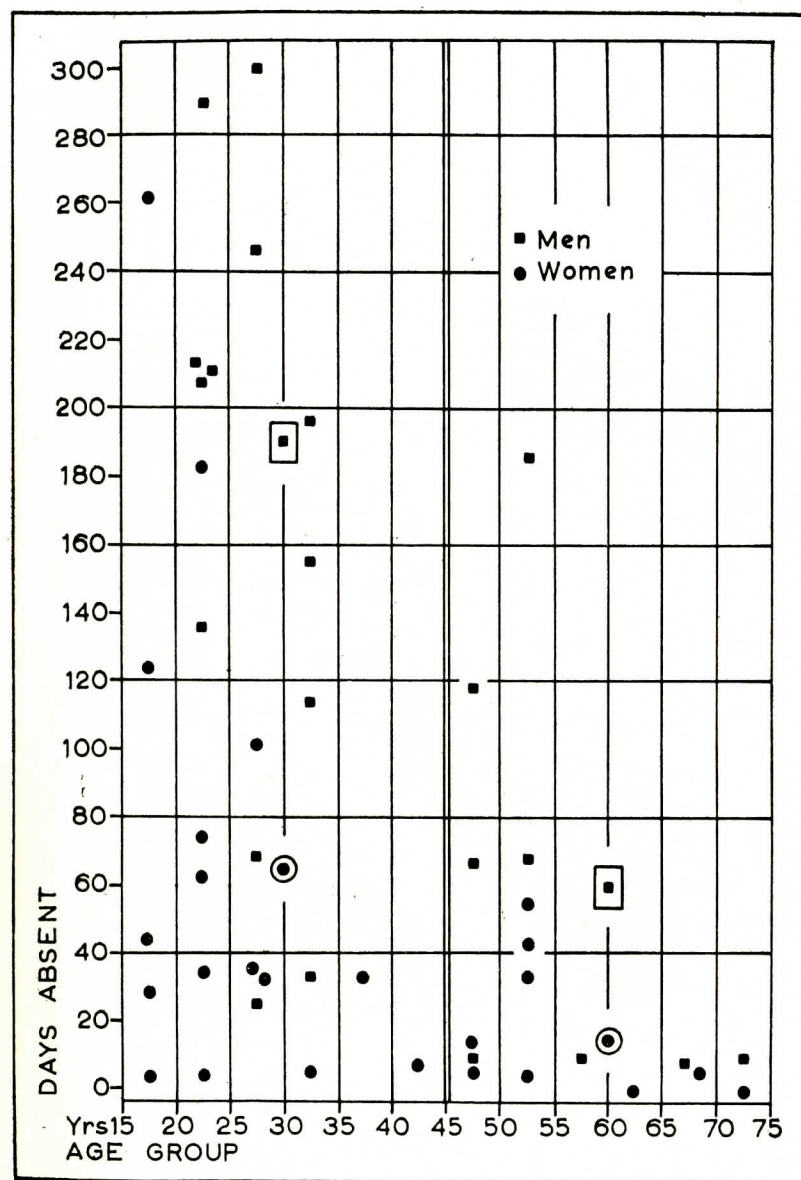


FIG. 1. The number of days absent from the village, by age and sex

In this and all subsequent similar diagrams the mean values for each of the four age-sex groups are separately indicated by the enclosed symbols.

The average number of days old women spent away from the village was only 18, and the old men averaged only 60. The young women each spent an average of 65 days away, whilst the young men were absent, on average, for 170 days. This pattern is related largely to participation in paid employment. Fig. 2 and Appendix C summarize the distribution of man-days spent away from the village by weekly periods. The reasons for this distribution are numerous and need not be elaborated here. But clearly both this distribution and that of each individual's time between the village and elsewhere are important in interpreting the patterns of work done in the village, and they should be borne in mind throughout the following chapters.

The records are not based on direct observation and cannot, therefore, provide the exact detail of a scientific time and motion study. For example, a man leaving the village at about 6 a.m. and returning at noon may report that during this period he had been cultivating

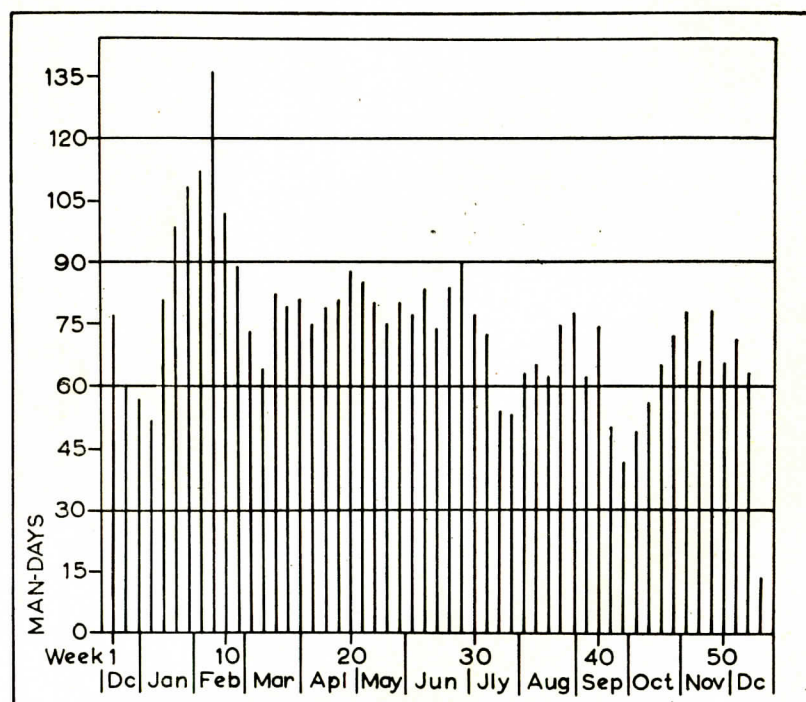


FIG. 2. The distribution of man-days of absence from the village by 53 weekly periods

In this and all subsequent similar diagrams the weekly periods are those shown in Appendix C. Week 53 consists of two days only; all others are full seven-day weeks.

his groundnut plot. In fact he may have spent one hour walking to and from his garden, half an hour in rest, and he may have collected some firewood on his return journey. Such details are inevitably overlooked in the records, which would show that he had done six hours hoe-cultivating in a particular garden, and a note may show that he brought some fuel back with him. Also when several activities were undertaken during a single session of work in the bush (say between 6 a.m. and 2 p.m. branches were stacked for a *chitemene* garden, cassava roots were harvested, and *mpundu* fruits were collected) the division of the total time between the various activities was dependent on the estimate of the worker and the assessment of the Research Assistant, who acquired a very shrewd knowledge of the time many repetitive tasks required. The records provide a reasonable but broad division of each villager's time into various categories of work which embrace ancillary activities and, at times, some minor unrelated tasks. It must also be evident that this study provides no indication of efficiency because it was not possible to measure quantitatively the results of each piece of work done.

Finally, it is not possible to calculate accurately all the work done for the benefit of a particular household partly because of the complex distribution of the benefits of any work, and partly because certain contributions—notably those made by children and those obtained from groups of people by the provision of a beer party—were not recorded in detail. Children are not pressed to work, but they assist in many small ways. But neither they nor their elders could provide reliable accounts of their activities. Group work for beer often lacked organization, and no one knew how many people worked for how long on each occasion and therefore detailed accounts were not forthcoming.

The Household Accounts

The Household Accounts Book presents a smaller but more formidable mass of detail which defies all attempts to summarize quantitatively the total information it holds. Including complementary records of exchanges between members of the sample, 9,158 transactions are recorded. Of these 6,026 (66%) involved no exchange of cash; they were transfers or exchanges of commodities only. When only material goods changed hands it was hoped that their cash value could be recorded (Appendix A) but such were the difficulties encountered that the results, though interesting, are not suitable for use in a quantitative analysis of the exchanges.

The villager, when asked to place a cash value on a commodity, considers the circumstances of the transaction as much as the inherent value of the article concerned. For instance, a hand of bananas might be offered to me—a rich European—at 5s.; the same bananas might be offered to an African in regular employment for 2s. 6d., or be exchanged for a shilling's worth of fish with a fellow villager, or be distributed freely by the owner to his close kin and friends. Similarly on different occasions commodities acquire different values. During

the harvest season a woman short of dried cassava roots would probably be given some freely, and later, perhaps in another way, she would return the favour. But during the rains when dried cassava roots were at a premium she would be very fortunate to receive such a gift and would probably have to purchase roots. The price would be related to her ability to pay, her relationship with the vendor, the character of the vendor, the number of potential vendors she could appeal to, and other such socio-economic factors. Further difficulties were raised by villagers' estimates of the cash value of a commodity given or received because they did not think in terms of cash or any other common denominator. A frequent and very revealing answer when asked the value of an item received was, 'It is a gift, it is worth nothing'—the inference being that there was no exchange but a simple one-way transfer in the interests of friendship or compassion. No less than 3,966—44 per cent of all transactions recorded—were, in fact, one-way transfers. In many such cases, and in cases of barter, the two parties concerned, when pressed for an estimate of the cash value of the commodities involved, gave widely divergent answers. A might regard the duiker meat he gave to B as being worth 5s. but B might claim it was worth 7s. 6d. The same was true of many items purchased with cash and later redistributed. A box of matches cost 2d.—but a gift of five matches would be valued as a pennyworth or more. So too with cotton, candles, paraffin, hooks, nails, salt, fish and other items which initially had a standard cash value fixed by their purchase price but which acquired different apparent values in different circumstances. Inevitably the Research Assistant had to be asked to use his discretion, and the recorded estimates of cash values of commodities given and received are his rather than the villager's. As such they are related to an urban scale of values rather than the values of Chief Kalaba's village, and it would be unrealistic to use them quantitatively in the context of the village economy.

Even a cursory analysis of the Household Account Book makes it abundantly clear that the majority of transactions, and nearly all of those in which no cash changed hands, were not concerned with the purchase of commodities from outside the field of village production nor the sale of commodities produced within the village on external markets but with the redistribution of local produce within the village. For instance, on 26 February Maliko caught a considerable quantity of fish and he made the following transactions:

Sold to 'strangers' in Loti's village	fish @ 7s. 6d.
Given as tribute to Chief Kalaba	fish (worth 2s.)
Given freely to his wife's mother*	fish (worth 4s.)
Given freely to his wife's sister*	fish (worth 2s.)
Given freely to Bweupe—a friend	fish (worth 1s.)
Given freely to Mwenda—because she is old*	fish (worth 1s.)

* These three items of 'expenditure' by Maliko are recorded a second time—as 'income' of the individuals concerned.

Such transactions are motivated by socio-economic factors, and the

exceptionally intricate channels of transfers which they reveal largely reflect the social organization and the personal relationships of the population concerned.

This paper is primarily concerned with the economic life of the villagers and details of socio-economic behaviour are marginal to this subject. The records of household accounts, therefore, have been used in this instance only to demonstrate adequacies and inadequacies of production achieved by the application of effort in village life as recorded in the Daily Record of Activities. Attention is focussed on ability to make good deficiencies in the village production, and as these were predominantly met by the use of cash only those 3,132 transactions in which cash changed hands are analysed in detail and the results presented, as far as possible, in quantitative terms. The household accounts of five couples are inadequate for use in this study (Appendix B). Four young couples spent exceptionally long periods away from the village in towns and no records are available for those days on which they were absent. The deputy chief and his junior wife spent nine weeks in Lusaka, and no records of their expenditure whilst there are available. Also their household accounts are much confused with those of a shop which the deputy chief managed for some time. In view of these limitations and the special circumstances of the chief's income their accounts have also been omitted.

In spite of inevitable shortcomings of the material used and the necessity to summarize much information, particularly in diagram form, this paper provides an account of aspects of the mode of life and standard of living in an Ushi village in considerably more detail than is generally available. Few such studies have been completed, though they have long been advocated, and the detailed recording and analysis of economic life in African villages still presents a challenging field for pioneer research. An urgent need for many similar surveys persists for they can greatly facilitate an understanding of African rural life and the rational improvement of it.

CHIEF KALABA'S COUNTRY

In Chief Kalaba's country the local physical environment is of the utmost significance in village life. On it the villager still depends very largely for his subsistence and it strongly influences his annual and daily routine. He must have a profound knowledge of his environment and how to exploit it if he is to survive, let alone live well. And yet he is much less dependent on local conditions now than he was at the turn of the century. Then his horizons were those of a small tribal group in a limited homeland. Trade supplied few commodities, notably salt, iron and cloth, novelties such as guns and luxuries such as beads, and those mainly to the élite of the group. Since then the villager has been increasingly drawn into a wider sphere and remote forces have reduced both the adequacy of the local environment and his ability to live within it. He now pays tax to a Northern Rhodesia government and is offered a wide range of trade goods from Japanese cottons to British bicycles. Trade has dealt a death blow to some traditional activities; bark cloth is no longer made, iron is no longer smelted; salt is manufactured only by the destitute, and clay pots by the poorer members of the older generations. Cash has become essential in the village to satisfy both needs and wants. To earn cash usually requires departure from traditional practices and, in most cases, ultimate dependence on resources other than those of the local environment. For many the search for cash takes them far from their village home. Within the village, however, in both traditional occupations and money-earning practices the importance of the physical environment remains paramount.

Dambo and Plateau

Chief Kalaba's country is part of the Fort Rosebery District, the homeland of the Ushi.¹ It lies largely within the upper basin of the River Mansa but extends eastwards towards Lake Bangweulu (Fig. 3). The eastern section, drained to the lake, was, until recently, ex-chief Chama's land and locally is still recognized as such. Physically and economically it is orientated towards the lake, and differs in many respects from the plateau area with which this study is concerned. The plateau proper is a level to gently undulating area about 4,000 feet above sea level. It is drained by the River Mansa and its rectilinear pattern of north-bank tributaries, notably the Chibalashi, the Lukangaba, the Lule and the Lupende. About five miles east of Fort Rosebery the Mansa leaves

¹ Throughout I have used the spelling 'Ushi' which is that adopted by the Native Authority and commonly used by literate members of the tribe.

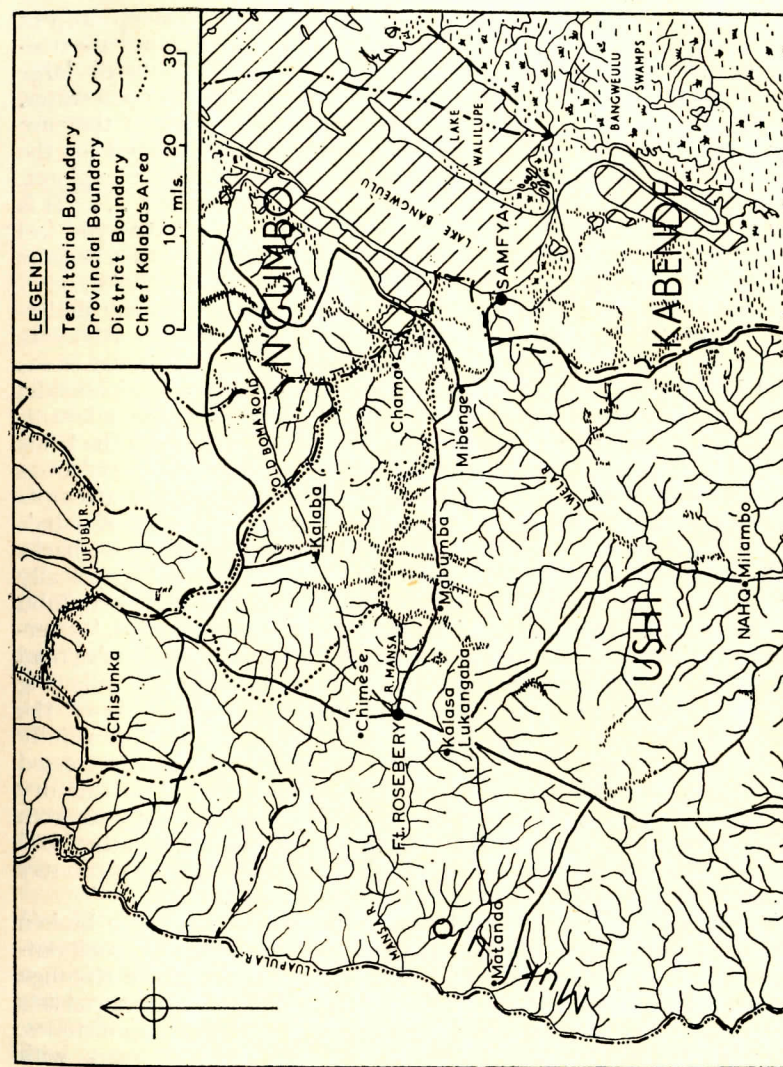


FIG. 3. Chief Kalaba's country—location

its expanse of dambos and starts a relatively rapid descent of some 700 feet to the Luapula in a steep-sided, incised valley. Upstream of this point dambos are characteristic of all drainage lines.

The margins of the dambos are sharply defined by a steep drop of several feet and an abrupt end to the woodland. The dambos are treeless, grassy and often swampy plains edged in places with large wooded anthills and broken here and there by stretches of open water. They slope very gently and drainage within them is poor; they are swampy and flooded during the rainy season and waterlogged for the greater part of the year. Dr. Livingstone, missionary and explorer, found that 'these sponges are a serious matter in travelling. . . . It is only when you reach the trees and are off the sour land that you feel secure from mud and leeches.' In the middle of the rains 'they become really dangerous' (Debenham, 1955). Dr. Kanthack (1945), civil engineer and hydrologist, found the dambo 'the key to the understanding of the hydrographic characteristics of Northern Rhodesia catchment areas'. He noted that 'dambos form great sponge areas which hold great quantities of water and are the sources of the perennial flow in the main streams and rivers'. Both findings are relevant. The Mansa dambo forms the boundary and a barrier between the lands of Chief Kalaba and those of Chief Mabumba; within both chiefs' areas footpaths follow the dambos and crossings are few. Recent attempts to open the 'Old Boma Road' from Fort Rosebery through Kalaba's area to N'gumbo country for motor vehicles have met severe set-backs at the dambos. The 'New Boma Road' was constructed specifically as a motor road and avoids the dambos by following the Mansa-Lufubu watershed. Similarly most major roads are, as far as possible, 'watershed roads', the major exception being the Fort Rosebery-Samfya road which avoids as many dambo crossings as possible whilst still following the Mansa valley. On the other hand Weatherley (1898) found the plateau between the Luapula and Lake Bangweulu 'beautifully wooded and well watered by many delightful streams' when he crossed in August and September 1896. The dambos are vital to this dry season water supply; water can be obtained throughout the year from shallow walls in the sands and clays of the major dambos, and they feed the open streams in steeper valleys. Within Chief Kalaba's country settlement is virtually tied to such sources of water.

Between the dambos the plateau is monotonous country broken only by anthills as large as huts and occasionally by limited rock outcrops. The area consists largely of sedimentary rocks of the Katanga System, mainly of the Plateau Series. 'Essentially this series consists of medium to coarse-grained arenaceous sediments; sandstones, felspathic sandstones, quartzites, arkoses and conglomerates with subordinate argillites and shales' (Guernsey, 1951). There are also some outcrops of granite. The soils developed on these and other comparable rocks are generally termed 'plateau soils'. Little scientific data is available on them but general descriptions (Trapnell, 1953, Ballantyne, 1958) refer to their infertility and low agricultural

potential related partly to the climate and partly to the poor parent materials. They are generally sandy, acid, highly leached and base deficient. Drainage is often impeded by ironstone concretions and lateritic horizons which are commonly found at no great depth and which occasionally appear as surface outcrops. From these unpromising plateau soils, which apparently are incapable of supporting permanent cultivation under the present agricultural systems, the villager must produce his staple foodstuffs, but in doing so he exploits both the soils and the vegetation cover.

Vegetation and Wild Life

The characteristic vegetation is a very variable 'Brachystegia-Isoberlinia paniculata' woodland complex in which 'B. floribunda and B. longifolia together with I. paniculata are generally dominant' among a large number of species (Trapnell, 1953). In the traditional *chitemene* system of agriculture trees are pollarded or felled and then burnt; Bands (1956) noted that 'the woodland of the (Fort Rosebery) District conveys the impression of having been very heavily gardened in the past'. Darling (1960) considers such 'woodland is now essentially a fire climax'. Undoubtedly the impact of man and fire has been severe and the vegetation cannot be described as 'natural'. The woodland is not dense and consists predominantly of small trees with little undergrowth; it is easily penetrated and is not difficult to clear. A rather denser vegetation with more undergrowth and including several types of palms is occasionally found along the dambo edges, but few true 'mushitus' have been noted. In addition to having a major role in the agricultural systems the vegetation cover, of both the plateau and the dambo, provides a multitude of useful commodities. The Ushi knowledge of plants, their habitats and their uses is immense, and the people have a keen utilitarian interest in all that grows around them.

A comparable interest is taken in wild life which is the main source of animal protein in the villagers' diet. The Ushi are not a cattle-keeping people though chiefs and a few important men may keep small herds as prestige symbols. Tsetse fly, still prevalent in large areas of the Fort Rosebery District, was formerly widespread and militated against European efforts to raise cattle and propaganda to encourage the Ushi to do so. Sheep and goats are more common but are not numerous and poultry are the most typical village livestock; even so a chicken is a rare treat. To the east the Bangweulu swamps and lake yield vast quantities of fish but the Ushi have only a limited interest in the fishing industry and trade. They are essentially a plateau woodland people and are not at home on the waters. They do, nevertheless, catch whatever fish they can from local streams and rivers and they regard fish highly as a food; they are eager to buy it when money is available. The most highly prized food is, however, meat and the Ushi were fond of hunting. Game animals, particularly the larger ungulates, are not common now and there has undoubtedly been very

considerable depletion of stocks during the present century. A skilled hunter, however, usually manages a kill. Also wild pigs are notoriously numerous, and the smaller mammals and rodents abound though, naturally, these are not the most palatable items. A variety of birds and insects are also collected at various seasons and these provide extra relishes. Hunting and collecting, like so many village activities, demand a fair knowledge of local habitats; to depend on chance findings would make difficult tasks unbearable.

Climate and Weather

People so dependent on the physical environment are naturally much affected by climatic and weather conditions and they take a keen interest in them. Three main climatic seasons are recognized: the 'rains' from November/December to April; and the dry season subdivided into a 'cold' period from April to August and a 'hot' period from August to the onset of the rains in November or December. Shorter periods, probably originally related to lunar months but now roughly equated with the Gregorian calendar months, are described in terms of characteristic natural phenomena or economic activities. Local and individual variations in such descriptions are common; for instance, May (*Shinde*) has been described as 'the period when food is plentiful', 'when groundnuts are harvested', and 'when river levels fall'; some refer to April as *Shinde* and describe it as the 'period when rains cease' and 'when harvest begins'. All such descriptions reflect, directly or indirectly, close associations between aspects of village life and prevailing weather or climatic conditions.

Table 1 presents some climatic statistics for Fort Rosebery in an attempt to summarize the main features of the climate. The rains are all-important in village life and the rainy season is virtually the growing season for all cultivated annuals. The onset of the rains is a period of great activity and considerable anxiety. To some extent the success of the agricultural season depends on the adjustment of various operations, such as the burning of *chitemene* gardens, sowing crops, making and planting mounds, to weather conditions which then are so variable. The rains are expected to set in during late November, but November may be very dry as in 1953 and 1957, or may be exceptionally wet as in 1954. Or November may have a high proportion of showery days which cause inconvenience, as in 1956, without compensation in the form of adequate rain. Or the rains may be delayed as in 1959, when an effective start to the wet weather was not made until late December. An exceptionally dry period shortly after the rains have commenced, as in December 1954, also can be serious for crops not fully established and similar shortages of rain later in the growing season, as in February 1958 and March 1955, can considerably reduce yields. Heavy rain can devastate standing crops, and the one wet day in April 1954, when 1.85 inches of rain fell at Fort Rosebery, must have caused concern. The fear of heavy rain in the months of April and May is expressed in an Ushi

	Jl.	Ag.	Sp.	Oc.	Nv.	Dc.	Ja.	Fb.	Mr.	Ap.	My.	Jn.	Yr.
(a) Mean Temperatures													
Mean Maximum	76.9	81.0	86.1	89.4	84.9	81.1	80.2	79.7	80.4	81.0	79.6	77.0	81.4
Mean	59.9	63.8	69.6	73.6	73.5	72.0	71.6	71.4	71.6	70.4	65.8	60.5	68.6
Mean Minimum	42.9	46.7	53.1	57.8	62.2	63.0	63.0	63.1	62.9	59.7	51.9	44.1	55.9
(b) Mean Rainfall (40 yr. average 1916-56) (inches)													
Rainfall	—	0.01	0.04	1.05	5.38	8.86	8.77	8.54	7.72	2.05	0.27	—	42.69
Raindays	—	—	—	3	12	18	19	17	16	5	1	—	91
(c) Monthly Rainfall 1950-61 (inches)													
1950/51	—	—	0.36	4.61	3.17	8.45	6.94	9.83	5.05	1.86	—	—	40.27
1951/52	—	—	0.07	0.65	9.17	10.55	5.54	9.59	5.86	1.24	0.16	—	42.83
1952/53	—	—	—	0.59	5.66	7.22	5.86	7.04	12.06	1.05	—	—	39.48
1953/54	—	—	—	—	3.00	9.58	8.30	5.71	7.94	1.85	—	—	36.38
1954/55	—	—	—	—	9.24	5.38	8.31	9.03	3.17	3.81	0.02	—	38.96
1955/56	—	—	—	0.81	5.43	7.66	10.93	7.80	7.22	4.76	0.12	—	44.73
1956/57	—	—	0.13	—	4.34	13.86	12.93	11.35	9.06	1.29	0.43	—	53.39
1957/58	—	—	—	0.98	0.70	11.25	8.75	4.07	8.77	0.39	—	—	34.91
1958/59	—	—	0.58	2.25	7.10	9.16	5.97	5.25	6.55	0.35	—	—	37.21
1959/60	—	—	—	1.28	3.64	5.60	13.39	13.51	11.80	1.72	0.09	—	51.11
1960/61	—	—	—	0.12	4.50	10.57	13.96	7.26	11.86	2.84	—	—	50.93
(d) Raindays and days with heavy rain (1.00 inch or more) 1950-61													
1950/51	—	—	1	6(2)	12	23(1)	22(1)	25(3)	19(1)	6(1)	—	—	113
1951/52	—	—	1	8	16(2)	26(4)	17(1)	21(2)	10(1)	3	2	—	104
1952/53	—	—	—	1	11(3)	14(2)	22	14(3)	18(4)	4	—	—	84
1953/54	—	—	—	—	8(1)	25(2)	22(1)	17(1)	14(1)	1(1)	—	—	87
1954/55	—	—	—	—	19(3)	23	24(1)	25(3)	14(1)	8(2)	2	—	115
1955/56	—	—	—	4	12(2)	26(2)	26(2)	23(2)	19(2)	14(1)	2	—	126
1956/57	—	—	1	—	19(1)	25(3)	26(3)	23(4)	22(3)	8	4	—	128
1957/58	—	—	—	3	5	27(3)	22(3)	21(1)	17(4)	2	—	—	97
1958/59	—	—	3	3(1)	17(3)	20(3)	21(1)	23	14(1)	5	—	—	106
1959/60	—	—	—	5	14(1)	19	21(6)	22(5)	19(3)	4	2	1	107
1960/61	—	—	—	2	9(2)	18(4)	23(7)	22(2)	27(5)	13	—	—	114

TABLE 1. Selected Climatic Statistics for Fort Rosebery
Data supplied by the Federal Meteorological Department, Salisbury

saying: *Ifula pakuya epo yona ifisabo*—'When the rains are finishing is the time they spoil crops.' Such variations in the incidence and nature of the rainfall constitute a threat to agricultural production more frequently than do variations in the total annual rainfall, though exceptionally dry seasons such as 1957-8 do indeed adversely affect yields.

The distribution of individual rainfalls and storms can be highly localized, particularly at the beginning and towards the end of the rainy season. Thus within a relatively small area at critical times some gardens may be blessed with desired rain whilst others receive scanty amounts, or some be cursed with unwanted storms whilst others enjoy relatively dry weather. Statistical data to investigate this is limited, the network of recording stations being very broad. Highly localized rainfalls can, however, actually be seen and the Ushi have a custom which demonstrates local differences in precipitation. They believe that the last-born in any family has been blessed with powers to stop rain falling by bowing down and exposing the buttocks to oncoming rain clouds (*afulamina kumfula*). This power should only be exercised when individuals or groups are in danger of being caught by rain whilst gardening. It is believed, and no doubt the belief persists only because of known instances, that such action can prevent or deflect rain so that, whilst it falls heavily nearby, the persons concerned remain dry.

This custom indicates an attitude of the Ushi towards the rains. Economically the rains are essential and this is recognized, but physiologically they are neither welcome nor pleasant despite their moderation of temperatures for what is a busy period. The villager does not like to get wet; often he has only one set of clothes and if these are soaked he must retire. And too often his hut roof leaks, thatching not being amongst the Ushi skills. Prolonged and intermittent rain and drizzle are particularly disliked, but *muloke*—'the rain that falls all day'—is the most depressing and the most detested; when such rains fall some families will not stir abroad but lie hungry indoors all day. Rain disturbs the household routine in various other irritating ways; cassava roots will not dry quickly, firewood is wet, dambos flood and make travel difficult. Ushi attitudes to the rainy season are much like those of the British to wintry weather mollified by the thought that without the rains they would starve.

During the dry season climate and weather cease to be of such vital concern and interest to the Ushi villager. Cold weather is perturbing. And particularly during June and July nights can be very cold; ground frosts are not unknown, and valley bottoms and dambos are frequently wreathed in cold, dense mist until the sun is high. Scant clothing is not conducive to early rising during such weather, and night fires are built larger to compensate a dearth of bedding. Strong winds are another element of note. They interfere with tree climbing to lop branches, which at any time is a dangerous occupation. They spread bush fires widely and, at times, dangerously,



PLATE 1

A highly localized rainstorm

though on the other hand they are relied upon to guide fires of deliberate bush burnings. Intense sunshine and high temperatures, particularly during the hot season, encourage a daily routine in which heavy work is completed, if possible, before midday and thereafter light tasks and leisure prevail and shade is sought. On the whole, however, dry season weather is regarded as pleasant and causes less anxiety and complaint than the rains.

The close adjustment of life in Chief Kalaba's village to the physical environment and the high degree of dependence on local natural resources is revealed in this study. Physical factors alone, however, influential and important though they are, do not determine the pattern of village life, and cultural traditions and prevailing techniques are of fundamental importance too. Had a different tribe occupied this country the economy may well have been substantially different.

THE Ushi are a Bemba-speaking tribe which migrated from the Luba-Lunda empire in 'Kola', now part of the Congo. The origin of the tribe as such is attributed to Muwe's discovery of MAKUMBA, probably a meteorite, which is recognized as the Ushi tribal god. (*vid.* Philpot, 1936). MAKUMBA still figures considerably in Ushi life and his word, revealed in dreams to various persons of importance, at times affects normal routine. Shortly after MAKUMBA had been found the group now known as the Ushi crossed the Luapula River and moved into the southern part of the Mansa basin. The Ushi were, and are, essentially bush cultivators, collectors and hunters and they found the well-watered plateau eminently suitable to their way of life. They chose to settle and soon spread into various parts of the surrounding, uninhabited country. Chief Kalaba I, a member of the royal *ngulube* clan, led one group of people across the River Mansa and settled on the Lupende stream. By 1905 the tribe and its country was divided under no less than twenty-seven chiefs, but due to later government policy only ten of these are now officially recognized. Chief Kalaba was established as a Native Authority, but Chief Chama was unseated and his area by Lake Bangweulu was incorporated with Chief Kalaba's plateau area. Ex-chief Chama became a court assessor in Kalaba's court, and in 1959 he was an important member of Chief Kalaba's village, though he maintained close associations with his former chiefdom.

Recent changes in the settlement of the Lule and Lupende neighbourhoods are relevant to the present study. Some three generations ago a group of people under Lumbwe Kalaba left Chief Kalaba's settlement and established a new neighbourhood on the Lule stream. At the turn of the century Lumbwe Kalaba was found as the head of three separate settlements or 'villages' in the Lule neighbourhood



and Chief Kalaba was still living on the Lupende stream (District Notebook). However, when the 'Old Boma Road' was opened as the mail road from Fort Rosebery to Luwingu Chief Kalaba wished to live on the road and so moved into the Lule neighbourhood to a site very near that of his present home. Chipungu became the senior headman in Lupende. Lumbwe Kalaba retained his position as 'owner of the land' in Lule, but the third incumbent left his village to take work in the Belgian Congo several years before the First World War and he spent the greater part of his life in paid employment away from his rural home. The original settlements of the Lule neighbourhood disintegrated, no doubt because of the vicissitudes of social life and the policy of the administration, and their members were absorbed into other groups. Thus Chief Kalaba's group became the sole occupants of the Lule neighbourhood and when Lumbwe Kalaba retired in 1956 he found himself 'owner of the land' but without a village home. Chief Kalaba recognized Lumbwe's traditional position and accepted him as an important member of his own settlement. Lumbwe Kalaba has reasserted his importance and plays a major role in the life of Chief Kalaba's village.

The process of subdivision continued within each neighbourhood. Groups broke away from the founder body to establish separate settlements and these in turn gave rise to further individual groups. This dispersion of relatively small groups of people was characteristic of the nineteenth century, but was opposed by the governments of the British South Africa Company and the Colonial Office because of difficulties it presented to their administrative machinery. Settlements were amalgamated into larger units which were officially registered and known as 'villages'; each was under an officially recognized headman. During the past thirty years, however, since indirect rule was introduced and as communications improved and administrative machinery became more efficient, regulations have been relaxed and the process of decentralization has reasserted itself. Villages have become more numerous and smaller, and divisions within the official villages are common. A village often appears as a series of *fikongwani* or 'sections', each under an elder who, in turn, recognizes the official village headman. The history of settlement and the present patterns make it clear that large villages and communal ownership and activity do not form the basis of life amongst Chief Kalaba's people. Small units are economically viable and are socially acceptable, even desirable.

Chief Kalaba's Village—Site and Morphology

Chief Kalaba's village consists of about fifty inhabited houses and extends for more than a thousand yards along the Old Boma Road to Fort Rosebery. It is situated where the road lies parallel with the Changa stream, a small tributary of the Lule, and it is from a number of shallow holes or wells in the Changa dambo that the village obtains its water throughout the year. A deep well has been sunk

by the government in the centre of the village but this is rarely used, partly because dambo wells are nearer to most houses and partly because the water has been polluted and the well cannot be cleaned easily. The Changa dambo is not easily crossed and only one bridge permits eastward movement over the Lule dambo. These obstacles to travel and the distribution of villages have directed the people of Chief Kalaba's village to the block of land between the Lukangaba and Lule rivers north of the 'Old Boma Road'. This is well-wooded country which does not suffer from excessive population pressure as do those areas in the Mansa and Chibalashi valleys nearer to Fort Rosebery.

The village clearing is not large and woodland, somewhat cut over for firewood and building timber, forms a backcloth to every village scene and trees are common within the village area. Sheep and goats are allowed to run freely and therefore cultivation within and around the village is restricted to tobacco, which is inedible, and to a few plants such as onions which can be grown on small patches protected by thorns; this is in contrast to many Ushi villages which are surrounded by cultivated gardens, mostly growing cassava. The village area is grazed by the flocks but the grass often becomes long and untidy during the rains and has to be cut to make the village presentable for official visitors.

The architecture and building standards are poor in many cases in spite of considerable improvements during recent years. The 1954 Tour Report on Chief Kalaba's area recorded that:

here and there one found the enterprising individual who had built himself a kimberley brick house, but for the vast majority wattle and daub huts were the rule and many of these were in an appalling condition.

The wattle and daub, or pole and dagga, house is the traditional type of building. The methods and materials used are similar to those employed by the Bemba which have been described in detail by Richards (1950). Most of the pole and dagga houses are small, rectangular, single-roomed buildings with an extension of the raised floor as a verandah beneath the overhanging eaves of the thatched roof. The house is a private place for the family but it is virtually a sleeping-room only. Except in wet weather all domestic activities are undertaken in the open or on the verandah of the house and, in some cases, the detached kitchen. Meals are generally eaten in the shade of the verandahs or other shelters, all of which are out of doors and in public view. It would, indeed, be difficult to work or serve food in the cramped confines of the traditional house with its low roof and beds of poles along the walls and without any light save that admitted by the one small doorway beneath the shadow of the eaves. Nevertheless, some cooking is done inside such dwelling houses during wet weather, and they are commonly the venue of private beer parties. On these occasions they assume a cosy, sociable atmosphere, lit by the glow of a small fire and warmed by the press of humanity. The only

ventilation is by the door-space, which is closed at night, and through the thatch. The air inside is often smoke-laden and causes considerable irritation of the eyes and throat, particularly to young children.

The pole and dagga house is, however, being increasingly replaced by kimberley brick houses of more generous proportions which permit subdivision of the buildings into two, three or more rooms. The size of such houses is often limited by the availability of cash and labour and the length of readily available roofing timbers. Unlike the pole and dagga houses brick houses cannot be built by the average villager. The bricks are simply made from local clays and water and are sun-dried, but some skill and experience is required in laying them and bricklayers are usually hired. Also window frames and doors are commonly of sawn timber and are the products of joiners, though many of the bricklayers can themselves supply such items. Screws, nails, hinges, glass and cement must be bought if the house is to be well fitted, though many do without such expensive items. If brick houses are well thatched and the thatch is repaired when necessary they will provide adequate shelter for many years. They are, therefore, by nature of their construction and the expense involved, relatively permanent structures.

Pole and dagga dwellings have been contrary to Ushi Native Authority rules for many years now and the villagers have been exhorted and directed to build in brick. Less than a decade ago a brick house had a prestige value as a symbol of social and economic success but it is now a generally accepted feature of village life. Only the very poor and those undecided about the permanence of their stay in any particular place are content to live in pole and dagga. At the close of 1959 about 45 per cent of all houses in Chief Kalaba's village were of kimberley brick, a very considerable change since the report of 1954. During the following year several more were built and several pole and dagga houses, most of them dilapidated and unoccupied for a considerable time, were destroyed by the Native Authority on the occasions of village inspections by officers of the Provincial Administration. At the close of 1960 about 65 per cent of all the houses were of brick.

Such changes from relatively temporary and inexpensive pole and dagga constructions to more permanent and costly brick houses has contributed to the recent development of spatially distinct village sections. The choice of permanent neighbours in a village society is not an easy one and the closely knit small family group often chooses to live separately when its residential mobility is reduced by the building of brick houses. The actual division of several Ushi villages has been traced to the period when brick houses were built in large numbers, and a dispute over the pending permanent settlement, indicated by the manufacture of kimberley bricks, of ex-chief Chama in Chief Kalaba's village occurred during 1960.

A household may have four other structures, two indigenous to the Ushi and two recently introduced by the European administration



PLATE 2

Two views of Chief Kalaba's village



(a) Chief Kalaba's house



(b) Lumbwe Kalaba's house

PLATE 3

and the missions. Circular food storage bins, a large one mainly for grain and a smaller one for groundnuts are built or rebuilt each year before or during the harvest. Their construction is similar to that of pole and dagga houses except that their floors are raised about a foot above ground level. The grain bin is filled before the roof is placed in position and is emptied from a small opening beneath the eaves; groundnuts, also entered through the roof aperture, are often obtained from a small hole at the base of the bin which is plugged when not in use. The other indigenous structure is a drying table some five or six feet in height and about five feet square on which cassava and other foodstuffs are sun-dried. The European innovations are a detached kitchen and a pit-latrine, neither of which have been accepted eagerly. Most families, under the threat of fines, now have a latrine or access to one of a relative. Kitchens have recently become more common as brick houses replace pole and dagga buildings leaving the latter available for other uses; they often become kitchens and children's sleeping quarters. Kitchens are acquiring something of a prestige value through their association with European life, but buildings have such a minor role in domestic activities in the village that they have little utilitarian appeal.

There is neither school nor church in Chief Kalaba's village, both being found in the neighbouring village of Tuli nearer the Lule river. Both belong to the White Father's Roman Catholic Mission, and they play an important part in village life. 82 per cent of the population of Chief Kalaba's village declare themselves believers in the Roman Catholic faith and a further 11 per cent adhere to other Christian denominations; only 7 per cent are avowed pagans. Education is less widespread and only 24 per cent of the adult population has been to school and only two villagers have had more than four years of schooling. A much higher proportion of the village children attend school. Nor is there a dispensary in Chief Kalaba's village. An unusually large kimberley brick building, deserted when its owner left the village to take employment elsewhere, was bought by the Native Authority to house a dispensary but their hopes have not been realized and the building is now ruinous. Medical treatment is available at Fort Rosebery, some eighteen miles distant, and Kalaba's people frequently complain that such distant services are inadequate. This complaint, supported by the large demand for European medical supplies in the village, indicates that such medicines are increasingly acceptable to the villagers.

Chief Kalaba's Village—Population

Chief Kalaba's village consists of four distinct, small clusters of houses and their subsidiary buildings and one large scattered group. The four small sections are occupied largely by closely knit kinship groups, each under a family head or elder. The populace of the large section all look directly to Chief Kalaba as their section elder and their headman, but they are by no means related members of a united group.

They are rather several independent families none of which comprise a sufficiently large, united group to establish a separate section and all of which prefer to live with Chief Kalaba than elsewhere. Chief Kalaba is the focal point of the whole village and, whilst each individual may have a number of reasons for living in the village, the heads of every household can give some tie, usually of clanship, with the chief to justify their residence in this particular village.

Chief Kalaba, as befits his position, lives in an exceptionally large brick house somewhat apart from the rest of the village which, together with a substantial brick kitchen, is enclosed by a ceremonial fence which symbolically sets the chief apart from his people. Outside the fence are three large storage bins in which the produce of his gardens and that brought as tribute and gifts are stored. Amongst the trees and shrubs which screen his dwelling Chief Kalaba's shrine, containing relics of his predecessors, is hid from the casual eye. This small, hut-like construction represents the stairway between the living chief and the spirits of his ancestors and as such it has an important place in village life. Chief Kalaba's acceptance of the Roman Catholic faith and his infirmity and near-blindness have hindered his execution of the traditional duties of a chief, and the neglected shrine is much in need of re-construction.

Chief Kalaba is, in fact, too old and infirm to undertake all the administrative and judicial duties of a Native Authority and for several years he has been assisted by an acting or deputy chief. The present deputy chief, John Chiwela, lives in a substantial brick house near the court. He is a polygamist and both his wives live in the village. Contrary to custom the junior wife lives with him and the senior wife, at present somewhat out of favour, lives nearby in another brick house.

Lumbwe Kalaba is another important person in the village. His position as 'owner of the land' of the Lule neighbourhood has been mentioned and he carries out his duties as such with vigour. He has also distinguished himself by spending all but five years of his adult life prior to his retirement in 1956 in urban employment. He has, however, quickly established himself in the village and in village life. He has an enormous strength of will and determination and an amazing energy for a man of over seventy years of age. He built a large pole and dagg house and a kitchen and surrounded them with a heavy fence which has the proportions of a stockade. He declares this barrier is to protect his household from the village flocks because he finds their presence in and around his buildings unhygienic. The fence does provide adequate protection from sheep and goats; it also offers complete privacy to its inmates and it echoes the ceremonial fence surrounding Chief Kalaba's dwelling place. These latter functions are undoubtedly significant. Lumbwe now has a large, kimberley brick house also within the confines of the fence and behind this house he has a small shrine or spirit house which is his particular place of contact with the spirits concerned with the welfare of the

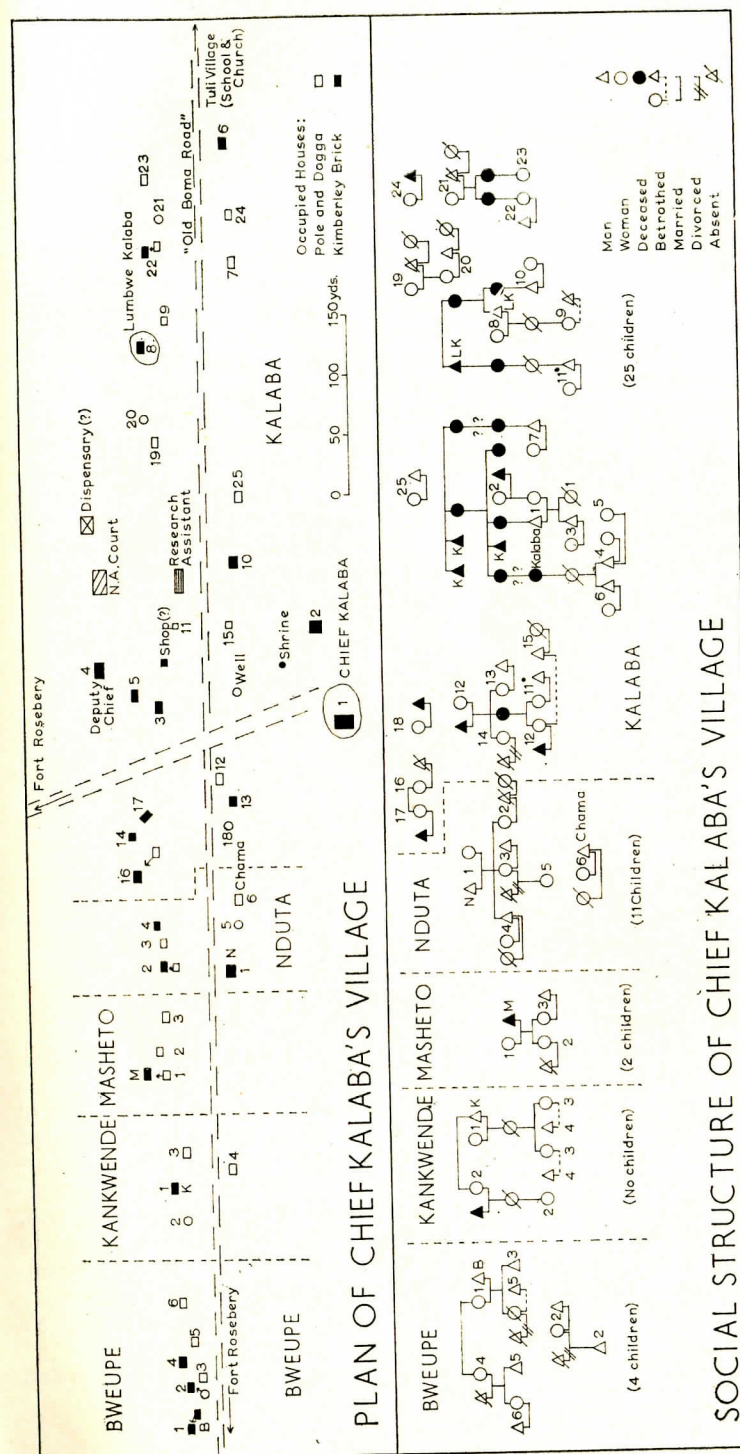


Fig. 5. Chief Kalaba's village—plan and social structure

Adults only are shown in the diagram of social structure, and the numbers given refer to the houses in the plan.

land. The obvious enthusiasm employed in building his village home has been applied to other aspects of rural life and Lumbwe is now well established in the subsistence economy of the village. His success is such that he is renowned for magic and supernatural practices which defend his person and well-being.

The other members of the village, with the exception of ex-chief Chama, have gathered around Chief Kalaba for a variety of social and economic reasons. They have come from a wide area: twenty-five (35 per cent) of the adult residents were born outside Chief Kalaba's chieftom and twelve of these were born members of other tribes. Such is the degree of mobility of the rural population that in some respects the village appears as a unit through which there is a constant flow of people, some staying but a short time, others settling for many years, and some leaving and returning at various times. Chief Kalaba, as village headman, is the permanent focal point and, despite the various subdivisions, all members of the village at all times recognize this.

At the close of 1959 there were 113 persons living in Chief Kalaba's village. These form a small part of a dynamic rural population and most families are fragments of larger kinship groups which are dispersed amongst numerous villages and, in many cases, several towns too. Statistics provided by a simple census of the village are, therefore, of very limited value outside their social context. For instance the age and sex structure of the village group (Table 2) cannot be rationally explained without reference to the village social structure. Ten household heads are guardians of fourteen children all but one of whom are offspring of their daughters or grand-daughters. These

Age Group:	0-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60+	Total
Male	6	4	3	1	9	7	3	3	5	41
Female	17	8	4	7	15	5	5	4	7	72
Total	23	12	7	8	24	12	8	7	12	113

TABLE 2. The Age and Sex Structure of Chief Kalaba's Village

children have been left with their grandparents for a variety of reasons, the two most common being that their mothers are occupied with a younger infant or their parents are absent in urban areas. Ten of them are girls. Thus a traditional behaviour pattern, accentuated perhaps by labour migration, is largely responsible for the disproportionate number of girls in the village whose presence cannot be rationally explained simply in terms of the age and sex structure of the group. Similarly four young men live in the village because they intend to marry there but they are not, as yet, fully incorporated into the group and after marriage they may or may not comply with the customary rules of uxorilocal marriage. This contingent swells the village's corps of able-bodied men.

Nevertheless some general comments may be made on the age and

sex structure and the marital status of the villagers. Children under the age of fifteen years constitute 38 per cent of the population and form the bulk of the 'dependents' in the village. Only twelve persons (11%) are over sixty years old and most of these are still active and largely independent within the subsistence economy. Women outnumber men and comprise 60 per cent of the adult population.

Marital Status	Men	Women
Bachelor/Spinster	6	6
Married (monogamously)	18*	17
Married (polygamously)		
Husband present	4	5
Husband absent		3
Grass-widows		3
Widows/Divorcees		9

* One of the married men intends to marry into the village and either divorce his absent wife or to live polygamously.

TABLE 3. The Marital Status of Adults in Chief Kalaba's Village

Six of the twenty-eight men are single and thus a large group of women, 42 per cent of the total, are necessarily without husbands; fifteen are unmarried and three are grass-widows (Table 3 and Fig. 5). Four of the single women, however, are betrothed and these, together with a fifth, a divorcee (Kalaba H.14), married during the following year; one of them married polygamously. One-third of the married women were married polygamously and during the follow-

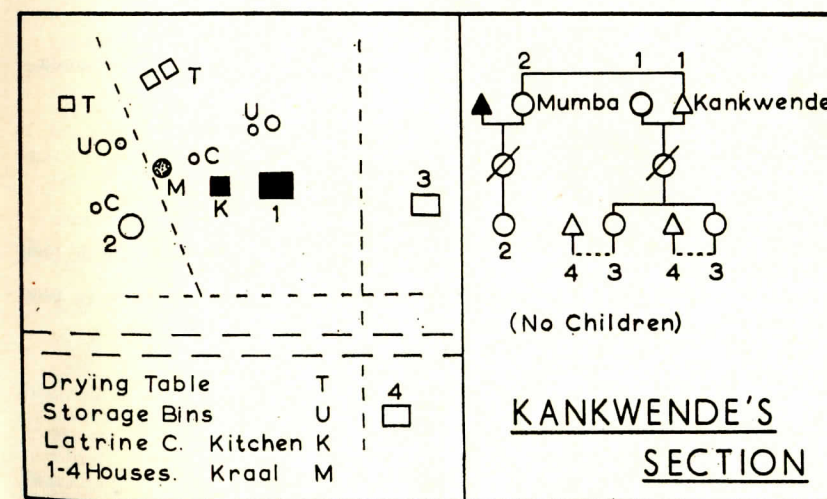


FIG. 6. Kankwende's section

Showing the distribution pattern and ownership of buildings.

ing year three men took second wives bringing the total polygamous marriages to twelve (40%) out of a total of thirty. These statistics are related, in part, to effects of the cash economy, and labour migration which remove more men than women from the village.

Analysis of such demographic data and the social structure of the village (Fig. 5) together with information on 'eating groups' and domestic organization—as reflected in the ownership of buildings, particularly food storage bins (Fig. 6)—permitted a tentative division of the village into households. A number of these households were selected to provide as far as possible, a representative sample of the village as a whole. The following directory indicates the composition and character of this sample:

HOUSEHOLDS PARTICIPATING IN THE INTENSIVE SURVEY

Notes: Reference to Fig. 5 is recommended.

KANKWENDE: indicates head of the household
Amon*: indicates head of a potential subdivision
House numbers: refer to house numbers in Fig. 5.
P: polygamous marriage
W: wife DD: daughter's daughter
D: daughter SS: son's son
S: son DH: daughter's husband

Household and Person	House Number	Sex	Age Group	Relationship to Head	Notes
KANKWENDE 1					
KANKWENDE	1	M	65-70	—	—
Mulala	1	F	60-65	W	—
Mwansa	3	F	15-20	DD	—
Chabunda	3	F	15-20	DD	—
Amon*	4	M	20-25	Nil	Betrothed to Mwansa
Chomba*	4	M	20-25	Nil	Betrothed to Chabunda
KANKWENDE 2					
MUMBA	2	F	70-75	—	—
Kashimba	2	F	20-25	DD	Incapacitated
MASHETO 1					
MWESA	1	F	50-55	—	Masheto's Widow
Dina	2	F	25-30	D	Grass-widow
Wilson*	(2)	M	25-30	DH	Employed in Ft. Rosebery Married 2nd wife in 1960
MASHETO 2					
MALIKO	3	M	30-35	—	Married 2nd wife in 1960
Sophia	3	F	25-30	W	—
Child	3	F	5-10	D	—
Child	3	F	0-5	D	—
NDUTA 1					
NDUTA	1	M	50-55	—	—
Bwalya	1	F	50-55	W	—
Child	5	F	10-15	DD	—
Child	5	F	10-15	DD	—
Child	1	M	10-15	SS	—
NDUTA 2					
SEBYO	(2)	M	20-25	—	Absent. P.
Chishala	2	F	15-20	W	—
Child	2	M	0-5	S	—

Household and Person	House Number	Sex	Age Group	Relationship to Head	Notes
NDUTA 3					
JOHN	3	M	30-35	—	—
Sophia	3	F	30-35	W	—
Child	3	F	0-5	D	—
Child	3	F	0-5	D	—
NDUTA 4					
JACOB	4	M	30-35	—	P.
Chipula	4	F	25-30	W	—
Child	4	F	5-10	D	—
Child	4	F	0-5	D	—
Child	4	F	0-5	D	—
KALABA 1					
LABAN	3	M	20-25	—	Chief's son. Employed by Health Department Married 2nd wife in 1960
Esta	3	F	15-20	W	—
Child	3	F	0-5	D	—
KALABA 2					
JOHN CHIWELA	4	M	30-35	—	Employed: Deputy-Chief. P. Junior Wife
Mark Million	4	F	20-25	W	—
Child	4	F	0-5	D	—
KALABA 3					
LUMBWE KALABA	8	M	70-75	—	—
Mwansa Angata	8	F	50-55	W	—
Juliana	9	F	15-20	DD	—
Akim*	—	M	20-25	Nil	Betrothed to Juliana
KALABA 4					
PETER MWAKA	10	M	45-50	—	—
Mumbi	10	F	35-40	W	—
Child	10	M	10-15	S	—
Child	10	M	0-5	S	—
KALABA 5					
STEPHANO	11	M	25-30	—	—
Bulandina	11	F	20-25	W	+
Child	11	M	0-5	S	—
KALABA 6					
BUNDA	14	F	40-45	W	+ Married Abel March 1960
ABEL	14	M	45-50	H	—
KALABA 7					
PHILEMON	15	M	25-30	—	Married, and betrothed to Edina. + Married Philemon Dec. 1959
Edina	12	F	20-25	(W)	—
Child	12	F	0-5	(D)	—
Child	12	M	0-5	(S)	—
KALABA 8					
KATONTOKA	13	M	45-50	—	—
Mwela	13	F	20-25	W	+
Child	13	F	5-10	D	—
KALABA 9					
MWENDA	12	F	65-70	—	+ The womenfolk of Hs. 5-9 are related; they co-operate in many aspects of village life

Household and Person	House Number	Sex	Age Group	Relationship to Head	Notes
KALABA 10					
MWELWA	(19)	M	50-55	—	P. Absent
Kaluba	19	F	45-50	W	
Child	19	F	5-10	D	
KALABA 11					
WILLIE	20	M	25-30	—	P.
Kashimbi Musebo	20	F	20-25	W	Often works with Kaluba
Child	20	F	0-5	D	
Child	20	F	0-5	D	
KALABA 12					
MPUNDU	24	F	50-55	—	
Child	24	F	0-5	DD	
KALABA 13					
LUKOMONA	25	M	55-60	—	
Kunda	25	F	45-50	W	

These twenty-one households with a total population of 70, including 46 economically active adults of whom 25 are women, comprise more than sixty per cent of the population of Chief Kalaba's village. They embrace a wide range of types of households and individuals, and analysis of their economic life may provide a representative case study of Ushi village life on the Fort Rosebery plateau.

THE AGRICULTURAL SYSTEM

THE agriculture of Chief Kalaba's village, like that of all the Ushi, is a primitive system of subsistence cultivation. No cash crops as such are produced and crop sales are incidental to the provision of food for the family. The Ushi are not a cattle-keeping people and domestic livestock have a very minor role in their economy. Nor can hunting and fishing be relied upon to provide adequate and continual supplies of protein, so considerable emphasis is placed on the production of 'relish' crops, particularly groundnuts and beans. The staple food crops are finger millet, the traditional main crop, and cassava, a relatively recent introduction of considerable significance.

The basic techniques involved are popularly known as 'slash and burn', 'ash cultivation' and 'bush fallowing', and are characteristic of shifting cultivation systems throughout the tropical world (Gourou, 1952). Amongst the Bemba-speaking tribes the cut-over area is known as *chitemene* but, by common use amongst both Africans and Europeans, this word has acquired value as an adjective and is indiscriminately used to describe the whole system and the cultivated plots. The *chitemene* system is admirably adapted to the physical environment, the technology and traditions of the villagers, and to their dietetic requirements and tastes. It is capable of modification and change, and cassava culture has been successfully incorporated with the traditional, pure millet cultivation.

Land Tenure and Land Holding¹

The *chitemene* system, even when infused with cassava culture, is a form of shifting cultivation and can support only a low population density. Settlements need not be moved frequently, if at all, provided individuals range over a wide area from their village and cultivated plots are constantly changed. Such conditions apply at Chief Kalaba's village, and gardens are made up to ten miles from the village, though most are within a radius of six miles. With no apparent shortage of either land or trees, and no vested agricultural interests in any parcel of land for an indefinite period, principles of land tenure have not been clearly defined. Such principles as do exist are, in fact, elementary and simple, but they refer to the rights of an individual to live and earn a living in the village rather than to property rights; they are concerned with the use of land rather than with land ownership.

Amongst the Ushi there is no system of land tenure in the European sense of the phrase, and much confusion has been generated by seeking

¹ *vide* White, C. M. N., Land Tenure Report No. 5, 1958.

such an institution. Political and administrative functions of tribal leaders often have been misinterpreted as coincident with property rights because of the use of such words as *chalo* and *mpanga*, 'country' and 'land' respectively, to indicate the extent of a chief's or headman's jurisdiction. *Mwine mpanga*, literally 'owner of the land', refers to a political and judicial head and spiritual guardian of an area and of the people living therein, and not to property rights of the individual concerned (*vide* Kay, 1960). In Kalaba's village there are three *mwine mpanga*. Chief Kalaba is 'owner' of his entire chiefdom, and also has claims to suzerainty over areas beyond, such as Chief Chisunka's territory. Ex-Chief Chama is still 'owner' of *buseba*, his former chiefdom near Lake Bangweulu, which is distinct from Kalaba's plateau area known as *myulu*. And, as indicated above, Lumbwe Kalaba is 'owner' of the Lule neighbourhood and shares spiritual duties and responsibilities there with the chief. Similarly, every village headman is *mwine mushi* (owner of the village), of which he is the political and, usually, the family head; the same term is frequently used in respect of village section elders. It has, therefore, been a simple matter to assume that absolute ownership of the tribal lands is vested in the Senior Chief and that property rights devolve with political offices. However, even allowing this argument, it is clear that no individual could personally own land, but rather would hold it in trust as an adjunct of his office and should be bound to leave it as received to his successor.

The system of land holding is, in fact, related to the system of land usage. Residence in a village confers rights to cultivate land and exploit other natural resources in the surrounding area, and only through their control of population movements can political authorities indirectly veto the allocation of land. Each villager can select his own plots in any unoccupied tract. A stranger might ask the headman, and a newly married man might ask his father-in-law, to point out unoccupied land in order to avoid disputes, but he need not request gifts of land. No one is restricted to any particular locality and, though it is more convenient to have gardens close to one another, it is permissible to have a scatter of plots in all directions and at any distance from the village. There is no defined 'village land' exclusively reserved for the occupants of any settlement, though, naturally, the land nearest to each village is used most by residents of that village.

The cultivation of land confers absolute and free rights over the use of the area cultivated for as long as it is used, and also prior rights over adjacent areas. There are three potential sources of conflict in these qualifications:

1. The definition of abandoned land.
2. The clash of 'prior rights over adjacent areas' when such areas are common to two or more individuals' gardens.
3. The division of standing crops and the allocation of land rights when cultivators change, as on separation, divorce and death.

The definition of abandoned land is related to the particular system of cultivation and varies considerably. Full rights are preserved whilst land is fallowed, but if land is left for longer than the customary fallow period and there are no extenuating circumstances it may be regarded as abandoned, vacant land. Disputes over prior rights are usually settled on the grounds that the first to actually cultivate or cut trees in the disputed area has full rights, and one may mark out the *chitemene*, in its strict sense, by pollarding trees at widely spaced intervals along the boundary of the area to be ultimately cut over. Disputes over land accompanying matrimonial cases and death are often settled by population movements, but each case is dealt with individually; gardens can be given away, and bequeathed.

There is no recognized procedure or precedent for settling land disputes and each case is settled individually and usually without litigation. Formal legal proceedings in such cases are not likely, as they are in so many other civil cases, to benefit either party involved; compensation, and thus financial gain, is rarely expected and therefore there is rarely need for the decision of the Native Authority Court. In any case, common sense, an intimate knowledge of each other's rights, and reference to the village headman and public opinion reduce land disputes to a minimum, and in Chief Kalaba's village where there is no shortage of trees they are relatively rare.

No resident is precluded from holding land; men, women and even children may have their own gardens. During 1960 a schoolboy in Kalaba's village, dissatisfied by the provisions supplied by his mother and step-father, cultivated his own garden to supplement his diet and to provide for his future because he felt he might be disowned and had no close relatives to depend upon. The extent of a person's holding is not formally limited, but in practice it is controlled by several factors. Of these the available labour at critical times of the agricultural year is, in many cases, the most restricting, but even where ample labour is available the gardens are usually no more than sufficient to satisfy those dependent on them. There being very limited market opportunities any surplus would probably be eaten by friends and relatives and the only return would be a good name whilst, at the same time, such opulence could engender jealousy and witchcraft. Shortly after the 1960 harvest Nduta fell ill, and he attributed his malady to the sorcery of someone who envied his agricultural wealth. He believed his life was in danger and so informed Chief Kalaba that he intended to leave the village; he made this generally known. A few days later the Chief, no doubt anxious not to lose Nduta, announced that he believed Nduta to be suffering from sorcery but that a social dispute lay at its source, and he named the possible offenders. At the same time he reiterated his warning about nefarious practices during and after harvest, and so covered the original accusation too. The next day Nduta recovered, and the case strengthened the belief in both sorcery and in Kalaba's reputation as a just and able chief.

The role of labour in controlling the size of gardens is not simple. An elementary family is usually dependent on the energy of the husband and wife, but extra labour can be purchased by either the traditional supply of beer for working parties or by payments in cash or kind, usually salt, fish, clothing or, occasionally, seed or foodstuffs. Chief Kalaba, now unable to depend on tribute labour (though some is still voluntarily rendered), has gardens cultivated for him by parties working for beer. The Deputy-Chief employs much labour both through beer parties and by individual payments, and he has extensive gardens though he himself does little agricultural work. Also, absentee villagers can hold gardens and may pay for their cultivation for as long as they maintain contact with the village. This is valuable in that it facilitates labour migration, particularly for short periods during which both husband and wife can be absent, and otherwise migrants might soon find themselves destitute on their return. Without reasonable market opportunities there has been no serious abuse of this system, but certain potential problems are obvious. The possibility of absentee land holders, well established in paid employment, hiring village labour for a pittance to produce saleable crops for them is a fanciful notion at present, but no more fanciful than the hope of introducing a cash crop into the village agriculture.

The head of a household may also benefit from the labour of his dependents, though this is notoriously meagre, and in particular from his sons-in-law. Children assist in numerous economic activities but are rarely pressed into working alongside their parents. Many, therefore, have had little apprenticeship in village life before they are betrothed and during this period and the early years of marriage they are expected to acquire and demonstrate the necessary skills and the ability to support themselves and a family whilst working under their father-in-law. Also a full complement of gardens cannot be established in one season, and thus the period an economic household has existed in the village also affects its number and size of gardens. Young couples are usually supported by the wife's parents, for whom they, in return, work, until they have been able to cultivate sufficient gardens to support themselves. Finally, agricultural labour is a form of marriage payment, and can now be commuted for a cash payment if both parties agree. If the husband wishes to leave the village and, perhaps, take paid employment, it is usual to pay cash in lieu of labour, but should the young couple stay in the village the traditional behaviour pattern is beneficial to both parties. An example of both cases was seen in Kankwende's Section. Chomba and Chabunda were anxious to dissolve parental ties, vested in Chabunda's maternal grandparents, as soon as possible and be free to seek employment in Fort Rosebery; they undertook to pay cash rather than labour. Amon and Mwansa, on the other hand, settled in the village and worked for both Kankwende and themselves. In September, at the close of the tree-cutting season, Kankwende and Mulala provided Amon with a feast of chicken and beer in recognition of his assistance

during the past season. This also served to demonstrate Mwansa's ability as a cook, for she was given credit for the feast, to both Amon and those of his relatives and friends he cared to invite.

Rights of land holding are clearly related to the distribution and grouping of the population and to the prevailing system of agriculture. The extent of land held is largely controlled by the availability of labour and, in the absence of markets, by the subsistence requirements of any household. No permanent, vested interests in any parcel of land have emerged and land has acquired no commercial value; no system of land ownership has, therefore, evolved. The villagers are, however, very conscious that the land they occupy is theirs for their own use, and aliens with interests in land are treated with suspicion unless they make it quite obvious that they intend to emerge themselves into the local society. Similarly, any obvious abuse of the customary land rights would probably be opposed by public opinion.

Domestic Livestock

Domestic animals are quite insignificant in everyday life but they have an important role as status symbols and on numerous social and ritual occasions. Chickens are customarily eaten on occasions that call for a feast, and they are presented as gifts at events such as the succession of a village headman who must then offer the Chief a chicken—white chickens are highly prized for such purposes. Otherwise poultry are rarely eaten, and an aversion to eating eggs persists, though it is not universal. This dislike is rarely explained directly and questions are avoided by saying eggs are required for other purposes—for sale, or for broody hens. It appears, however, to be based on a fear of stomach disorders and, particularly in children, of a 'hardness' of the stomach; could this be related to the swollen spleen in malaria cases?

Sheep are more numerous in Chief Kalaba's village than in most Ushi settlements, and within a radius of about 500 yards of the village they have precedence over gardens. In February 1960, there were 38 sheep in the village. Bweupe had the largest flock of 16 and Nduta kept 14 but owned only six. The others belonged to his relatives and friends. The remaining eight were owned by three families. Twenty-six of the 38 were ewes, but there were only five lambs of less than one year old. This is not altogether surprising in view of the standards of husbandry. All the sheep usually move as one flock, unattended, and they graze at will in the surrounding bush and dambo. They rarely stray far even in the dry season, and each night they are rounded up, separated into groups according to owners, and cooped up in small, log kraals which are only occasionally cleaned out. Little interest is shown in the welfare of the sheep, but they are regarded as a reserve of meat for special occasions and as an ultimate source of cash. During the previous year six sheep were killed for such purposes and one was taken by a leopard.

The only cattle in the village belong to Chief Kalaba. He had

nine at the beginning of 1960, but killed three, two bulls and a cow, during the subsequent twelve months. A bull was slaughtered in January to present the villagers with a feast, as is Chief Kalaba's custom at Christmas or New Year. This occasion was surrounded by peculiar circumstances. Chief Kalaba had planned to kill the beast on 24 December, but he dreamed during the night before that MAKUMBA wished him to delay the feast. On 8 January he again dreamed of MAKUMBA, and the tribal god then advised him that the time for the feast had come. These events coincide with others of probable significance. At Christmas there was plenty of exotic foodstuffs in the village and I had presented each family with sufficient dried fish for a meal. Kalaba's bull could have added substantially to the general celebrations and feasting, but the Chief might not then have received full credit due for his generous action. On the other hand between the 8th and 11th of January requirements of MAKUMBA were issued through Lumbwe Kalaba regarding the villagers' diet during the period of millet germination. In order to ensure a good millet crop everyone in the neighbourhood were to restrain from eating *Katapa*, the common dish made from cassava leaves, and other relishes, including sweet potato leaves and mushrooms, were to be avoided until the millet had fully established itself. The 1959 millet harvest had been very poor, and this was attributed by Lumbwe and others to general disrespect for MAKUMBA. Therefore, at least in Chief Kalaba's village, heed was taken of these avoidances even though other relishes were scarce. It was thus a very opportune occasion for Chief Kalaba to provide a feast of beef, which was then extremely well received.

During May Chief Kalaba killed a cow to welcome and honour a distinguished 'nephew' of his who returned from the Congo. The carcass was presented to this man, Katebe, who sold much of the meat for his own profit. The third beast was slaughtered for purely financial reasons and was, in fact, killed and mostly sold in Fort Rosebery, though some meat was sent back to Kalaba. This effort, under Katebe's supervision, was to defray expenses involved in hunting an elephant which Chief Kalaba had undertaken at considerable cost (*vide* Kay, 1961).

The cattle are given little more attention than the sheep, though they usually have a herd boy in charge of them. They fend for themselves and are only occasionally provided with crop wastes, such as green maize stems, which are thrown into the kraal. This kraal, a crude, open structure of logs, is periodically cleaned out and the manure is occasionally incorporated in mounds for growing tobacco. However, during the rainy season especially, the cattle often stand up to the hocks in mud and dung. Without a fundamental change in the attitude of the villagers it seems unlikely that standards of animal husbandry will improve, and they could hardly be worse than at present.

Types of Garden

The *chitemene* system of agriculture permits numerous variations in cultivation and different sequences of land use. Also terminology¹ varies considerably, and that used in Chief Kalaba's village is not found in all Ushi areas.

Chitemene, in its strict sense, refers to the cut-over area, and the circular ash patch where the branches have been burnt is called a *bukula*. The *bukula* is planted with cassava, maize, millet and numerous cucurbits, vegetables and herbs and is then referred to as a *munda*. The following year, when all the crops except cassava have been harvested, groundnuts are sown amongst the cassava and at the periphery of the former ash circle; the garden then becomes a *nsawa*. During the third and fourth years, after the groundnuts have been lifted and whilst the cassava is being harvested, the garden is called a *cifwani*; catch crops may be taken as the cassava is removed. The *cifwani* may also be referred to as a *munda*, but it is then distinguished by reference to the crops growing there.

When the cassava has been removed a stage in cultivation has been completed and the garden may then be abandoned, or rested under a grass fallow for a year or two, or immediately recultivated. When recultivated it is dug into mounds and planted mainly with pulses and root crops, and is known as an *icifuka*—'rested land'. (This word, in other Ushi areas, refers to actual fallows and to abandoned garden sites, and such hoe-cultivated gardens are known as *mabala*.) Such an *icifuka* garden cannot be made on the site of the *munda* until four years after the *chitemene* was first cut. To avoid this delay and in cases when the *cifwani* are infertile, gardens are often cleared directly from the bush and cropped as *icifuka*; this, of

Year	Type of Garden	Main Crops
1st	Chitemene	—
	Bukula	—
	MUNDA	Millet, Cassava, Maize, Cucurbits, Vegetables
2nd	NSAWA	Groundnuts, Cassava
3rd	CIFWANI	Cassava (Cassava harvest begins)
4th	CIFWANI	Cassava (Cassava harvest completed)
5th/6th/ 7th	Fallow or ICIFUKA	—
1st	Woodland	—
	ICIFUKA	Pulses, Rootcrops, Maize, Vegetables
	ICIFUKA	Pulses, Rootcrops
	Fallow or ICIFUKA	Cassava

TABLE 4. Types of Gardens in Chief Kalaba's Village

¹ To minimize confusion with vernacular words I have avoided the use of plurals, and have adopted the procedure of using nouns in the vernacular as adjectives where convenient.

course, increases the burden of clearing land, and thin woodland and areas cut over for *chitemene* are often used. These gardens are also called *icifuka*, which is rather an anachronism because they are, in the first instance, on newly cleared land.

All *icifuka* may be recultivated, with alternate periods of grass fallow, for an indefinite period but, with a new *chitemene* cut each year, any one plot is rarely used for more than six or seven years. They are then abandoned and woodland regenerates slowly.

A census of the village gardens was taken in February 1960, when most plots were planted. Some small plots were subsequently sown with a variety of cowpeas, and these are not indicated in the census. Unfortunately it was not possible to measure any gardens, nor to map their distribution. Sizes varied considerably, but no gardens were very large. The *icifuka* usually occupy only part of the original *munda*, and hoe-cultivated gardens taken in directly from the bush are mostly small too. The *munda* and *nsawa* are, of course, the main gardens. The results of the census for those households participating in the intensive survey are shown in Table 5.

A full complement of gardens consists of six or more plots, and even if the *icifuka* are taken in directly from the bush four years are usually required to establish a household firmly. Eleven households have six or more gardens, and another (Kalaba 8) has five, the cassava in one *cifwani* being exhausted, and is also well established. Four other households (Nduta 2 and 3, Kalaba 5 and 10) each have four gardens; sufficient to assure their independence but with little surplus and a narrow margin of security should any crop fail. These households are still small. Two of the heads are polygamous and therefore share their labour and their demands between two households. The adults, with the exception of Mwelwa and Kaluba, are young and able-bodied, and the men look towards the cash economy whenever opportunity offers; the prestige of being a beneficent host within the village does not yet have much appeal to them.

Household and Owner	Type of Garden	Approx. Distance from Village (Miles)	Main Crops
<i>Kankwende's Section</i>			
Hh. 1			
(a) Kankwende and Mulala	MUNDA	4	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	6	Groundnuts, cassava, beans, some maize and vegetables
	CIFWANI	5	Cassava
	CIFWANI	7	Cassava
	ICIFUKA	2½	Beans
	ICIFUKA	6½	Groundnuts, beans
	ICIFUKA	3	Peas, cowpeas
	ICIFUKA	4	Sweet potatoes, cassava

Household and Owner	Type of Garden	Approx. Distance from Village (Miles)	Main Crops
(b) Amon and Mwansa	ICIFUKA	6	Groundnuts, beans, maize, vegetables
	ICIFUKA	4	Groundnuts, beans, peas, cassava
Hh. 2 Mumba	MUNDA	8	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	9	Groundnuts, cassava, peas, some maize and vegetables
	CIFWANI	4	Cassava
	CIFWANI	7	Cassava, castor beans
	ICIFUKA	3	Groundnuts, beans
	ICIFUKA	2½	Sweet potatoes, cassava
<i>Masheto's Section</i>			
Hh. 1			
(a) Mwesa	MUNDA	2	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	3	Groundnuts, cassava, beans, some maize and vegetables
	CIFWANI	6	Cassava, sweet potatoes
	CIFWANI	8	Cassava, castor beans
	ICIFUKA	4	Groundnuts, beans
	ICIFUKA	5	Sweet potatoes, cassava, peas
	ICIFUKA	3	Cowpeas
(b) Dina and Wilson	MUNDA	4	Millet, cassava, maize, cucurbits and vegetables
	NSAWA	2	Groundnuts, cassava, some vegetables
	CIFWANI	6	Cassava
	ICIFUKA	5	Groundnuts, beans
Hh. 2 Maliko and Sophia	MUNDA	4	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	5	Groundnuts, cassava, beans, vegetables
	CIFWANI	7	Cassava, castor beans
	ICIFUKA	4	Groundnuts, beans
	ICIFUKA	3	Beans, peas, cassava
	ICIFUKA	6	Sweet potatoes, cassava

Nduta's Section
Hh. 1

Nduta and Bwalya	MUNDA	4	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	3	Groundnuts, cassava, some maize, vegetables
	CIFWANI	8	Cassava, beans
	CIFWANI	6	Cassava
	ICIFUKA	5	Beans, sweet potatoes, cassava
	ICIFUKA	7	Groundnuts, peas
	ICIFUKA	7	Sweet potatoes, cassava, peas

<i>Household and Owner</i>	<i>Type of Garden</i>	<i>Approx. Distance from Village (Miles)</i>	<i>Main Crops</i>
Hh. 2 Chishala and Sebyo	MUNDA	3	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	4	Groundnuts, cassava, some vegetables
	CIFWANI	7	Cassava
	ICIFUKA	5	Beans, peas
Hh. 3 John and Sophia	MUNDA	5	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	3	Groundnuts, cassava
	ICIFUKA	1½	Groundnuts, beans, peas, cassava
	ICIFUKA	2	Sweet potatoes, cassava
Hh. 4 Jacob and Chipula	MUNDA	3	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	4	Groundnuts, cassava, some vegetables
	CIFWANI	5	Cassava
	CIFWANI	6	Cassava
	ICIFUKA	6	Groundnuts
	ICIFUKA	2½	Beans, cassava
	ICIFUKA	3	Sweet potatoes, cassava, peas
<i>Kalaba's Section</i>			
Hh. 1 Laban and Esta	MUNDA	5	Millet, cassava, maize, cucurbits, vegetables
	ICIFUKA	3	Groundnuts, beans, peas, cassava
Hh. 2 (a) John Chiwela and Mark Million	MUNDA	8	Millet, cassava, maize, cucurbits, vegetables
	CIFWANI*	7	Cassava *(bought)
	ICIFUKA	4	Groundnuts, beans
	ICIFUKA	2½	Groundnuts, peas, cassava
	NSAWA	4	Groundnuts, cassava, some vegetables
(b) John Chiwela and Estele (not in survey)	CIFWANI*	6	Cassava *(bought)
	ICIFUKA	3	Beans, cassava
	ICIFUKA	7½	Sweet potatoes, cassava, peas
Hh. 3 (a) Lumbwe and Mwansa Angata	MUNDA	7	Millet, cassava, maize, cucurbits vegetables
	NSAWA	3	Groundnuts, cassava, vegetables
	NSAWA	5½	Groundnuts, cassava, maize, vegetables
	CIFWANI	5	Cassava
	CIFWANI	4	Cassava
	ICIFUKA	8½	Sweet potatoes, cassava, peas
	ICIFUKA	2½	Beans

<i>Household and Owner</i>	<i>Type of Garden</i>	<i>Approx. Distance from Village (Miles)</i>	<i>Main Crops</i>
(b) Juliana and Akim	ICIFUKA	4	Groundnuts, peas, beans, cassava
	ICIFUKA	2½	Sweet potatoes, cassava, peas
Hh. 4 (a) Peter Mwaka and Mumbi	MUNDA	4	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	3	Groundnuts, cassava, maize, vegetables
	CIFWANI	6	Cassava
	ICIFUKA	5	Groundnuts
	ICIFUKA	2	Beans, cassava
	ICIFUKA	7	Sweet potatoes, cassava, peas
(b) Musa (son)	MUNDA	3	Millet, cassava, maize, vegetables
Hh. 5 Stephano and Bulandina	MUNDA	8	Millet, cassava, maize, vegetables, cucurbits
	NSAWA	4	Groundnuts, cassava, maize
	CIFWANI	6	Cassava
	ICIFUKA	2	Beans, sweet potatoes, peas
Hh. 6 Bunda	MUNDA	4½	Millet, cassava, maize, vegetables, cucurbits
	NSAWA	3	Groundnuts, cassava, maize, vegetables
	CIFWANI	6	Cassava, castor beans
	CIFWANI	9	Cassava
	ICIFUKA	2½	Groundnuts, beans
	ICIFUKA	7	Sweet potatoes, cassava
Hh. 7 Philemon and Edina	ICIFUKA	4	Groundnuts, beans, peas
	ICIFUKA	6	Sweet potatoes, cassava, vegetables
Hh. 8 Katontoka and Mwela	MUNDA	6	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	4	Groundnuts, cassava, vegetables
	CIFWANI	7	Cassava
	ICIFUKA	5	Cassava, sweet potatoes, peas
	ICIFUKA	2½	Groundnuts, beans
Hh. 9 Mwenda	CIFWANI	5	Cassava
	ICIFUKA	3	Groundnuts, beans, peas
Hh. 10 Mwelwa and Kaluba	MUNDA	4	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	2½	Groundnuts, cassava, beans, maize
	CIFWANI	6	Cassava
	ICIFUKA	5	Sweet potatoes, cowpeas
Hh. 11 Willie and Kashimbi- Musebo	MUNDA	6	Millet, cassava, maize, cucurbits, vegetables
	ICIFUKA	5	Groundnuts, beans

Household and Owner	Type of Garden	Approx. Distance from Village (Miles)	Main Crops
Hh. 12 Mpundu	MUNDA	4	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	2	Groundnuts, cassava, maize, vegetables
	CIFWANI	5	Cassava
	CIFWANI	7	Cassava
	ICIFUKA	6	Groundnuts
	ICIFUKA	3	Beans
	ICIFUKA	4½	Sweet potatoes, cassava
Hh. 13 Lukomona and Kunda	MUNDA	5	Millet, cassava, maize, cucurbits, vegetables
	NSAWA	4	Groundnuts, cassava, vegetables
	CIFWANI	6	Cassava
	CIFWANI	3½	Cassava, peas, beans
	ICIFUKA	7	Beans
	ICIFUKA	7	Groundnuts
	ICIFUKA	2½	Sweet potatoes, cassava

TABLE 5. Types of Garden by Households and Owners, February 1960

Some small plots, planted with cowpeas in March, are omitted, as also are the village gardens of tobacco and bananas.

The more important cucurbits and vegetables referred to but not named are various pumpkins, gourds, cucumbers and melons, several varieties of cowpeas and peas, and numerous edible or otherwise useful green vegetables, herbs and spices.

Seven types of cassava were named of which two, *Kabala* and *Tambwani*, were common, two were rare—*Luongo* and *Mwansanga*—and the other three, *Matitimushi*, *Tamba* and *Salati*, were grown but not abundantly.

John Chiwela's gardens provide an example of a situation in a polygamous household. Each division has four gardens. With Mark Million, the junior wife whom he married the previous year, he holds a *munda* in the only *chitemene* cut in 1959, two *icifuka* made in the bush, and a *cifwani* with a standing crop of cassava which he purchased. With Estele, the senior wife, Chiwela has no *munda*, but one *nsawa* from the 1958 *chitemene*, two *icifuka* cultivated in former *munda* gardens, and one *cifwani* purchased for £5 10s. 0d. Chiwela had to buy the *cifwani* gardens because after taking the second wife the cassava in his own was rapidly exhausted. Anxious to establish a minimum food supply for his new wife Chiwela devoted most of his activity in 1959 and 1960 to providing her with gardens, and he planted much of the new *icifuka* gardens with groundnuts to compensate for the absence of an *nsawa*.

Four households (Kalaba 1, 7, 9 and 11) have only two gardens each. Three of these consist of newly married couples who have their first *munda* and/or gardens cleared in the bush. The fourth consists of a widow, who has a meagre supply from long cultivated

plots. None of these households can, in fact, support themselves from their gardens alone. Laban (Kalaba 1) is able to exploit his position in the cash economy—he travels much during his work—and his membership of the Chief's family; and his wife often eats with John Chiwela's senior wife. Philemon and Edina (Kalaba 7), recently married, depend to some extent on Edina's relatives with whom she worked before her marriage, and they receive assistance from Bunda (Kalaba 6) in particular. Mwenda (Kalaba 9) is also partly dependent on her relatives; and the womenfolk of households 5 to 9, though now separated by marriages, form a loose association in respect of food production and co-operate more closely in food preparation. Similarly, Willie and Kashimbi (Kalaba 11) still receive assistance from Kashimbi's mother on whom they were dependent until recently. Willie is a polygamist and therefore distributes his labour and requirements between his wives. Each of these households ought to be subdivisions of larger households, but their particular social circumstances prohibit this.

Three households do contain subsidiary, embryonic elements, two of which (Kankwende 1(b) and Kalaba 3(b)) have each taken in two small *icifuka* gardens, and one (Masheto 1(b)) has four gardens and is approaching self-sufficiency. In all cases these subsidiary families work, to some extent, for their respective elders who, in turn, assist them until they attain independence.

The rest of the village census provides comparable data and only Chief Kalaba's gardens require comment. Chief Kalaba has eight plots; one *munda*, two *nsawa*, three *cifwani* and two *icifuka* gardens. This composition shows a higher proportion of main gardens, *munda* and *nsawa*, than is general, and *icifuka* are relatively insignificant. This reflects a greater adherence to the traditional *chitemene* system than is general, and is probably due in part to the use of labour employed by beer parties which is customarily used in tree cutting and related activities rather than hoeing.

The Agricultural Year

The main agricultural operations may be divided into six categories:

	Percentage of Time Spent in Agriculture
1. Cultivating	20.2
2. Sowing and Planting	13.1
3. Weeding	4.3
4. Harvesting	31.4
5. Cutting <i>Chitemene</i>	18.1
6. Collecting and Piling Branches	12.5
x. Miscellaneous (Stock Keeping)	0.4

The total agricultural work done by the 25 women and 21 men participating in the intensive survey is shown divided into these six categories and by weekly periods in Fig. 7. This presentation of relatively

crude data provides a useful picture of the agricultural year and of the demands each operation made on the villagers.

It is unfortunate that the survey could not have begun in November with the first heavy rains and the start of the 1959-60 agricultural year. By 14 December, from which date records were kept, three distinct phases of sowing and planting were virtually complete and the sowing of millet, which is regarded as the most important event of the season, was about to begin.

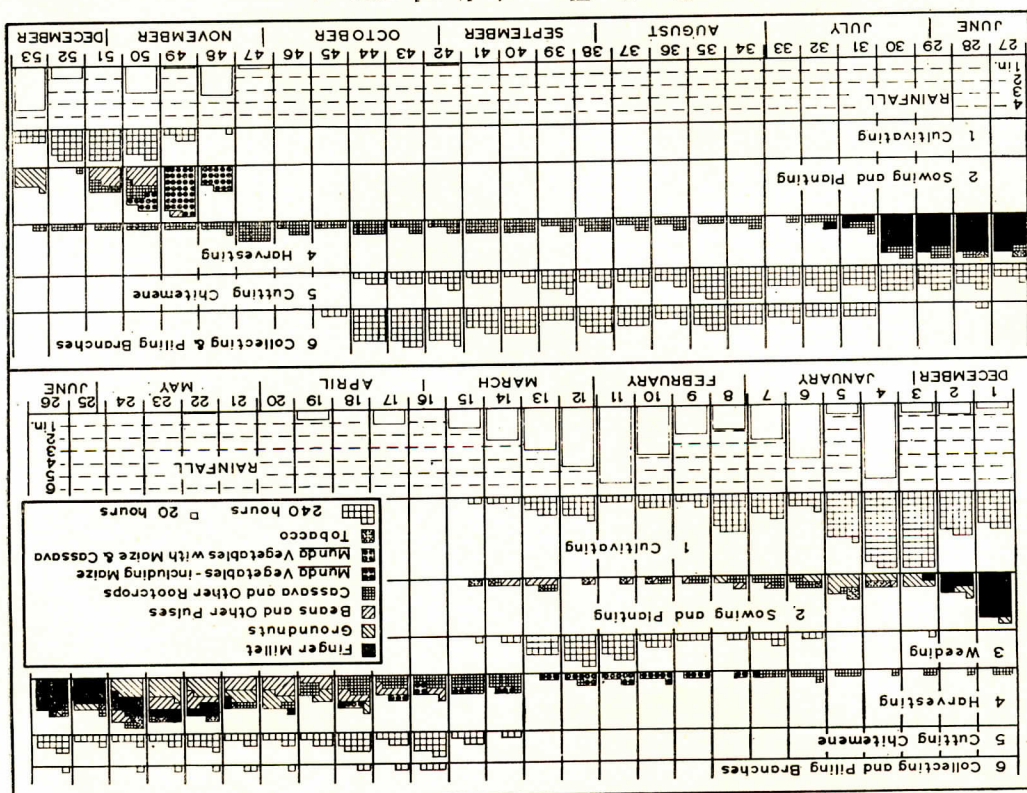
The last week in November and the first few days of December were dry, and heavy, prolonged rain was anxiously awaited. Such rain came just before the survey commenced—(3.57 inches fell at Fort Rosebery between 6-13 December)—and ushered in a period of intense activity. Weeds had sprung up in the *munda* gardens and were removed by a light hoeing. Then, mostly by group labour, millet was sown broadcast and covered with ash-strewn soil. Virtually all the millet was sown before Christmas, which was fortunate because there was not another period of heavy rain in December. Chief Kalaba was one of the last to sow millet, and he called upon his villagers and others from nearby to render free service for this operation on 20 December.

Millet is the one crop surrounded by ritual and ceremonies, and this probably reflects its former position as the sole staple crop of the Ushi. Lumbwe Kalaba, the 'owner of the land', was at the heart of these ceremonies. Before sowing commenced he prayed at his shrine for blessings on the crop. He was said to have 'soft hands' for sowing, and was invited to cast the first handfuls of seed in each garden—even Chief Kalaba availed himself of this service. Then the workers, calling on MAKUMBA for a good return as they entered the garden, completed sowing the whole of the burnt ash circle. In January Lumbwe Kalaba announced certain conditions required by MAKUMBA and made known to him in a dream, in order to ensure the god's favour and a good crop of millet. Until the millet was firmly established *katapa* and several other vegetables and mushrooms should not be eaten. These avoidances were kept strictly for a few days and no *katapa* was eaten in the village for a month until Lumbwe announced that MAKUMBA had taken note of their respect and, as all could see, the millet was growing strongly.

Meanwhile hard work continued in the other gardens. Plots were cleared and mounds were dug. Second and third sowings of ground-nuts were made during December and January. Then, towards the end of January and during February, attention turned to planting sweet potatoes and cassava, and to late sowings of beans. Finally, during March, a late sowing of a type of cowpeas brought cultivation to a close in the main gardens. In the village tobacco seeds were sown on specially prepared, rich seedbeds during January and were transplanted to carefully cultivated, flat-topped mounds in the latter half of February and throughout March. The leaves were collected as they became ready during May and June. Fig. 7 presents a conservative figure for the time devoted to tobacco because it was often attended to during otherwise spare moments and thus escaped full recording.

The total agricultural work carried out by 25 women and 21 men between 14 December 1959 and 13 December 1960 is presented by weekly periods in six categories, two of which—Harvesting and Sowing and Planting—are subdivided according to the main crops concerned. The rainfall figures for Fort Rosebery are also shown. Week 53 consists of two days only.

Fig. 7. The agricultural year



For two and a half months after the rains commenced, cultivating, planting and sowing dominated life in the village and agricultural activity was intense. By mid-February the excitement and work of the new agricultural year had subsided and the crops grew in the care of MAKUMBA. Weeds flourished too and some attempts were made to keep them at bay, particularly in the *nsawa* gardens. Weeding, however, was not popular and the wet weather of February and March diminished what enthusiasm there was. Monkeys, wild pigs and, later, guinea fowl, did some damage to crops, but little was done to deter these pests. Kankwende fenced his *munda* garden, employing people for this purpose by the provision of beer, but others did no more than dig pits and set traps in the hopes of catching pigs and guinea fowl.

Harvesting, other than the collection of cassava roots and leaves, began in January as pumpkin leaves and maize ripened in the *munda* gardens, and for three months, but particularly at the end of February and beginning of March, these gardens yielded vegetables, cucurbits and maize. They provided fresh relish and much of the produce was dried for future needs; seed was also carefully stored. Bean leaves, some green beans, cowpeas and a few groundnuts which had sprouted from nuts missed in the previous harvest, were collected as required throughout the rains, but the main harvest of the principal crops did not begin until April. Beans, together with peas and cowpeas, were the first crops harvested in quantity, but by mid-April the first groundnut crop was ready for lifting. Harvesting groundnuts required considerable labour because the ground rapidly became hard after the rains ceased. By mid-May the millet harvest had begun and at the close of the month it dominated the women's work. Collecting millet demanded patient steady work; the yield was a good one and each of the many heads of grain was cut with a small knife, packed into baskets and carried to the village for storage.

The millet harvest did not pass without reference to MAKUMBA. On 27 May Lumbwe Kalaba declared that *katapa* should not be eaten with bwali made of millet flour, though it may be consumed with cassava flour. MAKUMBA had blessed the people with plenty of millet and an abundance of good relish crops, and such goodness should not be abused by eating poor relish with millet flour. This declaration had little effect because few *katapa* dishes were being served anyway. More notable was the announcement made by Chief Kalaba and Lumbwe that Monday 6 June (Whit-Monday) was to be a holy day of thanksgiving and only light, essential tasks were to be undertaken. Chief Kalaba brewed a copious supply of beer to provide a free beer party for his village and other friends. This was to symbolize the first tasting of the fruits of MAKUMBA's goodness. Two days after this festival Chief Kalaba declared that the first Monday of each month should be kept as a holy day to honour MAKUMBA and to procure his continued blessing. By July, however, this protocol was largely forgotten and ignored.

The millet harvest brought a period of tension into the village.

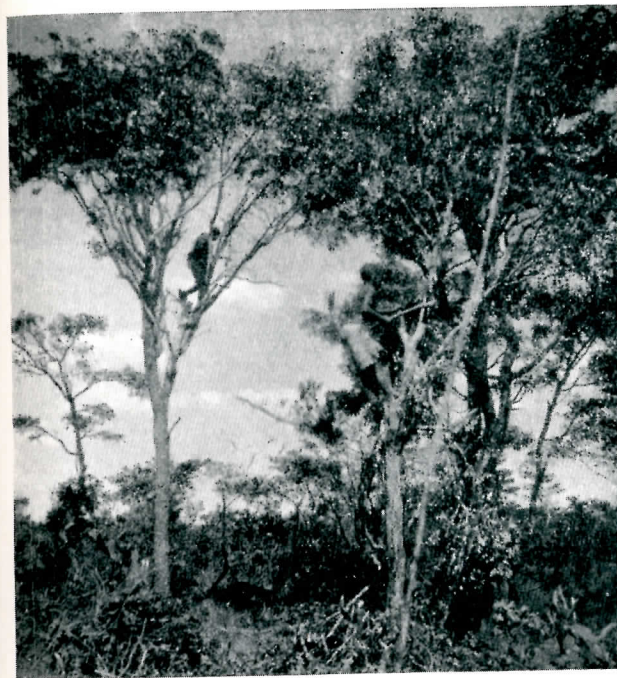


PLATE 4

(a) above. A father and son cutting branches

(b) right. Branches piled for a *chitemene* garden





PLATE 5

Planting sweet potatoes in an *icifuka* garden

Chief Kalaba warned his people that nefarious, supernatural thefts of millet would not be tolerated, and he advised everyone to look after their own grain store and keep away from those of other people. This warning was in respect of a belief that with the assistance of a sorcerer one could conjure up devils (*imilima*) which could spirit millet from one grain store to another. Undue interest in another person's grain bin was therefore regarded with suspicion, but no outstanding incident ensued.

The entire harvest was left largely to the women, and meanwhile the men turned their attention to cutting trees for the new gardens. Each man selected an area of dense woodland with an even growth of large trees and made known his intention of cutting there. Then, in mid-March, the first trees were pollarded and by April men cutting *chitemene* was a daily occurrence and characterized the following six months. There was no sense of urgency about this operation. It is a long, slow task and was treated as such. The old men made it a daily routine and cut trees steadily and persistently. The young men had a tendency to work for a day or two, and then turn their attention to other tasks. Paid employment, particularly local road work from April to July, delayed some men but did not really inconvenience them. The women gave little attention to collecting the lopped branches before July. Until then they were occupied with the harvest, and meanwhile the branches dried out. For three and a half months the women collected branches from where they had fallen, and stacked them systematically about three feet deep in circular patches. This operation began leisurely, but on 11 September a light thunderstorm warned that the rains could be early. Shortly afterwards the *nyenye* (cicada) sang their warning from the trees that it was time all the *chitemene* were ready to burn. And stories of bush fires added further to the sense of urgency. From mid-September the rate of work was increased, and some men felt obliged to help in this task lest their own work be jeopardized. On 18 October a heavy thunderstorm fell, and talk of burning the gardens spread through the village; most gardens were ready to burn. On the following day a bush fire swept the entire area and burnt all the gardens, and on 20 October everyone went to inspect the results; the general opinion was that the fire had done a good job, and agricultural work was over until the rains set in.

On 26 October the *nyenye* vanished and the trees were silent; to the village this meant the rains were imminent, but there were no signs of rain. This was another critical time in the agricultural year and accordingly Lumbwe Kalaba declared that no *katapa* should be eaten until the rains came. This was to show respect to MAKUMBA, and it sent many people out in search of alternative relishes. On 6 November a heavy storm fell; Chief Kalaba and Lumbwe both announced that they had observed the earth tremble as MAKUMBA passed through the village and brought the rain—*katapa* could now be eaten for the rains had set in. Some immediately began to plant their *munda* gardens, others watched the sky and waited for more rain. They were not disappointed

and the following week was a wet one. The new agricultural season opened.

The first operation was to plant cassava and sow maize, pumpkins, gourds, cucumbers, melons, various herbs and spices and numerous other crops in the *munda* gardens. Cassava cuttings taken from established plants were set, two in each hole, throughout the ash circle at widely spaced intervals. Similarly, maize seeds were dropped into holes here and there, but the other crops were sown around the perimeters. Some *munda* gardens incorporated anthills, and these were largely devoted to maize and cucurbits which do particularly well on the heavy clays. The *munda* gardens required no cultivation, but the *nsawa* and other gardens had to be cleared and dug before they could be sown. This work was delayed by a break in the rains, and whilst hesitant hands tested the still hard ground anxious eyes watched the newly planted cassava. A few rainy days brought relief and work proceeded. Mounds were made and beans were sown along with peas, cowpeas, cassava and other subsidiary crops during the last week of November and the first few days of December in spite of more dry weather. But this time the rains held off too long, and *icilala catantaila*—a dangerous dry spell—was much talked of. The ground dried out and cultivation became difficult; many stopped work until more rain should fall. Cassava cuttings began to wither and their roots were attacked by white ants; some would have to be replaced. Surprisingly Lumbwe Kalaba made no comment on the situation, which was eventually relieved on 10 December when rain fell and a wet period followed. There was a great rush then to prepare the *nsawa* gardens and to sow groundnuts. This was the third phase of planting which should be complete before the millet was sown,¹ and it was commonly held that all the millet should be sown before Christmas. The millet was not sown, however, until the precarious storms and showers of the early wet season were succeeded by the main rains, when the dangers of drought were reduced. Even so, as noted above (p. 43), special rituals and prayers were made to safeguard the millet, which still symbolizes the total food supply though cassava is now the main staple.

Cassava was available throughout the year, and some cassava was harvested² in 47 of the 53 weeks surveyed. In December, when the survey began, relatively little cassava was being collected, and even less was harvested during the very wet weather of February and March. This was a busy period with little time to spare for preparing cassava

¹ During the early rains each patch was planted the same day as it was prepared. Therefore, the separate recording of 'Cultivating' and of 'Sowing and Planting' was not always possible, and for these weeks it is important to read the two figures in conjunction with each other (Fig. 7). In contrast, once the wet season was established each garden was fully prepared for any one main crop which was then sown at a given time.

² This operation nearly always included peeling the cassava roots (which ought to be classed as 'food preparation') because, except when rain or night-fall drove the women back to the village, they peeled the cassava at the gardens to reduce the weight carried home.

flour. Also it is difficult to dry the soaked cassava roots during the rains, and the soaking itself requires a relatively long time in the cold water of the flowing streams and the full dambos. During this period *bwali* was made from cassava roots that had been dried and stored during October and November and from millet grain which had been reserved for use in this difficult period. By February green maize was available and less *bwali* was required.

At the end of March, when the rains ceased, and throughout April, considerable quantities of cassava were collected both for immediate use and for later use during the busy harvest period. By May millet was in use and the demand for cassava again declined. However, by July a steady demand was made on the stocks of cassava and continued throughout the dry season until the rains and the planting season again reduced harvesting. Throughout the year cassava also provided green leaves for consumption, and it is indeed a remarkable subsistence crop without which hunger would have been more common.

The Division of Labour

It is widely believed that a strict division of labour between men and women exists in African life. There is some truth in this in respect of Chief Kalaba's village, but analysis of the work done by men and women there shows that considerable qualifications are required (Fig. 8). Men comprised 45 per cent of the labour force surveyed and they undertook the following proportions of work done:

	%
1. Cultivating	40
2. Sowing and Planting	38
3. Weeding	23
4. Harvesting	5½
5. Cutting <i>Chitemene</i>	98½
6. Collecting Branches	14
Total Work	35½

As a group the men clearly did less than what might be considered a fair share of the total agricultural work, and their contribution to the different operations varied considerably. During the urgent, wet-season work of cultivating, sowing and planting—which comprised one-third of the total agricultural work—there was no division of duties between the sexes, and men and women of each household frequently worked together in the same gardens. Tobacco was, however, largely cultivated by men only and, though some women occasionally assisted their husbands, this crop was always regarded as the man's perquisite. The little weeding done was mostly carried out by the women, but the men did almost a quarter of it, and it cannot be dismissed as the women's sole responsibility.

During the dry season, when the pace of work was much slower and the various operations were more distinct, a strong division of labour appeared. Harvesting, which comprised almost one-third of the total work, was virtually left to the women. Meanwhile the men cut trees for

the *chitemene* gardens. This was considered to be exclusively man's work, but one widow failed to obtain sufficient male help and spent over 100 hours chopping small trees on her own account. Similarly, collecting and piling the branches was designated 'women's work'—and many jokes were made about men who carried branches. However, before the work was complete seventeen of the men had taken part, and they did 14 per cent of the total time employed in collecting branches. Without their intervention many gardens might not have been fully prepared before the bush fire burnt them. The sense of urgency in face of the oncoming rains overcame the prejudice against doing 'women's work', and also beer parties were provided to employ men and women for such work. It was quite evident that even this division of labour was flexible.

Division of labour by sex was clearly a matter of expediency and, as far as possible, tasks were allocated according to their physical requirements. The women undoubtedly did much heavy work, but the hardest tasks during the wet season generally were shared equitably. During the dry season the painstakingly slow work of harvest was left to the women, and was well within their capacity. Climbing, pollarding and felling trees was clearly the men's work; it was hard and dangerous, and few women would care to participate. As a corollary the women were expected to collect the branches, for the two operations overlap in time.

A second platitude about African life claims that women do all, or most of the agricultural work and men are relatively indolent. Clearly this is not so, but like most generalizations it contains some truth which is worth investigating. The total agricultural work done by each of forty-six adults during the year surveyed is shown according to the sex and age-group of the individuals in Fig. 8, and four age-sex groups have been defined:

Young men (less than 45 years)	13 persons
Young women (less than 45 years)	16 "
Old men (over 45 years)	8 "
Old women (over 45 years)	9 "

The average number of hours worked by each member of these four groups during the year is also shown. Both men and women over 45 years old did a great deal of work and the women (average 1,247 hours) did only a little more than the men (average 1,144 hours). The young men and women did considerably less than their elders, and there was a marked difference between the sexes; the average working year of the young women was 944 hours, and that of the young men was only 427 hours. With few exceptions the young men were relatively indolent in respect of agricultural work, and the young women were relatively industrious. But the old men, well established in village life, were certainly not lazy, and indeed one man did far more work than any woman. It should, however, be remembered that these figures measure time only, and not efficiency—for which no data are available.

Not all the work done by the forty-six informants was for their own households. At some time or other most of them worked for others,

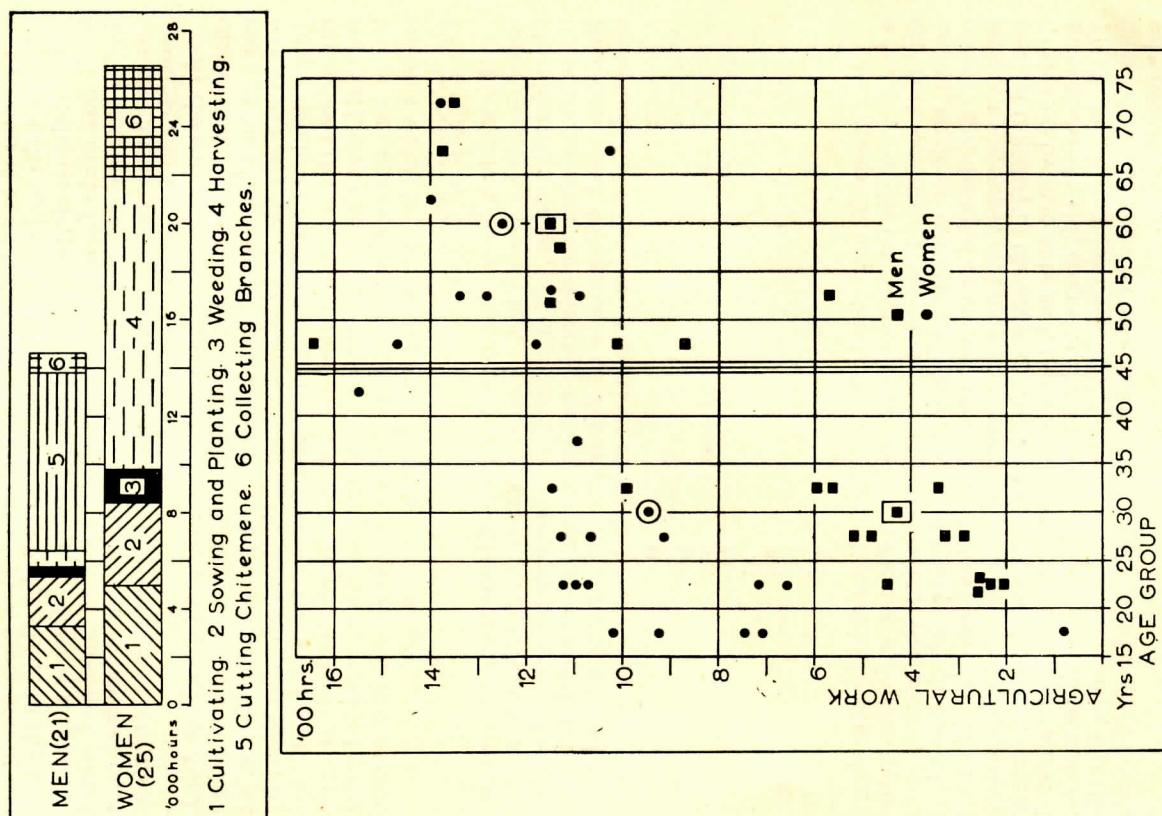


Fig. 8. The division of agricultural work by sex; and the total agricultural work done, by age and sex

usually as members of working parties and usually for payment in beer or, occasionally, salt or other commodities. Seven per cent (2,943 hours) of the total work done by these forty-six people was not, in fact, for themselves. The young men spent a relatively high proportion (15 per cent) of their working hours in such employment, which illustrates the ability of beer parties to mobilize labour which would otherwise not be employed. On the other hand eight households amongst the informants themselves employed group labour by the provision of beer or salt. John Chiwela, the deputy-chief, was the only young man to employ such working parties, and he had four. The heads of the other seven households were all over 45 years old; Kankwende had five working parties, Nduta had two, Peter Mwaka had two and Katontoka, Lumbwe Kalaba, Kaluba and Mwesa each had one. Thus the contribution of the young men to their own households was generally somewhat less than is indicated above, whilst many of the older people added to their direct contribution by employing group labour.

Group labour was mainly employed in preparing *chitemene* gardens and, to a lesser extent, in cultivating gardens. Of the seventeen groups employed by informants 10 were for the former and 5 for the latter; and of the 2,943 hours worked by informants for households other than their own 45 per cent were spent preparing *chitemene* and 25 per cent were employed in cultivation.

Group labour was insignificant in all other operations except the sowing of finger millet—a special occasion, as already noted. Virtually all of the millet was sown by groups of workers, and 585 hours (60%) of the total time spent sowing millet by the informants was spent in the gardens of households other than their own. Such groups, however, were not usually employed by means of beer parties but were arranged by mutual exchanges of labour. Groups of friends, relatives and neighbours worked together and sowed each of their gardens in turn, each individual garden being completely sown, if possible, in any one day. The deputy-chief did not join any such group and had to supply beer to pay people for sowing his millet, whilst Chief Kalaba called for, and received, free labour. The sowing of millet was the only agricultural activity which was in any way a communal effort, and the significance of this, if any, remains inadequately explained.

4

COLLECTING, FISHING AND HUNTING

FAMINE is now a rare event in the Fort Rosebery District, and even seasonal food shortages are relatively infrequent. The significance of wild produce as a vital reserve of foodstuffs has therefore declined. However, wild products are still important for they are the main source of first-class protein, and they add greater variety to the diet; several wild foodstuffs are regarded as delicacies, probably because they are only available in limited quantities and for short periods each year. A considerable proportion of the villagers' time—rather more than one-quarter of that spent in agriculture—is therefore devoted to procuring wild foodstuffs. This may be considered a relatively unprofitable use of time, but it is necessary in view of the inadequacies of the agricultural system.

Almost all wild products in Chief Kalaba's Area are freely and equally available to all his subjects. Hunters should provide the chief with select parts of any larger game, or even with a whole beast if they kill several on any one occasion, but this tribute can no longer be enforced and is often ignored. Individuals have prior rights to all produce in their fallowed gardens and in plots they have recently abandoned; and the ownership of fishing weirs is perpetual for as long as they are kept in use. Otherwise Kalaba's subjects may collect, fish or hunt wherever they desire within Chief Kalaba's Area, though naturally they usually remain near their own village. However, should they wish to go into other chiefs' areas, as hunters frequently do and collectors occasionally do, they should first obtain permission from the chiefs concerned, and they are usually obliged to pay part of any produce obtained to the chief as tribute. If such tribute is not paid permission would not be easily obtained on future occasions.

Collecting

During the year the forty-six adults spent 4,660 hours collecting various foodstuffs which may be divided into six groups:

Item	Percentage of Collecting Time
Mushrooms	32.5
Insects	15.5
Fruits	20.0
Roots	20.5
Leaves	5.5
Honey and Herbs	6.0

Mushrooms were the most important item, and a list of thirty-nine

edible varieties was compiled by questioning numerous individuals. Only a dozen of these, however, were consumed in quantity. Mushrooms were available shortly after the first rains fell in November until late March when the rains ceased, and throughout the wet season they were collected in small quantities for immediate consumption (Fig. 9). On three occasions—the second half of November, mid-January, and the first half of March—mushrooms were particularly abundant. The first of these occasions was shortly after the rains commenced and the other two coincided, but for a short time lag, with the wettest periods of the rains. On these occasions mushrooms were collected in large quantities; many were sun-dried and preserved for later use, particularly during the dry season but also for days when the pressure of agricultural work prevented the collection of other relishes.

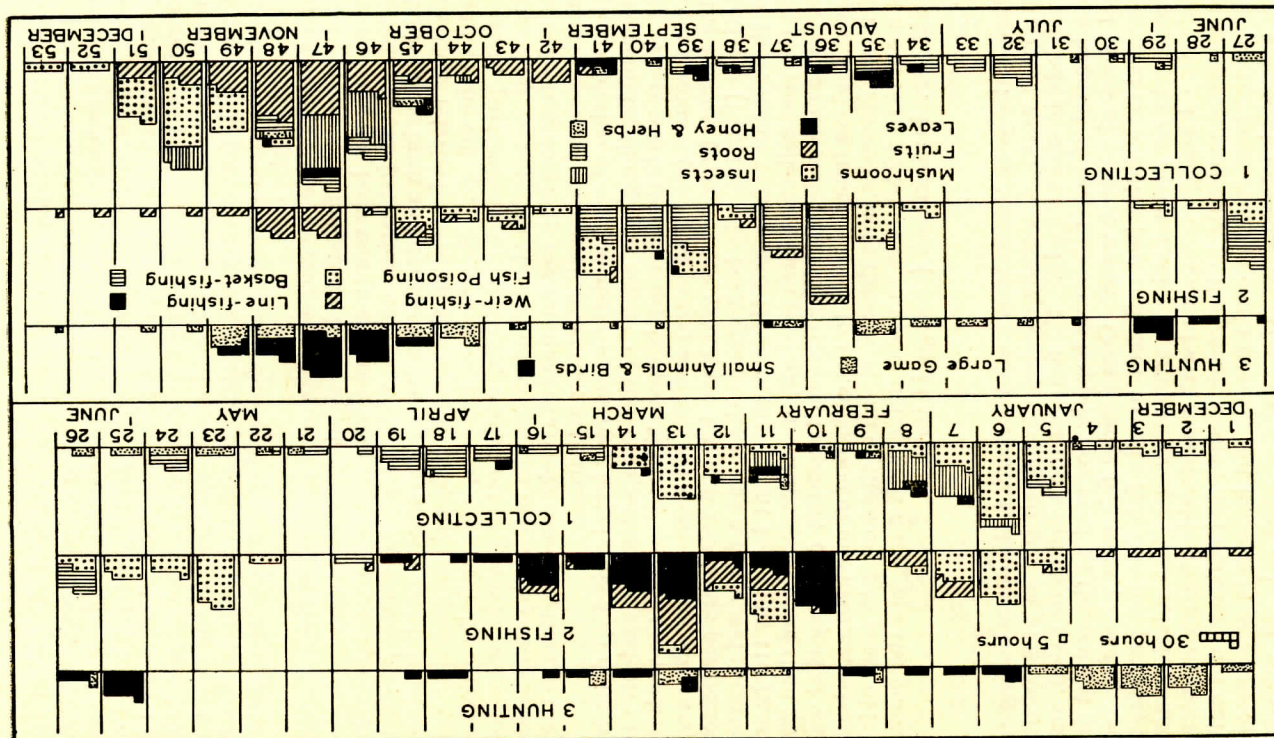
Numerous insects were collected but various types of caterpillars were the most important. Nineteen edible varieties were recorded, and the host trees of each and when they were likely to appear were well known to most villagers. During January and February, one of the two main seasons for collecting insects, *ifshoko* and *utubambe* were the most common caterpillars. The former is a small white grub found on *mutondo* trees and the latter is small and red, and lives on the *mpasa* and *mupulu* trees. During the same period *nyense* were important; they are a type of burrowing cricket and were dug out of sandy soils, particularly in fallow or abandoned gardens. During late October and November, the other important season for insects, *kayonga* and *chinkubala* were the more important local caterpillars; *nyenye*—the cicada—were collected from many trees; and grubs of the white ants and other termites were collected either before or during their flight.

The vast uninhabited areas south-west of the River Lwela in Chief Milambo's Area are famed for their caterpillars (*chinkubala*) which appear in great quantities during October and November. Expeditions from all parts of the Ushi country are then made into Milambo's Area to collect these caterpillars, and it is possible to sell them to traders who take them to the Copper Belt markets as well as to Fort Rosebery. One of our informants joined such an expedition from Kalaba's Area and he was away for fourteen days. He returned with a fair supply of caterpillars, many of which he sold locally—but he expressed the opinion that his long journey was not really worth while.

Fruits are available for only a limited season each year, but then they appear in abundance. More than twenty different kinds were recorded but only three, and two in particular, were really important. Of these *M'pundū* fruits were first to ripen and were collected from the end of September to the close of October. *Masuku* fruits were ready somewhat later and were available from late October to the end of November. *M'wango*, a type of plum, were the third important fruit and were collected from the end of September to the end of October. None of these bush fruits were preserved in any way and thus contributed to the food supply only whilst they were in season.

Various roots are available throughout the year, but they were

Fig. 9. Collecting, fishing and hunting



collected mainly during the dry season and particularly before and after the main harvesting months. The two most important roots, *cikanda* and *imbwenge*, were dug from the dambo margins and were not easily obtained during the wet season. *Munkoyo* roots, found on the plateau, were the only other root of importance and were used in the brewing of a light, rather sweet beer which is known as *munkoyo*. Numerous edible leaves were collected at various times of the year but they were not particularly important. Herbs were also gathered, mainly for medicinal purposes; and during May and June some honey was collected by the men.

The above provides an outline of the main features of the collecting economy in respect of foodstuffs, but it should be stressed that numerous resources have not been mentioned and were not, in fact, purposefully exploited. Some indication of the wide range of edible products available in the bush and dambo has been given above, and it has been shown that relatively few of these were collected in quantity and brought to the village. Many others, however, were casually collected and eaten, particularly by children, whilst other pursuits were followed. And, as noted in the Introduction, the children's contribution to the collecting economy was not quantitatively recorded, though they frequently assisted during all collecting activities.

The collection of wild foodstuffs was very largely (88.5%) done by the womenfolk, though no aspect of this occupation was exclusive to them. There was little difference between the time spent in the work by the young women (under 45 years) and the old women (over 45 years), and the average times for the year were 169 and 159 hours per person respectively (Fig. 10). In both groups there was a fairly wide scatter about these mean values, and three women spent less than 110 hours during the year collecting bush produce, and three spent more than 220 hours. The men collected all of the small quantity of honey that was procured, and contributed most to the collection of mushrooms, insects and fruits. However, only three men—all of them over 45 years old—spent more than 50 hours in the year doing such work, and the young men did very little indeed (average 14 hours).

Fishing

During the year the forty-six adults spent 4,347 hours fishing or doing related work. Generally catches were small and for most of the year fish was in short supply. No fish was too small to be eaten, and often a handful of tiny fishes was happily accepted as the reward for several hours of patient work. Occasionally fish were plentiful, and then several households had sufficient to sell—fish was too precious a commodity to be given freely to anyone except close relatives and dependents. Fishing was regarded with considerable pleasure by many of the villagers, particularly the young women and children, not only because of the good relish it could provide but because it gave opportunity for social intercourse. The young women enjoyed working together, joking, laughing and singing—except when line-fishing, which

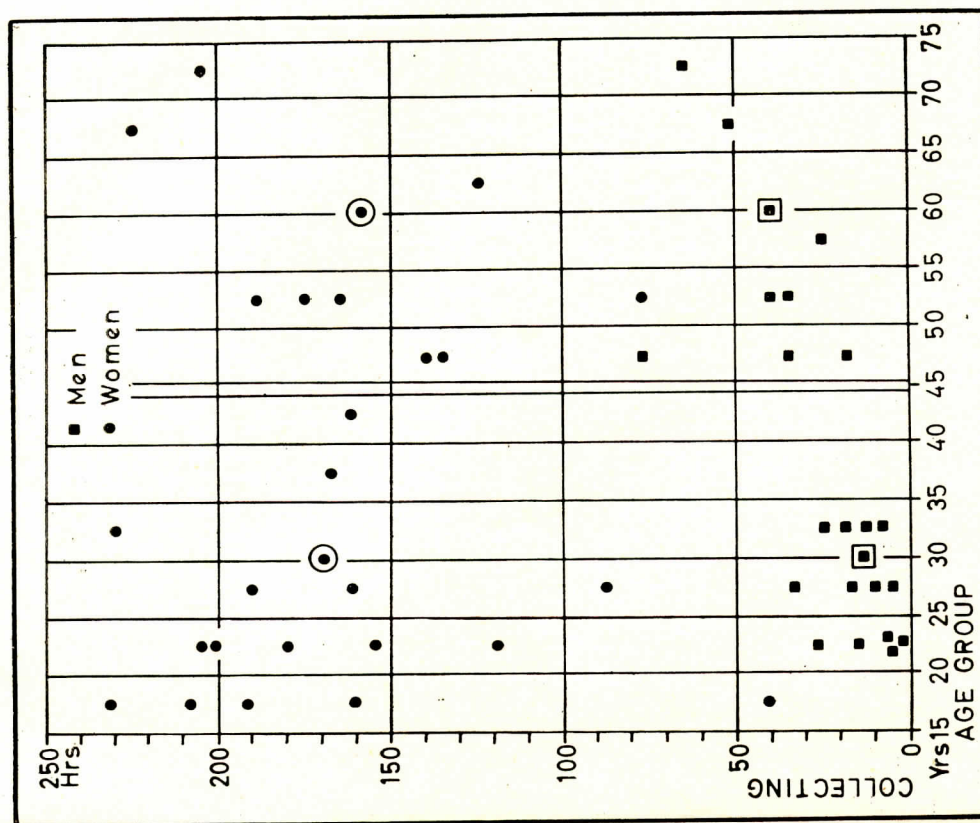


Fig. 10. Hours spent collecting foodstuffs, by age and sex

required them to work quietly alone or in twos and threes—and they considered a fishing trip a welcome break from the dull routine of agricultural tasks and domestic duties. The children regarded it as a good pastime, and boys took particular delight in spearing fish in shallow water with sharpened spokes from cycle wheels set into bamboo shafts. Unfortunately, the children's contribution to the economy could not be measured, and whilst it was not large it was probably more significant in fishing than in most other aspects of village life.

Four main methods were employed:

Method	Percentage of Fishing Time
Weir and trap	22½
Line-fishing	17
Fish poisoning	33½
Basket-fishing	27

These methods are practised in many parts of Central Africa and various techniques of each have been described (*vide inter alia* Brelsford, 1946 and Richards, 1939).

Only the men built weirs and made the ingenious bamboo traps (see frontispiece) which were set in them to catch fish as the rising flood waters flowed downstream. They were most effective during February and March, and during the rest of the year were used very little indeed. In this respect Fig. 9 is rather misleading because the ancillary tasks of collecting bamboos (done mainly during the dry season), of making and repairing traps (done largely towards the end of the dry season), and of building and repairing dams (done mostly as the rains commence), have all been included under the general heading of weir-fishing. Similarly attempts to protect traps and repairs of damage done to them by otters and water rats during the fishing season are included under the same heading.

Weir-fishing was virtually the only method employed by the men and it occupied 96 per cent of their fishing time; the remainder was spent poisoning fish. The young men, with one notable exception, took very little part in fishing (Fig. 11) and in most cases the little work they did was to assist the older men. Two of the old men did no fishing at all, but the other six, and two in particular, did their best to contribute some fish to the family diet. But conditions around Kalaba's village did not encourage weir-fishing. It was hard work to build dams from the wet dambo clays, and numerous leeches added to the discomfort of the work. The rising waters spread widely in numerous rivulets within the expanse of each dambo, and the returns from each weir were therefore small. Nevertheless, it was from such fishing that the largest surpluses of fish were obtained and allowed some men to make a small income from fish sales.

The other three methods were conducted virtually by the women alone, and each was suited to particular water conditions. During January, as pools and hollows in the dambos filled with water, conditions favoured the poisoning of fish. Various leaves, roots, and the bark of several trees were ground and pounded between two stones into small pieces. When thrown into relatively still and shallow waters this *ububa* stupefied or killed all fish within two or three hours, and the catch was then scooped from the surface in baskets. Such fish poisoning is contrary to Ushi Native Authority Rules, but the local authorities generally turn a blind eye to what is a traditional and time-honoured method of fishing. It would, in any case, be difficult to stamp such fishing out without the active co-operation of most of the villagers.

As the waters rose and began to flow fish-poisoning became impractical in most areas, and by mid-February conditions favoured line-fishing. The women (and children) used string, cotton, fibre and even fine grass to fish with. They dug worms from the dambo edge, or used pieces of fish or *bwali* as bait. Few of them had hooks, and the bait was usually tied directly to the line. They waded out up to waist deep, or stood amongst reeds in deep water and dangled their bait; a sharp jerk pulled the unwary fish out of the water into a waiting hand or dish, and the bait was often available for further use. Such fishing, known locally as *citumpi*, was the more important women's method throughout the period of rising waters from mid-February to the end of March. Then for six weeks or so, until the main floods fell, little fishing was done.

By mid-May the waters had fallen sufficiently to permit fish poisoning, and by June basket-fishing was also possible. These two methods were suited to periods of low water, and the latter was particularly popular because it required very little preparation, and could be fitted into a spare hour or so. When fishing with baskets the women usually worked in small groups. They selected a stretch of shallow water and either surrounded it or formed a line at one end. They then moved forward, stirring up the mud and water with their feet and scooping up baskets (see frontispiece) full of the dark liquid and any unlucky fish, which would be trapped in the close weave of the basket. By the end of June, however, fishing came to a close. The villagers explained that with the onset of cold weather the fish left the shallow waters and went downstream to the deep, warm waters of the River Mansa or hid deeply in the reeds where it remained warm. How much truth there is in these explanations remains to be tested, but certainly fishing was negligible for six weeks. Then, in August—when the waters began to warm again—fishing recommenced. August and September were busy months, and basket fishing dominated, but with fish-poisoning also important. Some large-scale poisoning events were arranged in which the dams used by men in weir-fishing were made sound and large pools of water allowed to collect behind these barrages. These waters were heavily poisoned, and relatively large catches were made during the following twelve hours or so. To prevent stealing some poisoners occasionally camped overnight by these pools and collected their catch by morning light. By the end of September, however, the local dambos had so dried out that fishing was virtually impossible, and little more was attempted until the following rains.

How any fish survive under such rigorous natural conditions and such severe harvesting is surprising, but fortunately not every part of the drainage system is equally affected. However, the old people recall that fish was formerly plentiful and imports from Lake Bangweulu were unnecessary. Whilst these may be fanciful recollections of good old days, it would seem inevitable that local resources cannot withstand such intense fishing and continue to supply a growing population adequately.

All of the twenty-six women did some fishing during the year, but time so spent varied considerably (Fig. 11); one young woman and four old women each did less than 50 hours fishing, whilst four young women each did more than 250 hours. As a group the young women did very much more fishing than the old women, and the average times per person were 174 and 59 hours respectively.

The division of labour, or rather fishing methods, between the sexes has been noted. This was partly because of the strong sense of modesty which prevails amongst adults and the various stages of undress that women assume whilst fishing. There may be a further reason associated with the avoidance of all sexual contacts prior to all fishing expeditions of any magnitude—this was to ensure favourable conditions and good catches, and was observed despite the very poor yields obtained. This was the only ritual recorded in association with fishing, and apparently no other ceremonies or special prayers were necessary.

Hunting

Only the men hunted, and all but one of them did some hunting during the year. However, game is no longer plentiful and almost as much time was spent chasing and trapping small animals and birds, such as moles, rats, guinea fowl and pigeons, as was devoted to hunting larger beasts. Hunting was not, in fact, as important an occupation as one might imagine from village gossip, and the men as a group spent almost as much time collecting and fishing as they did hunting from the village, though four men spent 61 man-days away from the village on hunting trips. Only four men, three of them under 45 years old, did more than 100 hours hunting from the village, and the average time was only 78 hours (medium—72 hours). And with few exceptions—related to the possession of guns rather than age and social position—there was little difference between the contributions of the young and the old men. The former importance of hunting and its present significance as the principal source of meat—the most highly prized food—was reflected in the numerous ceremonies, rituals, avoidances, charms and prayers that each hunter concerned himself with, and in Chief Kalaba's elephant hunt (*vide* Kay, 1961).

Four of our informants had guns and professed to be hunters, but the most renowned local community of hunters lived in the neighbouring village of Tuli; a hunter from that village usually worked for Chief Kalaba. Those without guns could try to trap large game such as wild pigs and various antelopes, particularly the duiker, in staked pits and with wire snares; and they could join teams—usually organized in Tuli's village—which hunted with nets and spears during the dry season after bush fires had cleared the undergrowth (*vide* Richards, 1939). Every man could set traps or excavate and chase small animals such as rats and moles, and could snare birds in nets. To many of the men hunting was a pleasant occupation which was expected of them by the womenfolk and which could provide a good meal at times.

The hunting of large game was done mostly between August and

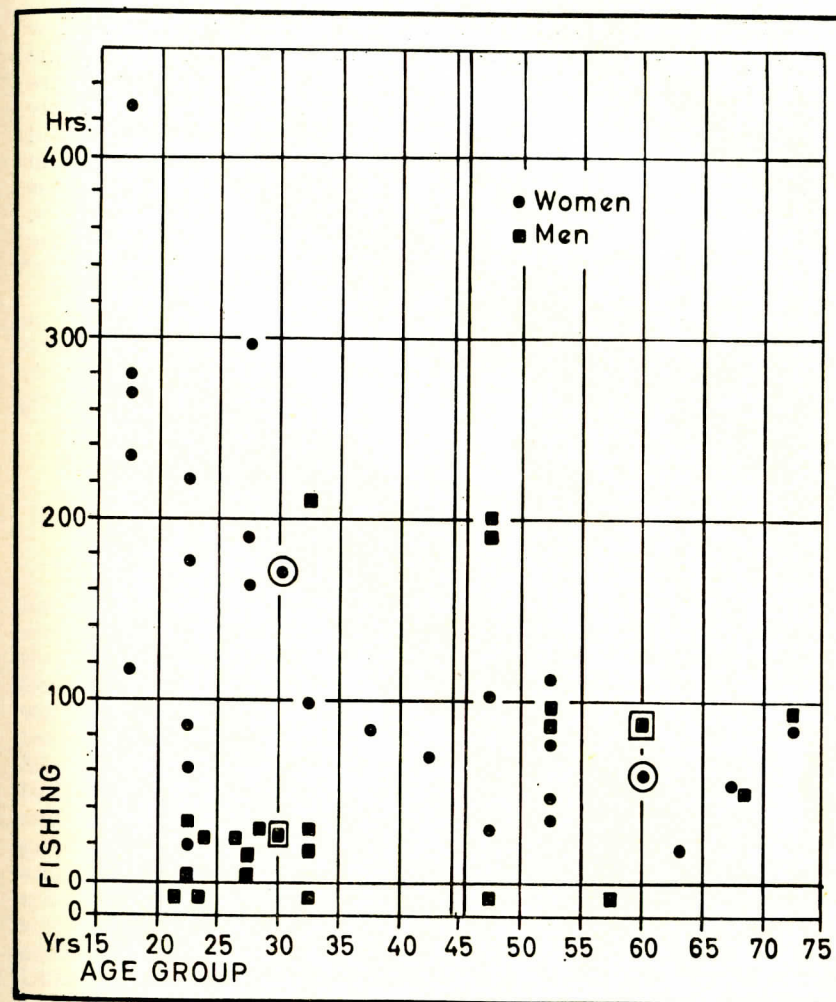


FIG. 11. Hours spent fishing, by age and sex

February when bush fires had cleared the undergrowth and when water supplies were more restricted and game consequently more concentrated into limited areas. In Kalaba's village particular efforts were made to provide meat for the period of feasting around Christmas and New Year, and also in October and November after the local bush fire. Hunting and trapping small animals and birds was to some extent related to the agricultural seasons, and was mostly carried on in the cultivated and fallow gardens. During the wet season moles were dug

out as gardens were planted, and they were also excavated from fallow plots whilst the rain-softened earth facilitated digging. During the millet harvest guinea fowl and pigeons were trapped and rats were hunted in the gardens. And finally both rats and moles were easily excavated and caught in the ash patches after the piled branches had been burnt in the *chitemene* gardens. This hunting and trapping in gardens was partly to protect seeds and crops, and whilst the game was welcomed as good relish the animals were cursed as pests in the gardens. In passing it might be noted that the villagers would not eat domestic or house rats, which were thrown away when killed.

5

MISCELLANEOUS ACTIVITIES AND PAID
EMPLOYMENT

THE two preceding chapters have described work undertaken to procure foodstuffs. There remains a large field of miscellaneous activities, mostly undertaken within the village itself, which together occupied almost as much of the villagers' time (46,878 hours) as did all the food-producing operations. These may be divided into four broad groups:

	<i>Percentage of Total Time</i>
Domestic Chores	27½
Food Preparation	51½
Craft Industry	4½
Building	16½

Each group encompasses a large number of tasks and details of each are beyond the scope of this paper. The following discussions are therefore limited to broad outlines, but the significance of these activities must not be obscured by this relatively cursory treatment. The women did more than 80 per cent of the work involved, and these tasks—which receive relatively little attention in literature—take up 53 per cent of the women's working time. The purchase of manufactured utensils, implements and cloth has done much to reduce work in craft industries. But otherwise only recently has much attention been given, through the Development Area Training Centres, Women's Clubs and similar institutions, to effecting improvements in the domestic sphere of village life. Yet the arduous burden of these miscellaneous activities could be lightened and labour released for more productive occupations if some effective means of improvement were initiated. Unfortunately the most rational improvements—by specialization and the division of labour between individuals—do not seem possible until the 'exchange economy' has reached a considerably higher level.

Domestic Chores and Food Preparation

Domestic chores repeated themselves with a tedious monotony. They consisted largely of fetching water, collecting firewood, sweeping buildings and surrounds, smearing floors with clay, cleaning cooking utensils, eating bowls and similar articles, and washing clothes and blankets. During January and February in particular charcoal was manufactured because during the rains dry firewood was difficult to obtain, and also because much cooking was done indoors on charcoal

fires in small, open fire grates. During the same months grass around the houses had to be kept short. These additional wet-season tasks were undertaken equally by men and women, but otherwise virtually all domestic chores—and food preparation—were undertaken by women only. Men rarely helped, and even when their womenfolk were absent or ill they did as little as possible, often depending on relatives or children.

Food preparation is used as a comprehensive phrase to cover the wide range of activities dealing with foodstuffs from the time they were brought into the village to the time they were consumed. The staple foodstuffs required considerable attention. The heads of millet were stored as such. As and when flour was required they were threshed by pounding in a mortar, the grain was separated from the husks by either winnowing between two baskets or by sieving, and was then ground into flour by rubbing between two stones, a large, flat one being set in a clay foundation and the other being held in both hands. Cassava flour required even more preparation. The peeled roots, protected in rough grass cradles, were soaked in pits dug below the water-table in the *dam-bos*. The period of soaking varied with the season; it was shortest—2 to 3 days—in the hot season and longest—up to 6 days—in the cold weather of July. The roots were then dried. During the dry season they were sun-dried whole on raised tables. During the rains they were broken into pieces, laid out on mats, and frequently stirred and turned in order to make the best use of dry, sunny spells; or the roots were fire-dried on racks above a low fire. The dried roots or pieces were stored, and were broken up and pounded into flour daily according to requirements. Usually no more than a week's supply of roots was prepared at one time because cassava does not keep well. However, at times well-dried roots were stored for longer periods, and particularly for use during the rains.

Other foodstuffs generally required less attention, but the usual pre-cooking preparations were, of course, necessary. Also many foodstuffs—mushrooms, leaves, vegetables, insects, fish and meat—were dried either in the sun or over fires, and either before or after cooking, in order to preserve them for later use in times of relative shortage. Preparing and cooking meals was also a lengthy task. Most relish dishes were usually stewed until they fell into a semi-liquid state to be eaten with *bwali*—a stiff, dough-like mixture of flour and water, the flour being cooked as it was stirred into boiling water. In view of the work women did and of the time required to prepare a cooked meal it is not surprising that usually only one cooked meal was eaten each day, in the late afternoon or early evening. Cold food left over from the preceding day's meal, supplementary snacks and beer, however, were often available at other times.

Time spent in doing domestic chores and in food preparation—both almost exclusively women's work—varied relatively little throughout the year (Fig. 12), and daily variations generally equated one another. Throughout the year they occupied a large proportion of the women's



PLATE 6

(a) left. Sisters pounding cassava into flour

(b) below. Sun-drying cassava roots during rainy weather

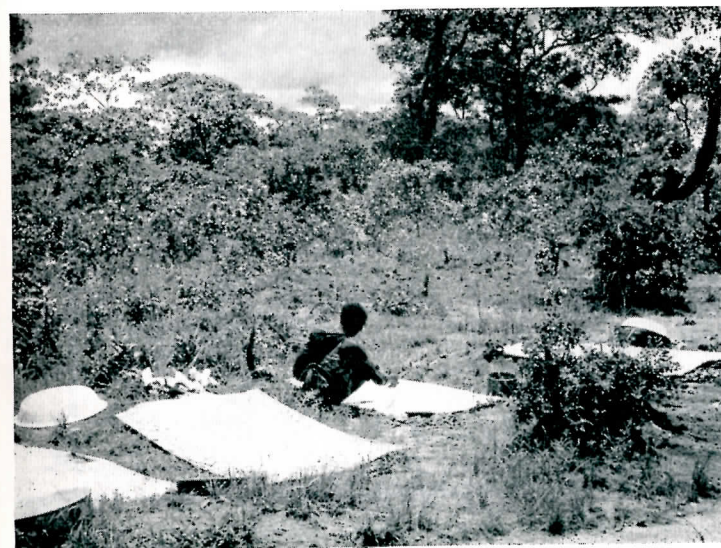
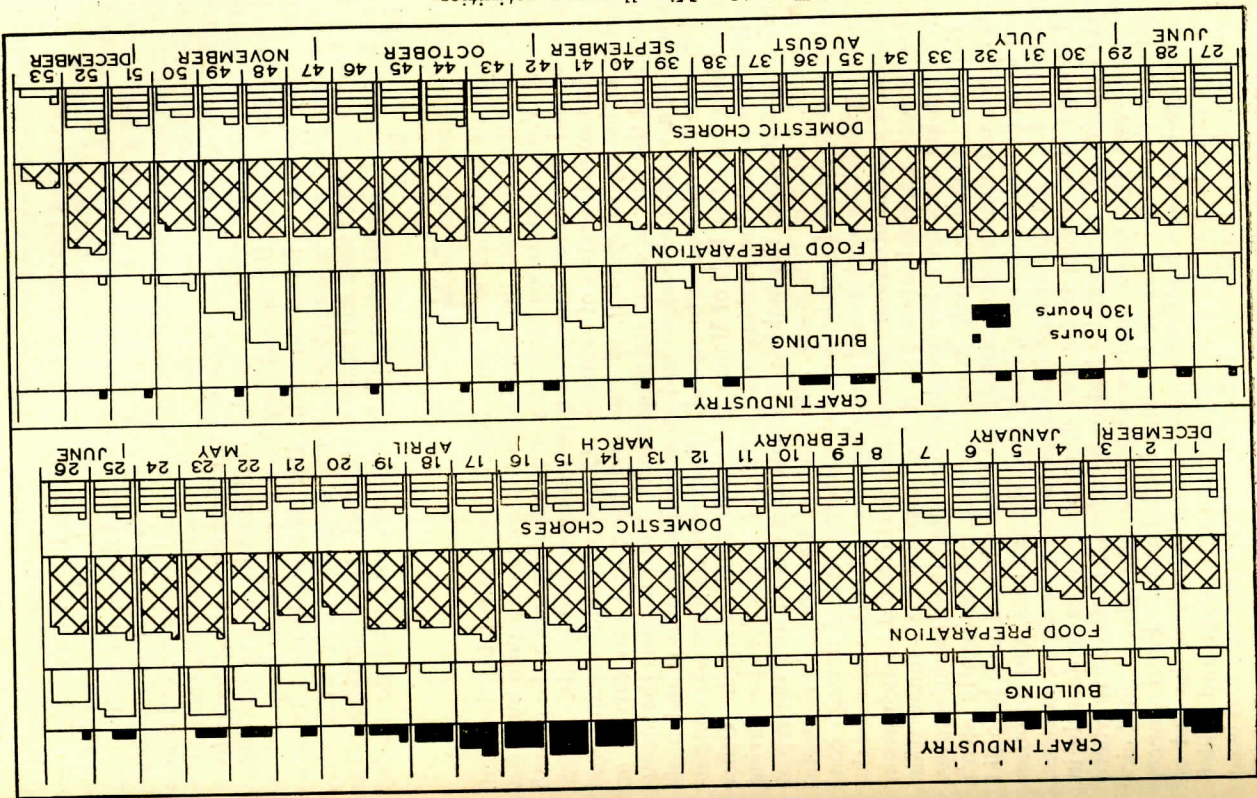


Fig. 12. Miscellaneous activities



working hours and, with two exceptions, each woman spent more than 1,000 hours during the year in such work (Fig. 13). The average time so occupied for women over 45 years old was 1,732 hours and for the younger women—1,416 hours. The individual figures for each woman do not give a direct reflection of each woman's personal responsibility to her own family. Much of the work has a social character, and women work in groups sharing their labour and, to some extent, their food-stuffs. Thus, for instance, three women may each bring some food-stuffs, and together prepare a meal. One may have a responsibility to two other persons, the second may have to provide for five, and the third may have only herself to feed. But they would work together until their joint efforts completed all the cooking. Nor would they need to hurry unless they had other work pressing on their time. The implications of this situation will be obvious, and need no further elaboration here.

Craft Industries and Building

The craft industries were very largely undertaken by the men. The chief exception was the manufacture of some clay pots by a few women. Village industries have very much declined with the growth of trade and the use of European-type manufactured goods. There were only two main types of industry. One was the manufacture and repair, including sharpening, of axes and hoes, and was carried on throughout the year as occasions demanded. The other was the manufacture of a variety of baskets and of mats from bamboos and reeds collected as the rains came to an end. Such manufacture was concentrated into the latter half of March and the first half of April. Other activities included the making and repair of drums for use during Christmas festivities, the making of stools and chairs, and the repair of bicycles. Most of this work, like much of the women's domestic work was done rather leisurely during the afternoons and through conversation with fellow workers and onlookers these jobs often assumed the character of a social occasion. Not all men participated in such work, and some took a special interest in it and earned some remuneration either by doing work for other people or by selling their manufactures.

Building, including repair work, was also predominantly men's work. Women occasionally assisted, and those without male help did patch leaks in their house roofs, build food storage bins, and do other essential tasks. All the village buildings—houses, kitchens, latrines, food storage bins, drying tables and sheep pens—were frequently in need of repairs and occasionally had to be rebuilt, particularly where pole and dagga were used. Such work was usually delayed until circumstances demanded that it be done immediately. For instance, food storage bins were hastily repaired or partly built at the end of April and early in May to accommodate the groundnut and millet harvests which were imminent. But once the pole structures had been erected and the insides smeared with clay work on these storages slowed up remarkably. During the following two months the outsides

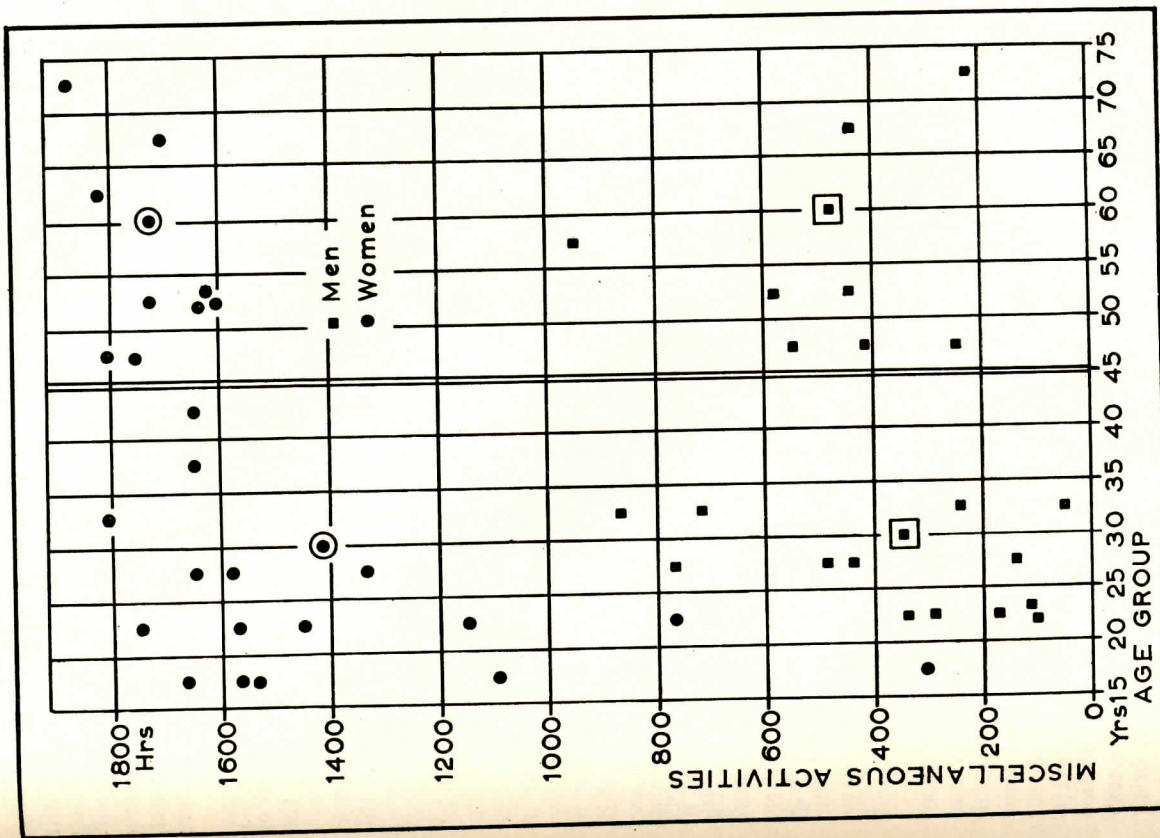


FIG. 13. Hours spent in miscellaneous activities, by age and sex

were smeared when a convenient time came to hand; it was pointed out that to rush the work through before the harvest was complete might lead to unnecessary repair work if the sides were damaged during filling. The apertures were roughly covered with grass until September or October—when the threat of oncoming rains made roofing necessary. At the same time all other roofs were renewed or repaired, though the rains eventually indicated several patches in need of more work.

Several new buildings, mostly in brick, were erected during the dry season, and most men did some building work either for themselves or for others. Beer parties were commonly given in order to engage the help of all available male hands—and occasionally female hands too—because brick-making and roof building required a lot of hard work. Brick-making started shortly after the rains had ceased whilst the ground was still relatively soft and water still plentiful. The use of forty-four gallon drums to carry water to the village relieved the women of much work, and they helped surprisingly little in making bricks. Every man was capable of making the sun-dried 'kimberley bricks' and of clearing and levelling house sites, but relatively few were sufficiently skilled to do the actual building. Bricklayers were commonly employed, and some of our informants obtained local employment in such work. The labourer's tasks of carrying the bricks and of mixing the clay mortar were usually done by the house-owner himself. Throughout the dry season stacks of sun-dried bricks were reduced and new buildings rose steadily. Then the house owner was left to roof his own building. Poles, fibre ropes and grass had to be collected in quantity, and by late September thoughts turned to the rains and the hurry to complete all building began. In late October, after the bush fire had stopped all tree-cutting for *chitemene* gardens, work assumed unprecedented levels for a couple of weeks in which most buildings were completed. By mid-November floors had been levelled and smeared, doors made and fitted, and windows blocked in various ways, and the building season was over. Another step towards an all-brick village had been taken.

Participation in the craft industries and building varied very considerably (Fig. 13) and the average figures of 369 hours for each man under 45 years and of 485 for each older man are not very meaningful. Most men worked according to their own skills and ability and their own building requirements. Those who had recently built brick houses or who chose to continue living in pole and dagga houses had no exceptional demands on their time. Everyone could join in working parties to assist others, or could work freely for relatives and friends; and everyone had some repair work to do. It is conceivable that when brick buildings predominate the annual burden of building and repairs will decrease substantially, not only because of the more permanent nature of brick but because of indirect influences. For instance there was already a tendency for people with large brick houses to store food-stuffs inside their houses—on shelves and in grass bundles hung from

rafters—and it seems possible that built-in food storages may ultimately replace the present subsidiary pole and dagga constructions. Thus the men's burden of miscellaneous activities may be still further reduced, whilst that of the women remains much as it has been for many years.

Paid Employment

Opportunities to earn cash locally were very limited and the only source of paid employment available to men living in the village was road work. Each year the Ushi Native Authority cleared and repaired the access road leading north from Chief Kalaba's village to the New Boma Road from Fort Rosebery. During most years employment was also available on the New Boma Road itself, and in 1960 an attempt was made to reopen the 'Old Boma Road' between Chief Kalaba's village and Fort Rosebery for motor traffic (Fig. 3). This latter venture provided rather more work than was usually available and, as work began in Chief Kalaba's village and the first labourers were engaged there, members of the village were able to benefit considerably. Work began on 6 April and those employed went daily to work from their homes. Their journey increased as the length of completed road was extended from the village, and early in June those still employed left the village to live in a road camp nearer their place of work. They thus became 'labour migrants' and only came home to the village at weekends. Some had left employment before this removal took place, and by the end of June all men from Chief Kalaba's village had been signed off. During October the embankments and bridges across the several dambos were built and this work provided employment for a few men from the village for up to one month.

During the year seven of the twenty-one men, only two of them over 45 years old, worked on the roads. Whilst residing in the village they spent 2,360 hours on 293 days in such work, including travelling time. The periods spent away from the village in road camps during which there was no participation in village life and for which no detailed records are available have been included with all other days spent as 'labour migrants' away from the village.

6

THE VILLAGERS' WORK—A SUMMARY

THE three preceding chapters provide separate accounts of various economic activities. This chapter draws together various data and gives a brief summary of some aspects of the villagers' work.

Categories of Work

Six broad fields of activity have been recognized and their relative importance as indicated by the total time devoted to each is shown in Table 6. The group of miscellaneous activities heads the list with 46.4 per cent, followed by agriculture with 40.6 per cent of all work done during the year by the forty-six adults. Collecting, fishing, paid employment and hunting follow, in that order, but each occupies less than 5 per cent of all working hours and, by this criteria, is relatively unimportant. There are, however, considerable variations in the work done by individuals (Appendix B) and by groups according to age and sex (Table 6).

Category of Work	46 Adults	Young Men	Old Men	Young Women	Old Women
Miscellaneous activities	46.4	34.5	25.8	52.3	54.1
Agriculture	40.6	39.9	60.2	35.1	39.2
Collecting	4.6	1.3	2.2	6.2	4.9
Fishing	4.3	2.4	4.6	6.4	1.8
Paid Employment	2.5	13.5	4.1	—	—
Hunting	1.6	8.4	3.1	—	—

TABLE 6. The Percentage Distribution of Work done by the Whole Sample and by Age-Sex Groups between Categories of Work

Men, both young and old but particularly old men, spent more time in agriculture than any other field of activity and with them the group of miscellaneous activities takes second place. The young men spent 13.5 per cent of their working hours whilst in the village in paid employment, and 8.4 per cent in hunting, but they did very little collecting or fishing. The old men showed more interest in fishing but they devoted only 4.6 per cent of their time to that work; they did little collecting or hunting, and spent only a small proportion of their time in paid employment. The women naturally took no part in either paid employment or hunting. Miscellaneous activities took more than half of their working hours and agriculture received considerably less attention, particularly from the young women. The young women, however, showed most interest in fishing and collecting and these

activities received 12.6 per cent of their working hours. On the other hand the old women devoted even less of their time to fishing than the young men, but more time than the men to collecting.

Group-contributions of Work to the Village Economy

The total contributions of the four age-sex groups to the economic life of the village differ considerably. Young men constitute 28 per cent of the whole sample but they did only 13.7 per cent of all work and old men, 17.5 per cent of the sample, did only 15 per cent. On the other hand, young women, 35 per cent of the sample, did 42.9 per cent of the work and old women, 19.5 per cent of the sample, did 28.4 per cent of the work. It would appear that the men, and particularly the young men, did not pull their weight in the village. The young men did only 49 per cent of their share of the work according to their proportion of the sample, and the old men did only 86 per cent of theirs. In contrast the young women did 122 per cent of their proportion of the work, and the old women did 145 per cent of theirs. But these contributions must be qualified by reference to the periods of absence from the village (Fig. 1). The young men, on average, were present for only 54 per cent of the year, whereas the old men were present for 84 per cent, the young women for 82 per cent and the old women for 95 per cent. It is also reasonable to make allowances for periods of illness which rendered individuals inactive (Appendix B). Therefore the *average working day*, i.e. the total hours worked by each individual divided by the number of days he or she was active in the village, is a more useful guide to the relative contributions of individuals and of groups to the village economy (Fig. 14).

With one exception all the women worked, on average, more than eight hours each and every day they were active in the village, and the mean length of the average working days of the young women is 9.2 hours and that of the old women is 9.3 hours. These figures clearly indicate the very long working days which all women undertake. Twelve hours of economic activity on any day is not unusual, and at times, when certain operations require urgent attention, fourteen hours—from dawn until after dusk—may be fully occupied. It is not therefore surprising that, particularly in domestic duties and household chores, women work together in groups and merge work with leisure, economic activity with social life. It is unlikely that efficiency is much impaired by this if at all, partly because after several hours of hard agricultural or other work most women lack the energy for concentrated and sustained effort but largely because the processes of food preparation, cooking and other domestic work are so time-consuming and incapable of being hurried that social intercourse is quite permissible, and possibly economically beneficial.

The men clearly contribute less, in terms of hours of work, to the village economy than the women. Not one man worked, on average, more than eight hours a day and the mean average working day for old men is 6.6 hours and for young men, 5.7 hours. The young men in

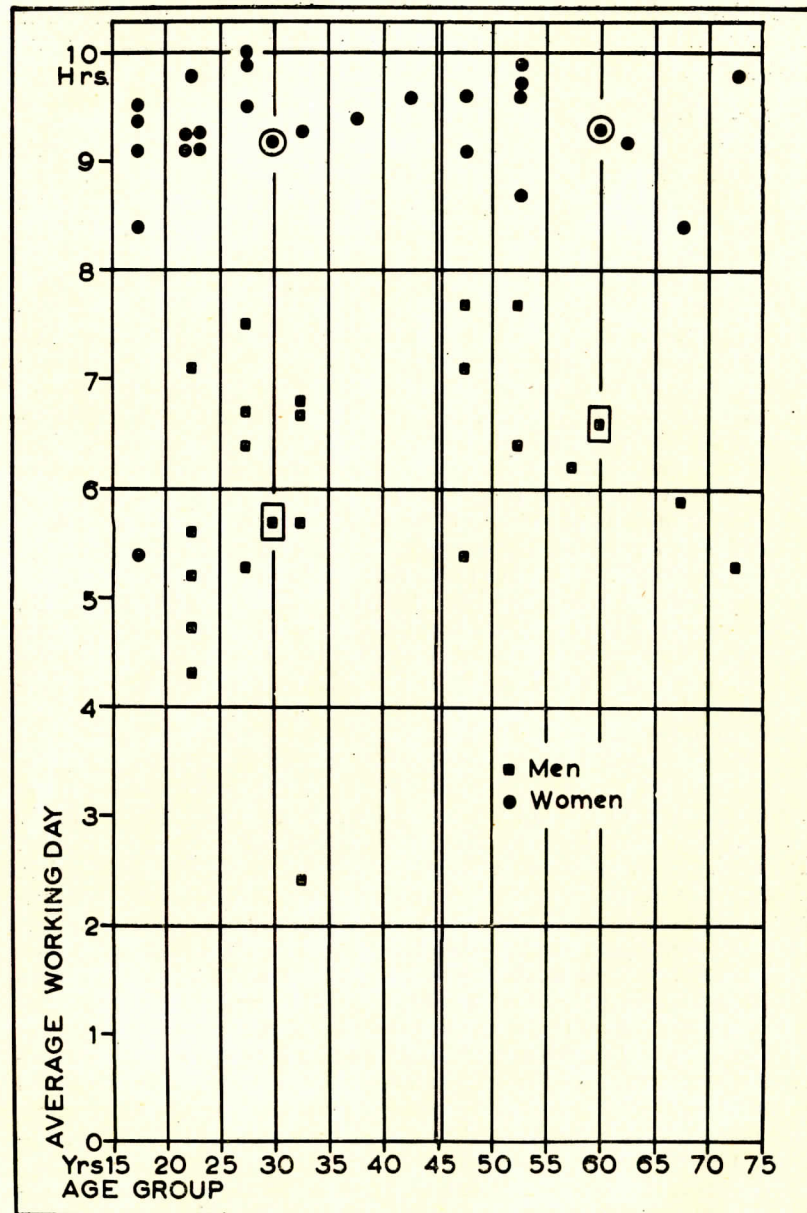


FIG. 14. The average working day, by age and sex

particular do less than might reasonably be expected of them. Not only do they spend much time out of the village—mostly in employment or in search of employment—but they have a relatively leisurely life whilst in the village. It may be that they work harder than others, but this seems doubtful, and it is the old men who have the highest reputations for agricultural efficiency. It is more likely that many of them rest on laurels earned in paid employment. Also several may be less inclined to work until they have finally decided to settle for some considerable time in the village because most village work involves investment for the future. The old men's working day, however, is barely an hour longer than the young men's and falls far short of that of the women. It is quite probable that changes in village life since *pax britannica* have favoured men more than women, and in particular trade goods have ousted craft industries of all kinds and the decimation of game has almost prohibited hunting. Finally, however, it should be pointed out that this study takes no account of 'non-economic work'. Political and social tasks, mostly the men's responsibility, are not considered in the above assessment of contributions to village life.

Seasonal Differences in Village Work

The close association of many economic activities with the climatic seasons, weather conditions and other seasonal phenomena have been noted in the foregoing chapters. The consequent distribution of all work done by weekly periods and according to four broad groups of activities is summarized in Fig. 15. In order to assess seasonal differences in the pressure of this work on the villagers' time it is necessary to take into account the size of the labour force actually available in the village during any given week, and to facilitate this exercise it is convenient to define a standard working day rather than refer to pressure on the whole twenty-four hour day. Ten hours, a figure which recommends itself for several obvious reasons, was chosen as the standard working day. Thus if all members of the group participating in this study were present and active for every day of a week then the available man-hours in that week would be:

$$46 \text{ villagers} \times 7 \text{ days} \times 10 \text{ hours} = 3,220 \text{ man-hours.}$$

In fact, in no week was everyone present (Fig. 2) and the available man-hours in each week when deductions have been made for the loss of man-days through absence and illness are shown in Fig. 15. Pressure of work on this available man-power can be illustrated by expressing the total work done as a percentage of the available man-hours, and these figures are also shown in Fig. 15. Because the standard working day has been taken as ten hours these percentages conveniently indicate what the actual mean working day for the whole group was in each week. Thus in week 53 when work done was equal (but for 2 hours), to the available man-hours the percentage is, obviously, 100 and this shows that on average every villager present in week 53

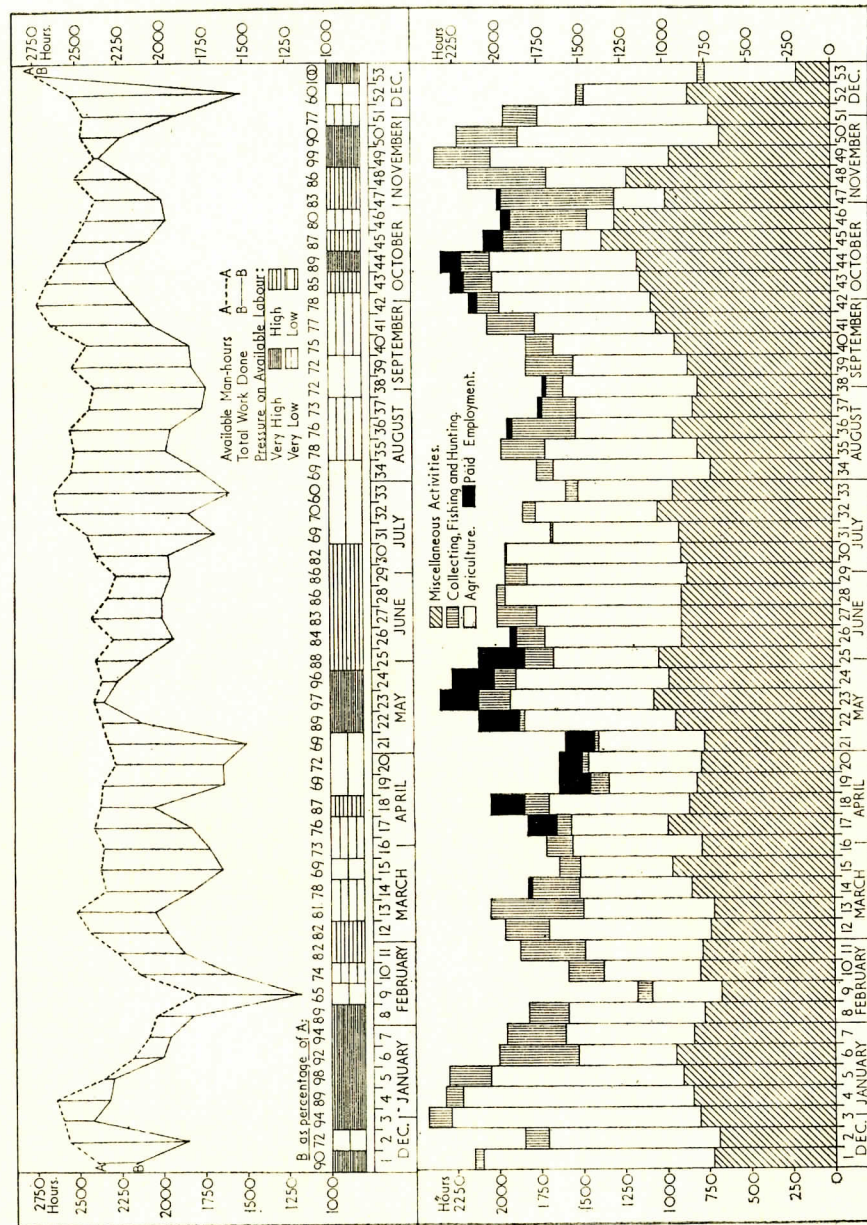


Fig. 15. The weekly distribution of work done, and the pressure of work on available man-power

worked 10 hours on each day that he or she was active there—70 hours in a full week. Similarly in week 52 when work done was only 60 per cent of the available man-hours the average working day for each individual was 6 hours—a 42-hour week.

The average working day by weekly periods varies considerably—from 6 hours in weeks 33 and 52 to 10 hours in week 53. The fifty-two full weeks were arranged in ranking order according to the length of their working day and then divided into four equal groups. In the thirteen weeks above the upper quartile (a working day of 8.9 hours or more) pressure of work on available labour is described as 'very high'; in those weeks between the median and upper quartile (8.2 to 8.8 hours), it is said to be 'high'; in those between the lower quartile and the median (7.3 to 8.1 hours), 'low'; and in those below the lower quartile (less than 7.2 hours), 'very low'. Week 53 was classified separately. This division of the year into four categories (Fig. 15) clearly indicates the different demands the village economy makes on the village labour at various times of the year, and this type of data must qualify any assessment of under-employment in the village.

The main reasons for the seasonal distribution of work are indicated in the foregoing chapters and need not be repeated. The most intense and prolonged period of very high pressure on the village labour force begins as the main rains introduce the agricultural season and continues for about two and a half months until sowing and planting are almost complete. This period had run for several weeks when the village survey commenced, and in week 1 the average working day for the whole group was 9.0 hours. In week 2 work was interrupted by Christmas festivities, but thereafter for six weeks the average working day did not fall below 8.9 hours. Then, in week 9, village life, and economic work in particular, were completely disrupted by the death and funeral of a local and highly esteemed dignitary. The majority of the people of Chief Kalaba's village went to mourn his passing, and most of them spent three or four days away from the village in doing so. This occasion so broke the routine of village life that not only was the available man power greatly reduced during week 9 but the rate of work was also much less than previously; the average working day fell from 8.9 hours in week 8 to 6.5 hours in week 9. This gave the period of consistently very high pressure on labour a more abrupt termination than normally might be expected, and introduced a thirteen-week period in which work generally made much lighter demands on the villagers' time.

In May, in week 22, the millet harvest began and marked the beginning of another long period of high pressure. Harvesting, lopping trees, and various building operations were largely responsible for the long working days—with the weekly average consistently above 8.2 hours—which continued for nine weeks. During the first four of these weeks several men were spending long working days of ten to twelve hours in paid employment. Not that they actually *worked* for so long, but as the road work they were engaged on moved further from the

village the time they spent walking to and from the site increased until it was about equal to the time they actually worked. Early in June they chose to leave the village and make a road camp at their place of work, but until then their strenuous days were largely responsible for the rather longer working days in the first half of the harvest season. With the exception of paid employment and the part-construction of food storage bins the men had relatively little urgent work on their hands. They were busy, but not exceptionally hard-pressed, and this mid-year period of high pressure on available labour is mostly due to the demands of the harvest, particularly the millet harvest, on the women. For them the harvest season is as hard, at least in terms of hours of work, as the cultivating and planting season.

With the harvest complete early in June for many and by mid-July for almost all of the villagers a second long period of relatively easy days ensued. For twelve weeks, from week 31 to week 42 inclusive, the average working day never exceeded 7·8 hours and for most of the time was considerably less. But with October came the threat of rain, and the penalties of procrastination had to be paid. The *chitemene* gardens had to be ready for firing, and new buildings and all repair work had to be completed. Preparations for the wet season such as the stocking of dried cassava and firewood, the reconstruction of fishing weirs, and the repair of agricultural implements also demanded attention. Consequently, and rather unnecessarily, October was a busy month in spite of its heat. In weeks 43 and 45 pressure on available man-power was high, and in week 44, very high. But with the *chitemene* gardens fired in mid-October and most buildings complete a short respite followed in week 46. However, the weeks before the rains set in are the most important period for the collection of all sorts of wild produce, and collecting and processing bush produce took much of the women's time as they awaited the heavy rains which would open the new agricultural season. Consequently pressure of work in weeks 47 and 48 was high. Also after a heavy storm on 6 November agricultural work began and gathered momentum as the following days brought more rain. In weeks 49 and 50 pressure of work was very high; the busiest period of the year—a critical period for agricultural production had begun. But a long dry spell in the latter half of November and during the first days of December made much agricultural work impossible or unadvisable, and in week 51 the average working day was reduced to 7·7 hours whereas in weeks 49 and 50 it had been 9·9 and 9·0 hours respectively. In week 52 agricultural work virtually ceased for five days—the villagers, particularly the men, anxiously waited in idleness for more rain. It came on 10 December and virtually all the agricultural work in week 52 was done on the last two days. On 12 and 13 December—week 53—the average working day was 10·0 hours; the break in the year's busiest period was over.

It is clear that during certain periods, and one in particular, the villagers—including the men—are fully employed by any standards. At other times they might be described as underemployed, though the

word could never be applied justly to the women. Absence from the village of members of the sample does not show any consistent relationship with the seasonal differences in the pressure of village work (Fig. 15). It is, however, far too small a sample on which to base any discussion as to when villagers in general actually absent themselves from the village in relation to the village economy, though the above pattern of periods of high and low pressures upon the villagers' time may suggest when they *ought not* to be absent if the village economy is to attain its maximum strength.

SOME ASPECTS OF LIVING STANDARDS IN CHIEF KALABA'S VILLAGE

THE greater part of this paper has described aspects of the mode of life in Chief Kalaba's village, and it has been demonstrated that the villager's life is, in fact, far from easy. A dearth of technical knowledge and of capital equipment and the very limited opportunities for entering a specialism and the exchange economy confine the villagers to a primitive polyfunctional life in which much effort is expended and the returns are neither abundant nor assured. The adequacy or inadequacy of such returns by standards of the modern world is being questioned increasingly by individuals and institutions outside the village and by the villagers themselves as they gain more knowledge and experience of other ways of life. It is, however, exceptionally difficult to measure accurately the standard of village life, and the village situation does not lend itself to the use of refined concepts. Consequently, in spite of growing interest in the subject it has received insufficient scientific attention, and opinion is in many cases ill-informed. Amongst some sectors of society unrealistic pictures of village life founded largely in emotion and built from now firmly-held beliefs and myths persist unchallenged, and will continue to do so until adequately refuted by the findings of objective investigations.

No systematic study of the standard of village life was undertaken in Chief Kalaba's village and therefore no precise statements are possible. Some relevant data were collected, and this final chapter attempts to illuminate some aspects of living standards in the village and in particular to demonstrate some inadequacies of the subsistence production and ways in which and the extent to which these were met.

Subsistence Production

No quantitative survey was made of the subsistence production. In the official pilot areas of the Health and Nutrition Scheme the agricultural officer and the nutrition officer made detailed studies of agricultural production and of total food intake respectively, but no comparable surveys were possible in Chief Kalaba's village. The only systematic records of food intake refer to the relish dishes eaten at the main meal of the day by the twenty-one households studied. The main, and usually the only meal of the day consists of two main dishes. *Bwali*, a very stiff, dough-like porridge of flour and water, is eaten with a *munani* dish—a stew of vegetables, fish or meat often fortified with a groundnut or other sauce. These relish dishes are named according to their main constituent, and it is these that were

recorded. It must be clearly understood that these records have no quantitative value (no meals were weighed), but they do illustrate some aspects of the village diet and may allow some comparison with similar data for other areas (*vide* Colson, 1958).

15,018 dishes were served during the year. On many occasions and for various reasons a woman cooked more than one relish dish for a particular meal and each was recorded according to its main content. The relative frequency of the main constituents of relish dishes are shown below according to their character and their origin:

<i>Agricultural Produce</i>	<i>Dishes</i>	<i>%</i>
Vegetables	3,814	25.4
Pulses	1,726	11.5
Cucurbits	177	1.1
<i>Total</i>	5,717	38.0
<i>Wild Produce</i>		
Mushrooms	1,263	8.4
Roots	1,057	7.1
Leaves	1,030	6.9
Insects	726	4.8
<i>Total</i>	4,076	27.2
<i>Livestock Products</i>		
Eggs	254	1.7
Chicken	120	0.8
Meat (beef : mutton : goat.)	97	0.6
<i>Total</i>	471	3.1
<i>Game Meat</i>		
Large game	720	4.8
Rodents and birds	447	3.0
<i>Total</i>	1,167	7.8
<i>Fish (Fresh and Dried)</i>		
<i>Total</i>	3,587	23.9

No account was taken of the secondary constituents of each dish, and this undoubtedly minimizes the apparent contribution of agricultural products, and particularly of pulses, to the total diet. Most of the vegetables are leaves of plants grown primarily for other purposes and include cassava leaves, sweet potato leaves, pumpkin leaves, bean leaves and cowpea leaves. None of these would be considered acceptable without a generous stew or sauce, mainly of groundnuts or beans. Many dishes of wild produce also would be considered unpalatable unless similarly garnished. A surprisingly high proportion of dishes contained first-class (animal) protein—no less than 34.8 per cent, and 39.6 per cent if insects are accepted as first-class protein. Most of these are fish dishes (23.9%) and subsistence production provides only a small proportion of the fish consumed. The significance of the fish trade in this locality thus becomes evident, and it will be further emphasized in later pages.

Seasonal differences in the variety of relish dishes served are summarized in Fig. 16. The influences of the seasonal production of many foodstuffs are evident though their availability is affected by

processing and storing. The occurrence of fish in the diet is, of course, much influenced by the frequency of supplies from the Lake Bangweulu region and the ability and desire to purchase fish as well as by seasonal variations in local production.

These data permit some analysis of seasonal differences in the quality of the diet as indicated by the proportion of first-class protein dishes in the total dishes served. Including insects as first-class protein, the proportion of dishes containing such protein as their main constituent ranges from 8.5 per cent in week 3 to 69.5 per cent in week 26. Weeks 1 to 52 were arranged in ranking order according to the proportion of protein dishes of all dishes served that week and were divided into four groups each of thirteen weeks. The village diet in those weeks above the upper quartile (50 per cent or more of the dishes served being of first-class protein) may be described as *good*; in those between the median and the upper quartile (36 to 49 per cent)—*fair*; in those between the lower quartile and the median (24 to 35 per cent)—*poor*; and in those below the lower quartile (less than 24 per cent)—*very poor*.

The distribution of these four categories might be compared with that of the intensity of village work (Figs. 15 and 16). It is apparent that for the greater part of the busy cultivating and planting season the quality of the diet was very poor or poor, and considerable reliance was placed on collected produce and on mushrooms in particular during this period. Cassava culture provides a more assured supply of foodstuffs—both staple flour and relish (cassava leaves)—than the formerly pure millet culture and there was no marked shortage of food in absolute terms and no 'hunger months' which Richards (1939) recorded as a 'pronounced feature' of the Bemba village dietary. The diet during this busy period caused much dissatisfaction because of its monotony and the dearth of fish and meat, and occasionally meals were refused on these grounds. Also the wet weather made food preparation difficult, and the drying of cassava roots in particular was not always possible. Such difficulties occasionally meant that main meals were not prepared and the families concerned ate snacks only; they would say that they had not eaten all day, or even for two or three days, meaning that they had not had the customary meal of *bwali* and *munani*. Thus, for a variety of reasons, but not because of an absolute lack of foodstuffs, the diet during the busiest period of the year would appear to have been very inadequate, and it was certainly poorer than that of other periods. The diet during the harvesting season, the other main period when the pressure of work was high, was much more adequate. Fish was then plentiful not because of local fishing but because employment on the road nearby had brought ready cash into the village and ample supplies of fish were available for purchase. Fish comprised more than 38 per cent of all dishes served for five consecutive weeks (weeks 23 to 27) but no complaints of a monotonous diet were heard on these grounds; fish and meat were always welcome dishes.

During the longest period when protein dishes were numerous—from mid-August to the end of November when fish, game, and insects

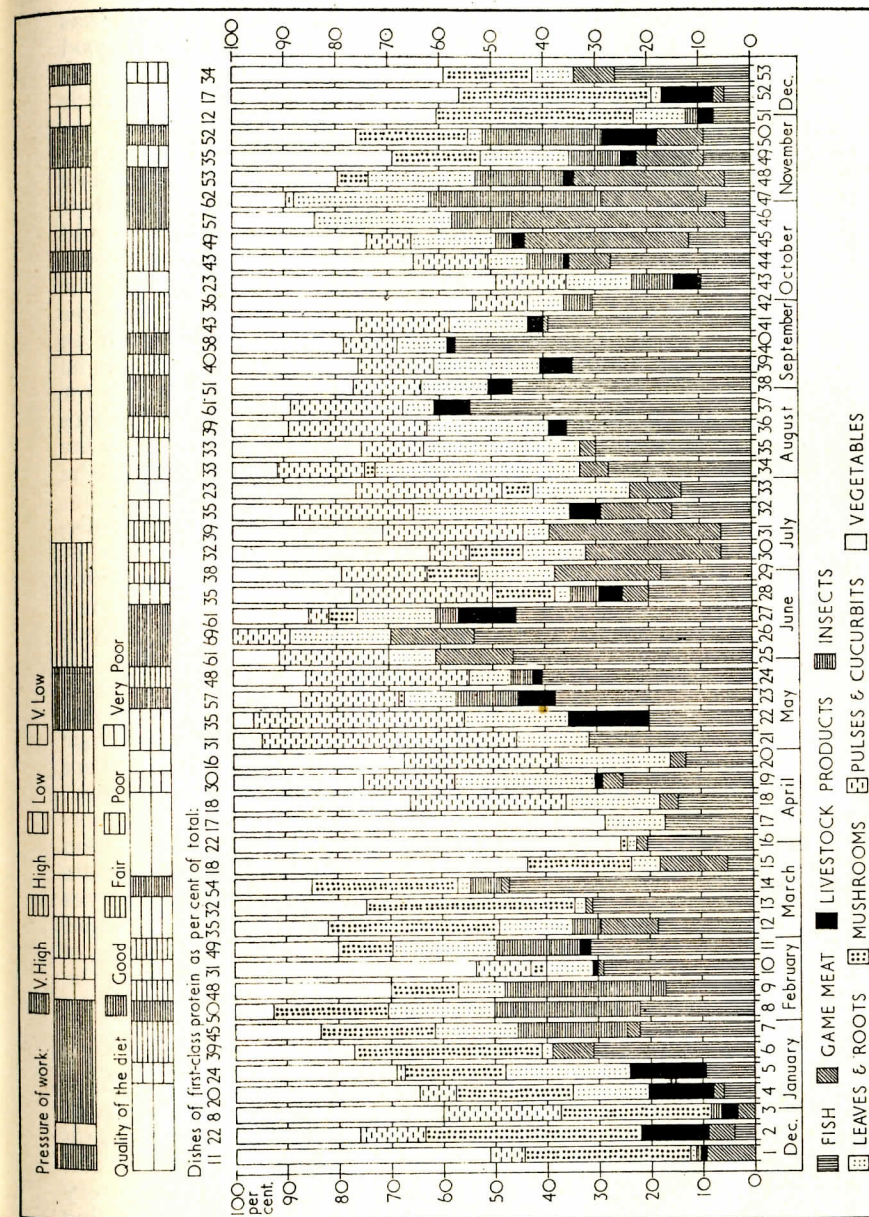


Fig. 16. Differences in the variety of relish dishes served and in the quality of the diet by weekly periods

each contributed successively in quantity—the pressure of work was generally low, and it is unfortunate that this period of a fair to good diet should terminate just as the long, hard days of the rainy season began. The villagers are aware of such seasonal differences in their diet; they know when to expect good times and when bad times are likely. They know that cash is often relatively plentiful in the dry season as the annual tasks of road repairing and maintenance come round. But they do not generally reserve funds to supplement their inadequate diet during the rains when fish, though less plentiful, could be purchased from traders. This attitude, however, should arouse neither surprise nor derision for it is difficult not to be improvident when there are so many pressing needs for cash and when cash is never plentiful and is only occasionally available in quantity. Also if an individual chose to be prudent and reserve funds for later occasions he or she would be subject to many spoken and unspoken demands for assistance and it is considered exceptionally ill-mannered not to share foodstuffs amongst one's kin and friends. It is therefore not easy for an individual to break with the habits of the community whilst he remains a member of it.

No data relevant to subsistence production other than that discussed above and in previous chapters were collected systematically. A detailed inventory of production and of possessions therefore cannot be presented, and a general account of Ushi material culture is not proposed here; reference to the several relevant plates is, however, recommended. Even without such material it is evident that the subsistence production cannot itself satisfy all the villager's needs, and the village group is less self-sufficient than it was prior to *pax britannica*. Virtually all needs and wants not met by the subsistence production require cash expenditure, and the extent to which they are satisfied is closely related to the amount of cash that can be obtained. The villager's need for cash is acute. For him cash provides an opportunity to improve his well-being and his status. Increased production within the subsistence economy confers relatively restricted benefits because generally there is little demand for the commodities he produces and he cannot easily exchange any surplus for either cash or other desirable goods. It is therefore of interest to examine what sources of cash are available to the villager before discussing the use made of the money he receives.

Sources of Cash in Chief Kalaba's Village

The records of income and expenditure indicate the individuals who effected each transaction (Appendix A) but no details are available of the domestic division and use of cash by a man and his wife and therefore a married couple must be regarded as a single unit in respect of financial arrangements. The thirty-six villagers for whom satisfactory accounts are available have been divided into three groups according to their age and marital status. Group A consists of eight young couples, in each case both partners being less than 45 years old. Group

Source of Income	Group A		Group B		Group C		Total	
	£	%	£	%	£	%	£	%
1(A) SALES OF PRODUCE								
1. Agricultural Produce	10.2	4.4	40.5	19.2	12.9	23.0	63.6	12.8
2. Domestic Animals, Meat and Eggs	3.5	1.5	12.6	6.0	3.5	6.3	19.6	3.9
3. Wild Produce	2.1	0.9	0.5	0.2	2.0	3.6	4.6	0.9
4. Fish	9.0	3.9	4.9	2.4	1.3	2.3	15.2	3.1
5. Game meat	25.4	10.9	0.5	0.2	—	—	25.9	5.2
6. Manufactured Items	6.4	2.7	11.9	5.8	0.7	1.2	19.0	3.8
7. Beer	7.2	3.1	2.8	1.3	—	—	10.0	2.0
Total	63.8	27.4	73.7	35.1	20.4	36.4	157.9	31.7
1(B) SALES OF PERSONAL PROPERTY	18.8	8.1	0.4	0.2	—	—	19.2	3.8
All Sales—Total	82.6	35.5	74.1	35.3	20.4	36.4	177.1	35.5
2 INCOME FROM LABOUR								
1. Casual Village Work	17.5	7.5	5.5	2.5	3.1	5.5	26.1	5.3
2. Regular Employment	83.8	36.1	20.6	10.0	—	—	104.4	20.9
3. Profits from Trading Fish	5.2	2.2	—	—	—	—	5.2	1.0
Total	106.5	45.8	26.1	12.5	3.1	5.5	135.7	27.2
3 UNEARNED INCOME								
1. All Gifts (including remittances)	33.0	14.2	85.3	40.7	20.9	37.5	139.2	28.1
2. Marriage Payments	—	—	23.8	11.5	10.5	18.8	34.3	6.9
3. Miscellaneous	10.5	4.5	—	—	1.0	1.8	11.5	2.3
Total	43.5	18.7	109.1	52.2	32.4	58.1	185.0	37.3
Total Cash Income—All Sources	232.6	100.0	209.3	100.0	55.9	100.0	497.8	100.0

TABLE 7. Cash Income of Groups of Households by Sources

Group A consists of eight young couples, Group B consists of eight old couples, Group C consists of four old widows.

B consists of eight old couples; in five cases both man and wife are over 45 years old but in three cases the men are old but their wives are less than 45 years old. Group C consists of four old widows (Appendix D).

These thirty-six adults had a total cash income during the year of £497.8. 35.5 per cent of this sum was obtained from sales of village produce and unwanted personal property. 27.2 per cent was earned by wage-labour or self-employment—as fish traders. And 37.3 per cent was unearned income (Table 7).

There are no organized marketing facilities for the sale of village produce, and indeed there is very little demand for any commodity the villager produces. Chief Kalaba's village is, however, relatively well situated for casual sales of foodstuffs and other produce. The Ushi Native Authority Court meets at the village twice a week, on average, and usually it attracts a small crowd of people concerned with

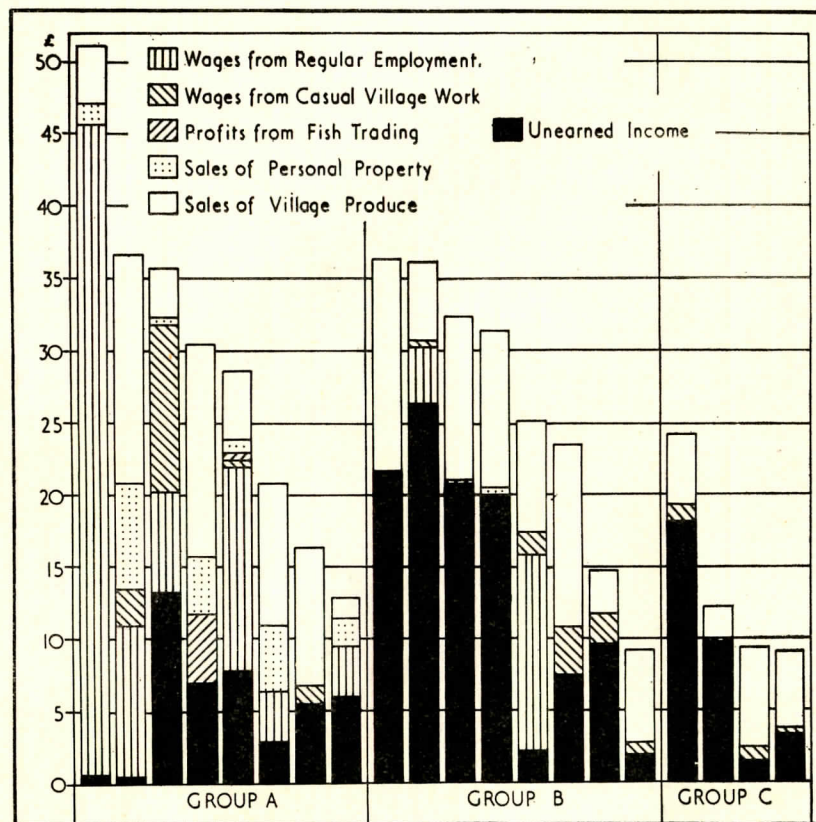


FIG. 17. Cash income of twenty families by sources

or interested in the cases to be heard. The Old Boma Road from the densely peopled N'gumbo lands by Lake Bangweulu is a busy route and it carries many traders, travellers, and labour migrants through the heart of the village (Figs. 3 and 5). And market vendors from Fort Rosebery occasionally come out to the village to purchase tobacco (for making snuff), beans, groundnuts, and finger millet in bulk for retail distribution in the township markets. Sales of agricultural produce provided 12.8 per cent of the total income and the items sold were:

	£
Tobacco	17.2
Beans	14.9
Bananas	11.0
Groundnuts	9.2
Finger millet	6.1
Cassava (roots and flour)	3.1
Cowpeas and other pulses	1.6
Pumpkins and maize	0.5
Total	£63.6

This list emphasizes the very restricted market opportunities. Most items were sold in very small quantities, and the small amounts of cash realized were usually regarded as windfalls and were quickly spent, mostly on foodstuffs and small household goods. Only the larger sales of tobacco and the occasional sales of a debbi (four-gallon tin) or more of pulses or finger millet were regarded as significant sales.

Differences in the sales of produce and property by the three groups are shown in Table 7. The young couples sold relatively little agricultural produce, perhaps because they had little to spare and perhaps because they were reluctant to hawk small quantities to prospective buyers who were mostly of their own age-group. The main item of village produce they sold was game meat which brought in relatively large sums at each sale. The young couples also, rather surprisingly, made more money from beer sales than the older people. Their profits came from sun-down parties; large, organized social occasions which require some investment of capital, and which are popular in urban areas (*vide* Kay, 1960, and Anon, 1957). And virtually all items of personal property sold—mostly worn clothing, bicycle parts, and an old gun (which realized £7)—were sold by young persons, and by young men in particular. The older villagers were more dependent upon sales of agricultural produce and domestic animals, notably chickens, sheep and goats. Together these provided 25.2 per cent of the income of the old couples and 29.3 per cent of the old widows' total income. The old men made more money than any other group from the manufacture and sale of various items such as mats, baskets, fish traps, axe heads and handles for axes and hoes. The chief manufactured item sold by women was charcoal which was often in demand by those going to Fort Rosebery and even had a local

market during the wet season. One old widow was able to make some money from her knowledge of medicinal herbs which she collected and sold.

The relative importance of the contribution of all sales to the total income of each group of households is remarkably uniform. Sales provided 35.5 per cent of all cash received by the young couples, 35.3 per cent of that received by the old couples and 36.4 per cent of that received by the old widows. The situation in respect of wages, however, was markedly different. The old widows earned only £3.1 (5.5 per cent of their total income) from casual village work. One-third of this sum was the professional fees of a mid-wife, and the remainder was from working in routine agricultural tasks. The old couples earned only £26.1 (12.5 per cent of their income) from paid employment, and of this £5.5 was earned from casual village work, partly by the womenfolk. The old men generally were willing to take regular work, particularly road work near the village, but they could not compete successfully with the younger men for the limited number of labourer's jobs available. The young men earned £83.8 from regular paid employment, but £45 of this was earned by a permanent employee of the Federal Ministry of Health. A further £17.5 was earned from casual village work, and more than half of this was received by one man who often worked for Chief Kalaba, herding cattle in particular. And £5.2 was gained by two men who tried their hands, not very successfully, at fish trading. Altogether wage labour provided 45.8 per cent of the young couples' total income.

The distribution of unearned income was in several ways complementary to that of wages earned. Unearned income provided only 18.7 per cent of the young couples' cash but 52.2 per cent of the old couples' and 58.1 per cent of the widows' incomes. Most of this unearned cash came from relatives in employment in distant towns, in Elisabethville and on the Copper Belt of Northern Rhodesia in particular, and some, mostly marriage payments, came from men at work in Fort Rosebery. The social channels along which these gifts and payments flow lie outside the scope of this paper, but it is clear that they converge mostly on older villagers. The older villagers are, in fact, very dependent upon the extent and strength of the networks of connections they can maintain between themselves and relatives in paid employment. Remittances provide villagers with benefits only cash can purchase and they obtain some social security for the absentee worker because a ready giver is always welcomed and provided for on his return to the village. The majority of the villagers in this survey were dependent on unearned income of all kinds for more than half of the cash they received, and the village economy failed to provide any of the villagers with adequate opportunities to earn cash.

The sources of each household's income are shown in Fig. 17, and Fig. 18 shows the total income and expenditure of each household. The highest income (£51.1) was obtained by a young couple and the lowest (£9.3) by an old widow. The young couples, on average, had an

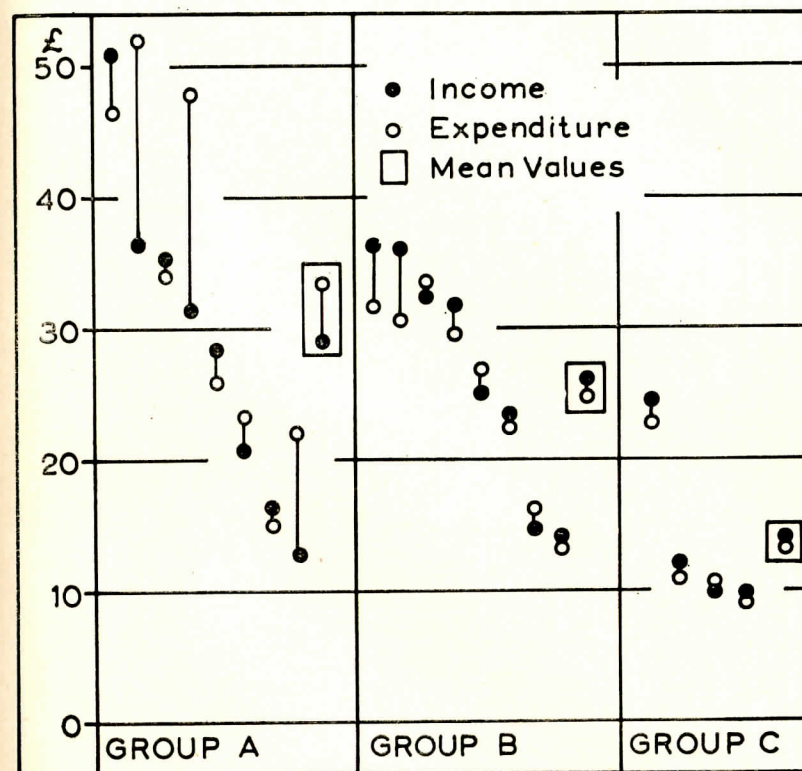


FIG. 18. Cash income and expenditure of twenty families

income of £29.1 each, the old couples averaged £26.2, and the old widows only £14. Several villagers had cash in hand when the survey began and were able to spend more during the year than they received. In particular three young men who had recently left urban employment had relatively large sums of capital in hand—£30, £18 and £14 respectively—and they all drew heavily on their savings during the year (Fig. 18). Without these savings they may have found village life intolerable. Largely as a result of the heavy spending of these three, the young couples as a group spent more than they earned whilst both groups of old people, on average, spent less than their income. The thirty-six adults spent a total of £521.9 during the year, and analysis of this expenditure reveals what the villagers felt most in need of and, by inference, what they had to do without.

Cash Expenditure in Chief Kalaba's Village

The use of money by the three groups of households and the thirty-six villagers is shown in Table 8, and the expenditure of each household is summarized in Fig. 19. No less than 22.0 per cent of all expenditure was on foodstuffs, the two major purchases being fish (14.8%) and salt (5.0%). Some meat was also purchased, but it was rarely available for sale and was more highly-priced than fish. Most of the fish bought was dried fish brought by traders from the Lake Bangweulu region. The villagers realized that without purchases of fish their diet would be dangerously inadequate. In discussing the food situation it was often stated by the villagers that 'Without money we would starve'—the inference being that they would have few square meals, to use a western idiom. The old men fondly recalled the days of their youth, as many old men do, when game and fish were plentiful locally and they were

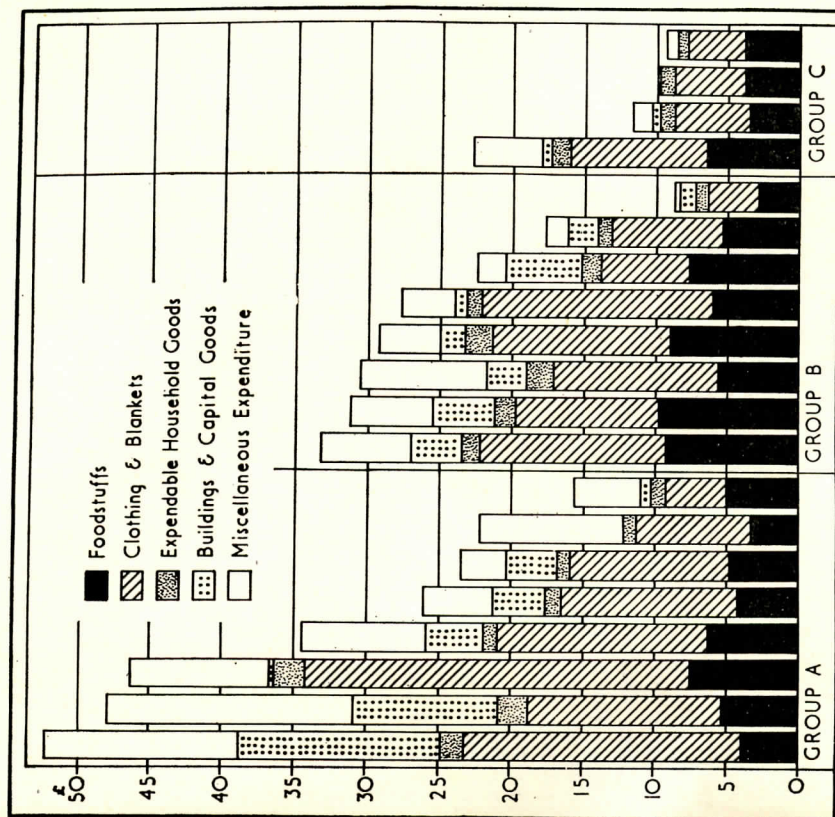


Fig. 19. Cash expenditure by twenty families

TABLE 8. Cash Expenditure by Groups of Households
Group A consists of eight young couples, Group B consists of eight old couples, Group C consists of four old widows.

Expenditure	Group A		Group B		Group C		Total	
	£	%	£	%	£	%	£	%
1. FOODSTUFFS	26.8	9.9	37.4	18.7	24.0	12.9	77.1	14.8
Fish	1.8	0.7	4.4	2.2	6.5	3.5	6.2	1.2
Meat	10.4	3.9	12.0	6.0	25.9	12.9	5.0	1.0
Salt	2.2	0.8	2.2	1.1	1.9	1.0	5.4	1.0
Other Items	41.2	15.3	56.0	28.0	32.4	17.4	114.6	22.0
2. CLOTHING AND BLANKETS	108.3	40.3	79.7	40.0	44.5	23.9	211.9	40.5
Expendable Household Goods	5.4	2.0	4.5	2.2	4.3	2.3	12.2	2.3
Soap	4.8	1.8	5.6	2.8	2.0	1.1	11.5	2.2
Others	10.2	3.8	10.1	5.0	6.3	3.4	23.7	4.5
3. CAPITAL EXPENDITURE	14.6	5.4	18.0	9.0	—	—	32.6	6.2
On Buildings	22.1	8.2	4.3	2.2	2.4	1.3	27.7	5.3
On Other Items	36.7	13.6	22.3	11.2	2.4	1.3	60.3	11.5
4. MISCELLANEOUS EXPENDITURE	18.8	7.1	6.7	3.3	4.8	2.6	28.1	5.5
Gifts	10.2	3.8	—	—	—	—	10.2	2.0
Marriage Payments	19.0	7.2	12.8	6.4	2.9	1.5	34.7	6.8
Beer	3.7	1.4	0.7	0.3	0.2	0.1	4.5	0.8
Cigarettes and Tobacco	11.0	4.1	4.0	2.0	—	—	15.0	2.8
Tax	7.5	2.8	4.0	2.0	—	—	11.5	2.2
Transport	1.7	0.6	3.5	1.8	2.2	1.2	7.4	1.4
Others	71.9	27.0	31.7	15.8	7.8	4.1	111.4	21.5
Total Cash Expenditure	268.3	100.0	199.8	100.0	53.8	100.0	521.9	100.0

never short of good relish. These recollections may be reliable, and if so then the subsistence diet has suffered in respect of its protein content and the present dependence on cash purchases of fish to supplement the village production is more disturbing if it arises from efforts to maintain a deteriorating diet rather than from attempts to improve a poor one. Salt was always in demand and large quantities are consumed. Women without salt would gladly do a day's work for a handful but they would not do the same work for three times its value in cash—unless salt was for sale nearby. The villagers have no easy alternative to buying salt, and subsistence production by burning reeds is rarely considered nowadays when one can usually beg or work for salt. The other foodstuffs purchased were mostly luxury items alien to the traditional diet; cooking oil, sugar, sweets, biscuits and bread were the main items, and most of the purchases were made during the Christmas Festival season.

The old widows spent almost one-third of their cash expenditure on foodstuffs, and the old couples similarly spent 28.0 per cent of theirs. The young couples spent rather less in both relative and absolute terms than the old people. This was partly because several of them were, to some extent, fed by their older relatives, particularly their wives' parents, and thus needed to buy fish and salt only when their elders were unable or unwilling to do so. Also two young men bought dried fish in bulk for re-sale and their families ate freely from these trade stocks whilst they lasted—one of the reasons why the profits were so low.

Most cash was spent on clothing and blankets—items the villager no longer attempts to produce for himself and for which he is entirely dependent upon cash, or on gifts from those with cash. 40.5 per cent of all expenditure was devoted to these articles, and all three groups spent about the same proportion of their total expenditure on clothing and blankets. Expendable household goods form another group of commodities which the villager must purchase or do without because their production is in most cases beyond his ability and his traditional substitutes no longer merit production in face of competition from trade goods. Soap was by far the most important of these household goods, and the others included matches, candles, paraffin, vaseline, razor blades, pins, needles and cotton. Total expenditure on such goods was small and constituted only 4.5 per cent of the total. They were always in short supply and with the exception of soap and matches none of these goods are as yet considered to be indispensable. They are much desired but most villagers cannot afford to buy in large quantities and to make regular use of them, and often when they are in need they have little or no cash. Women begging for one or two matches, and boxes of matches being divided for re-sale in pennyworths or half-pennyworths vividly demonstrated abysmal inadequacies of the village situation for the poorer individuals.

Foodstuffs, clothing and blankets, and expendable household goods account for two-thirds of all expenditure. The remaining third was

spent on such a variety of items that classification proved difficult. Expenditure on buildings and other capital goods such as bicycles, guns, knives, cooking utensils, plates, mirrors and locks have been separated and the remaining uses of cash have been listed under miscellaneous expenditure. The old widows spent very little on capital goods, but the old couples invested considerably in buildings—a reflection of the change from pole and dagga huts to kimberley brick houses. The young couples were similarly involved in building expenses, and also they were more inclined and more able to purchase various items of personal equipment. The young couples spent most on the miscellaneous items, and largely because of their social positions and their higher incomes they gave £18.8 away in gifts and paid £10.2 in marriage payments. Altogether £39.2 were spent on beer and tobacco, and £22.7 of this sum were spent by the young couples, mostly by the men. Other items of expenditure included taxes, transport costs, court fines, witch-doctors' fees, loans, subscriptions to political parties, and wages paid for assistance in village work.

The patterns of expenditure reveal the dependence of the villager on cash purchases for several essentials, notably on foodstuffs, clothing and blankets, and some small household goods that are becoming necessities in modern village life. They also reveal the very meagre extent of the material goods most villagers possess. But urban behaviour and cultural patterns are known and, to some extent, are desired in the village, and the villager himself will increasingly compare his lot with that of the urban dweller, or with the life he personally experienced in urban areas. Village life has much to recommend it, but the inadequacies of subsistence production in spite of hard work make it economically unattractive. The definite need of cash and the extraordinary difficulties of obtaining it within the framework of traditional village life focus much of the villagers' attention on to paid employment and urban life. The young men in particular literally alternate between the subsistence economy of the village and the cash economy of the towns, and in 1960 no less than 76 per cent of the able-bodied adult males of Chief Kalaba's Area were absent from their villages in search of work—in search of cash. Women, children, and even many old men are largely dependent directly or indirectly on cash earned by male relatives and friends which spreads in ever-widening, decreasing waves from its sources—mostly in the towns—through the rural areas.

The very considerable and widespread disparity between the economies of the urban and rural areas is well known in general terms, and so too are the divergent standards of living associated with the different economies. It is, however, too easy to dismiss the low levels of productivity and inadequacies of the village economy as the villager's responsibility and to assume that a remedy lies in his own hands. The villager is not lethargic but works to the best of his knowledge and ability. The differences between the subsistence economy and the cash economy are not of his making, and the only way he sees to minimize these differences is by seeking an active part in the cash economy as

often as opportunity offers. Urban employment cannot meet the growing needs of the villagers and the cash economy must expand. The need for rural economic development is one of the most pressing Northern Rhodesia faces and is officially recognized as such in the current Development Plan (1962). 'A vital aspect of the plan is the training of farmers, fishermen and other producers' so that they may be quickly brought into commercial production and the cash economy. Such revolutionary progress envisages a new rural life completely replacing the traditional village life. But the majority of the villagers are neither capable of nor willing to participate immediately in such rapid progress, and indeed it is not intended that the majority should do so. For most of them improvement must come within the framework of their present village life; evolutionary, gradual changes towards increased productivity and greater participation in the cash economy are required. Such progress was the object of the Health and Nutrition Scheme, and this study of life in Chief Kalaba's village was undertaken to help to document some of the problems and possibilities that were likely to be encountered. If it adds a little to available data about Ushi life on the Fort Rosebery plateau and on African village life in general it will be potentially successful.

APPENDIX A

Data Recorded

1. *The Village Census*

Village..... Section..... Household..... Date.....

For each member of the household present and for those temporarily absent:

Name..... Sex..... Age..... Tribe.....
 Place of birth..... Clan..... Position in household.....
 Relationship to (a) Section Elder and (b) Village Headman.....
 Reason for living in this village.....
 Marital status..... Date of marriage.....
 Education..... Religion (Denomination).....

2. *The Household Accounts Survey*

The majority of transactions consist of both 'income' and 'expenditure'. If cash is involved the flow of cash determined the classification of the transaction. All cases of barter were entered in the 'income' log. Goods earned by services rendered were also entered as 'income'.

INCOME:

Date..... Member of household..... Cash.....
 Material (a) Description..... (b) Value.....
 Origin (a) Name..... (b) Relationship to household.....
 Place of transaction.....
 Expenditure incurred / Reason for no expenditure.....
 Purpose of transaction.....
 Any relevant comments.....

EXPENDITURE:

Date..... Member of household..... Cash.....
 Material (a) Description..... (b) Value.....
 Destination (a) Name..... (b) Relationship to household.....
 Place of transaction.....
 Income obtained / Reason for no income.....
 Purpose of transaction.....
 Any relevant comments.....

PERSON	SEX	AGE-GROUP	No. of Days Absent from Village				No. of Days Spent in Village		Economic Activities (in hours) whilst in the Village								TOTAL	AVERAGE ⁽⁵⁾ WORKING DAY
			Hunting Collecting Trading	Living with 2nd wife	On Social Visits	Employed or seeking work	Ill	Active	Agriculture	Collecting	Fishing	Hunting	Miscellaneous Activities	In Paid Employment				
KANKWENDE	M	65-70	-	-	9	-	21	336	1,384	54	49	50	436	-	1,973	5.9		
MULALA	F	60-65	-	-	-	-	-	366	1,398	125	16	-	1,826	-	3,365	9.2		
MWANSA	F	15-20	-	-	5	-	13	348	931	231	424	-	1,575	-	3,161	9.1		
CHABUNDA (6)	F	15-20	-	-	8	117	1	240	706	192	265	-	1,097	-	2,250	9.4		
AMON (6)	M	20-25	-	-	22	116	30	198	457	9	12	32	288	236	1,034	5.2		
CHOMBA (6)	M	20-25	-	-	10	198	1	157	253	14	2	73	335	-	677	4.3		
MUMBA	F	70-75	-	-	-	-	5	361	1,378	206	71	-	1,886	-	3,541	9.8		
MWESA	F	50-55	-	-	47	-	-	319	1,335	79	42	-	1,608	-	3,064	9.6		
DINA (6)	F	25-30	-	-	5	96	1	264	927	86	163	-	1,337	-	2,513	9.5		
WILSON (6)	M	25-30	-	72	5	170	-	119	327	8	10	15	441	-	801	6.7		
MALIKO	M	30-35	-	11	9	13	13	320	1,009	23	203	76	878	-	2,189	6.8		
SOPHIA	F	25-30	-	-	37	-	21	308	1,075	189	189	-	1,590	-	3,043	9.9		
NDUTA	M	50-55	-	-	69	-	23	274	1,160	34	95	26	447	-	1,762	6.4		
EWALYA	F	50-55	-	-	33	-	3	330	1,286	173	79	-	1,734	-	3,272	9.9		
SEBYO	M	20-25	34	187	-	8	-	137	233	8	-	154	182	186	763	5.6		
CHISHALA	F	15-20	-	-	29	-	3	334	1,015	209	282	-	1,673	-	3,179	9.5		
JOHN	M	30-35	80	-	35	-	5	246	569	11	27	86	719	-	1,412	5.7		
SOPHIA	F	30-35	-	-	6	-	6	354	1,156	232	98	-	1,805	-	3,291	9.3		
JACOB	M	30-35	8	110	-	38	-	210	591	16	15	50	249	475	1,396	6.7		
CHIPULA	F	25-30	-	-	34	-	8	324	1,132	162	299	-	1,650	-	3,243	10.0		
LABAN	M	20-25	-	-	-	213	-	145	258	26	26	104	115	154 ⁽³⁾	683	4.7		
ESTA	F	15-20	-	-	44	-	-	322	744	161	235	-	1,545	-	2,685	8.4		
JOHN CHIWELE (6)	M	30-35	-	-	38	159	72 ⁽¹⁾	169	329	9	-	-	68	Chief ⁽⁴⁾	406	2.4		
MARK MILLION (6)	F	20-25	-	-	8	66	-	220	710	118	17	-	1,153	-	1,998	9.1		
LUMBE KALABA	M	70-75	-	-	10	-	13	343	1,356	59	86	79	228	-	1,808	5.3		
MWANSA ANGATA	F	50-55	-	-	3	-	6	357	1,163	179	105	-	1,637	-	3,084	8.7		
JULIANA (6)	F	15-20	-	-	1	261	3	101	94	40	102	-	306	-	542	5.4		
AKIM (6)	M	20-25	-	-	28(2)	261	10	67	212	6	-	35	122	-	475	7.1		
PETER MWAKA	M	45-50	18	-	12	37	4	295	875	35	188	143	413	438	2,092	7.1		
MUMBI	F	35-40	-	-	35	-	10	321	1,097	168	85	-	1,651	-	3,001	9.4		
STEPHANO	M	25-30	20	-	12	37	2	295	517	34	2	436	486	422	1,899	6.4		
BULANDINA	F	20-25	-	-	3	-	5	358	1,086	206	216	-	1,754	-	3,262	9.1		
BUNDA	F	40-45	-	-	7	-	-	359	1,557	164	72	-	1,650	-	3,443	9.6		
ABEL	M	45-50	-	-	119(2)	-	-	247	1,014	18	-	24	265	-	1,321	5.4		
PHILEMON	M	25-30	-	-	4	-	4	338	504	16	18	83	771	413	1,805	5.3		
EDINA	F	20-25	-	-	35	-	5	336	1,117	205	179	-	1,589	-	3,090	9.2		
KATONTOKA	M	45-50	-	-	10	-	2	354	1,645	78	195	65	551	190	2,724	7.7		
MWELA	F	20-25	-	-	63	-	1	302	1,098	154	67	-	1,456	-	2,775	9.2		
MWENDA	F	65-70	-	-	6	-	2	358	1,004	226	54	-	1,709	-	2,993	8.4		
MWELWA	M	50-55	-	184	2	-	7	173	576	38	87	64	586	-	1,351	7.7		
KALUBA	F	45-50	-	-	12	-	3	351	1,186	139	106	-	1,760	-	3,191	9.1		
WILLIE (6)	M	25-30	14	23	-	264	9	65	290	8	20	22	145	-	485	7.5		
K. MUSEBO (6)	F	20-25	-	-	-	183	-	174	661	180	84	-	777	-	1,702	9.8		
MPUNDU	F	50-55	-	-	55	-	8	303	1,093	168	33	-	1,627	-	2,921	9.7		
LUKOMONA	M	55-60	-	-	10	-	10	346	1,138	23	-	20	953	-	2,134	6.2		
KUNDA	F	45-50	-	-	6	-	1	359	1,474	138	28	-	1,802	-	3,442	9.6		

APPENDIX B. Summary of the Villagers' Economic Activities.

- (1) Includes days spent in hospital.
- (2) Includes period prior to marriage.
- (3) Employed by Health Department.

- (4) Deputy Chief. Hours Spent in Paid Employment - It was not possible to record hours when the Chief was "on duty" because this often involved no distinctive behaviour. A chief is a chief ALL the time.
- (5) Average working day. i.e.: Total hours work divided by number of active days in the village.
- (6) Household Accounts inadequate.

APPENDIX C

The division of the year 14 December 1959–13 December 1960 into weeks, and the distribution of man-days spent away from the village

<i>Week No.</i>	<i>Dates</i>	<i>Man-Days</i>	<i>Week No.</i>	<i>Dates</i>	<i>Man-Days</i>
1	Dec. 14–20	77	27	June 13–19	74
2	21–27	60	28	20–26	84
3	28–3	57	29	27–3	90
4	Jan. 4–10	52	30	July 4–10	77
5	11–17	81	31	11–17	72
6	18–24	98	32	18–24	54
7	25–31	108	33	25–31	53
8	Feb. 1–7	112	34	Aug. 1–7	63
9	8–14	136	35	8–14	65
10	15–21	102	36	15–21	62
11	22–28	89	37	22–28	74
12	29–6	73	38	29–4	77
13	Mar. 7–13	64	39	Sep. 5–11	63
14	14–20	82	40	12–18	73
15	21–27	79	41	19–25	51
16	28–3	81	42	26–2	41
17	April 4–10	75	43	Oct. 3–9	49
18	11–17	79	44	10–16	56
19	18–24	80	45	17–23	65
20	25–1	88	46	24–30	72
21	May 2–8	85	47	31–6	78
22	9–15	80	48	Nov. 7–13	66
23	16–22	75	49	14–20	78
24	23–29	80	50	21–27	65
25	30–5	77	51	28–4	71
26	June 6–12	87	52	Dec. 5–11	63
			53	12–13	13

APPENDIX D

The composition of household groups in respect of the study of Household Accounts. Reference to the detailed directory of the selected households on page 26 is recommended.

<i>Group A</i>	<i>Young Couples</i>
1. Amon and Mwansa	Kankwende Household 1.
2. Maliko and Sophia	Masheto Household 2.
3. Sebyo and Chishala	Nduta Household 2.
4. John and Sophia	Nduta Household 3.
5. Jacob and Chipula	Nduta Household 4.
6. Laban and Esta	Kalaba Household 1.
7. Stephano and Bulandina	Kalaba Household 5.
8. Philemon and Edina	Kalaba Household 7.
<i>Group B</i>	<i>Old Couples</i>
1. Kankwende and Mulala	Kankwende Household 1.
2. Nduta and Bwalya	Nduta Household 1.
3. Lumbwe Kalaba and Mwansa Angata	Kalaba Household 3.
4. Peter Mwaka and Mumbi	Kalaba Household 4.
5. Abel and Bunda	Kalaba Household 6.
6. Katontoka and Mwela	Kalaba Household 8.
7. Mwelwa and Kaluba	Kalaba Household 10.
8. Lukomona and Kunda	Kalaba Household 13.
<i>Group C</i>	<i>Old Widows</i>
1. Mumba	Kankwende Household 2.
2. Mwesa	Masheto Household 1.
3. Mwenda	Kalaba Household 9.
4. Mpundu	Kalaba Household 12.

The Household Accounts of ten villagers were unsuitable for use in the study (*vide* Appendix B and p. 7)

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