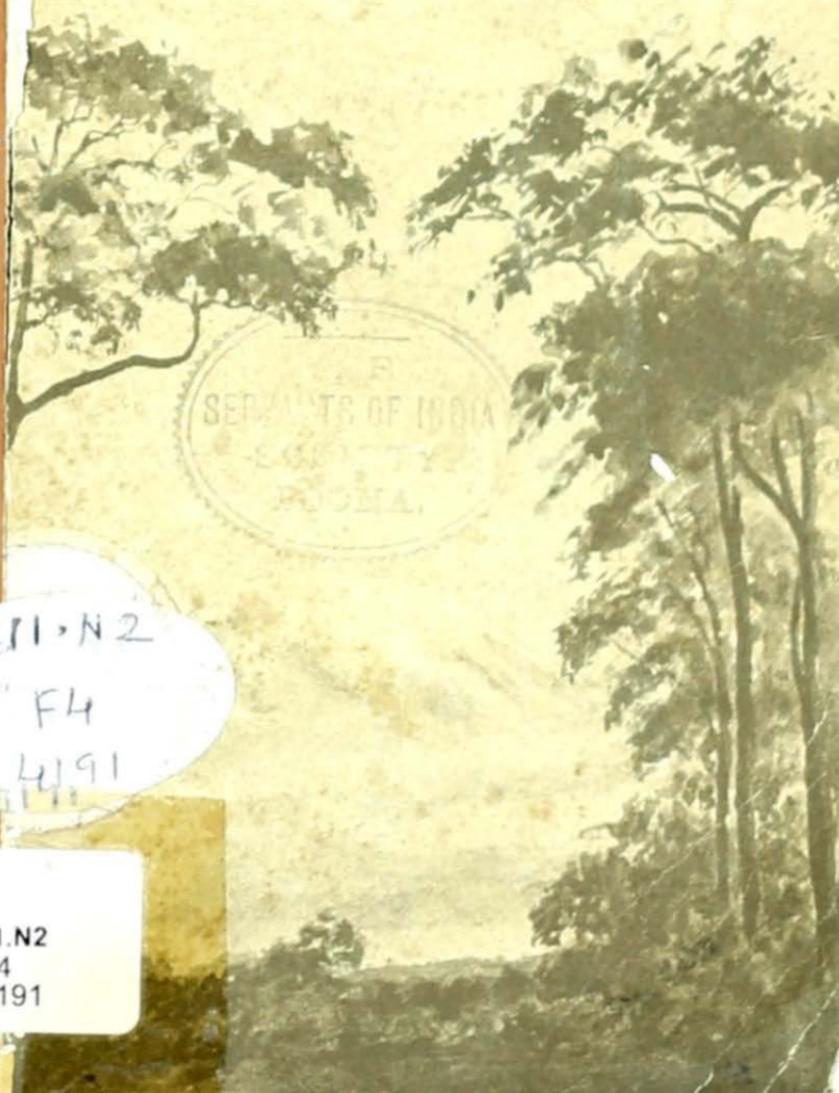




TANGANYIKA EXHIBITION HANDBOOK



GOVERNMENT OF INDIA
BOMBAY

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FLAX HEMP SISAL JUTE

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MS:
LONDON."

ys,

DUNDEE:
6, Euclid Crescent.
BELFAST:
Textile Building,
Linenhall Street.

LIVERPOOL:
9, London Court,
Crown Street.
NEW YORK:
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PARIS:
58, Rue Jean-
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BOLOGNA:
Via Degli,
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of the conquering Arabs, it disappeared. One of the islands to be captured was the original Kilwa (Kilwa) where there are still to be seen, not far from the Portuguese fort already mentioned, the mosques and other buildings of the Arabs. In its chequered history, this Kilwa was even sacked by a tribe of Bantu Cannibals; subsequent to this in 1587, it does not appear to have regained its power and after the activity of the Arabs against the Portuguese during the latter half of the seventeenth century, the rest of the Coast into the hands of Saif bin Imam of Muscat, from which place the Arab influence was removed to Zanzibar in 1832. Sultan Seyyid Said, who had begun to rule in 1804. Sultan who, by causing part of the population of Kisiwani to become fugitives from his rule, brought about the founding of modern Kilwa mentioned.

The removal of his capital by this Sultan from the coast to Zanzibar was pregnant with results for the Sultan. He was enabled thereby at once to escape from the bad effects of the internal dissensions of Oman and to place his ships from a centre near to the mainland. At the same time he was assisted by the defeat, from Egypt, of his hereditary enemies, the Wahhabis, and by the growing power of the British in the Persian Gulf, until he was able to form a nest of pirates who preyed on whom they would. He did much to limit the power at sea of the Arab. Standing this assistance, Sultan Seyyid Said prevailed on the Government of India to annul a treaty made in 1795 between the British with Arabs of Mombasa which gave the British protection; and further brought the coast under his power, although it took four years of fighting, ending in 1832, to make them yield. The

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er as indirect evidence and tradition serve to show, it is likely that Arabia and India traded with the East Coast of Africa at least twenty ago; but there is nothing to indicate that any on was begun until about the eighth century, was probably brought about by the spread of anism. Then towards the end of the first thousands of the Christian Era the Persians came from z to join the Arabs; after this time these two then in a full tide of their energy, established nearly all along the coast, which in the twelfth and thirteenth centuries reached the height of their and prosperity.

years after the great Portuguese explorer Vasco sailed along the East African Coast a fort was Kilwa Kisiwani, south of the modern Kilwa the chief town of the district called Kilwa; but Portuguese did not maintain this post long, and the ent became an ordinary trading post. It was this time that the position of the Portuguese on st, held by force acting from Mombasa, Mozambique ibar, was strongest; but their power, never very as broken by the Arabs of Oman and Muscat, who end of the seventeenth century had taken most of rtified posts, and after a slight revival in the first the eighteenth century, permitted by the quarrels

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energetic Sultan eventually resulted in the islands of Zanzibar, Pemba, MANA, etc., and the coast of what is now the coast of Tanganyika and It was the desire for the prosperity of his that led him to introduce into Pemba and the clove, the chief internal source of their to-day.

On the death of Sultan Said in 1856, Zanzibar became separated from Muscat, and his dominions divided between two of his sons, one, Thuwainy, Muscat, and the other, Majid, Zanzibar and the Islands and the Coast, the last in consideration of annual tribute to his brother of Muscat, this division was confirmed under the arbitration of the Viceroy of India. In the next year the Arab power was made permanent by a reciprocal engagement by Great Britain, which was adhered to in 1886 by Germany, to recognize the independence of Zanzibar, which continued to be ruled by Majid until he was succeeded on his death in 1895 by his brother Seyyid Bargash, who was followed by Hamud bin Hamud bin Mohamed and Said Khalifa bin Hamud, the present Sultan. The time of the reigns of the Sultans of Zanzibar, until the treaty of 1873 which put an end to the slave trade, may be regarded as a period of predominating Arab influence, a period during which the Arab, assisted by the Indian, penetrated far into the interior in pursuit of the trade in slaves and in ivory. With the ending of this trade by the treaty, poverty fell upon the plantation-owners, the Arabs through lack of labour, and they were obliged to transfer their energy, assisted as before by the British, to illegal slave raiding in the interior, with an increase of the cruelty that was already a feature of the

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It was during this time that British influence—directed by such able minds as those of Sir John Kirk, British Consul at Zanzibar for many years, and of Sir William Mackinnon—was paramount in the Islands ^{on the} Coast, through the Sultans of Zanzibar: ^{so} that the latter (although Arab influence ^{was} non-existent behind the coast strip except ^{on} routes) was in 1877 asked to accept a lease ^{for} years of the Administration, including the ^{Coast} a concession, of the whole of the area known as Tanganyika and Kenya—an offer which the Government found itself unable to accept. On the Continent of Europe, however, France and Germany were during these years taking an increasing interest in this area, the latter especially accumulating influence as a result of her newly-awakened desire for expansion; and France may be regarded as having some claims to consideration, in view of her interests on the Coast, but until 1884 Germany was none. In this year, however, the latter nation sought to take advantage of the fact that Dr. Karl Peters and others of her explorers penetrated to the interior area south of Kilosa called Usagara and made treaties with local chiefs granting extensive rights to the German Colonization Society, which was set up under a charter from the German Government. The rights of administration over all the country from the Coast and Lake Tanganyika. By means of expeditions this area of influence was extended northerly and southerly; and although the Sultan of Zanzibar rightly protested against what amounted to an invasion of his territory, he was forced to yield to lack of support by the British Government. The sending of German war

Zanzibar. This definite entry into the Continent by a European power marked the beginning of the end of slave-raiding. Great Britain maintained a passive attitude towards it, merely watching to ensure that the grounds of her intentions received no trespass and her interests no harm. But there was speedily an end to this passivity, even, and in 1886, 1890 and 1907 agreements were made with Germany by which any claim of the Sultan of Zanzibar to the interior ceased to be recognized, and his rights were limited and reduced by cession to those possessed by him at the present time, namely the rule over Zanzibar and Pemba under a British Protectorate. It was now that the obtaining of Coastal concessions from the Sultan by Great Britain and Germany led to the development of activity in their respective spheres of influence that had come into being prior to the European War; but owing to the natural opposition of the Coast peoples, the Arabs and Swahilis, deprived of their rights without being consulted, the Germans found themselves forced to take refuge in Bagamoyo and Dar es Salaam, where they lurked protected by a German squadron. This inefficiency of the Colonisation Society caused the Administration to be taken over by the German Government in 1889, and by the end of the next year German rule was established, although further, often very severe, fighting in the next few years, notably in Tabora, Moshi, Kilwa and Uhehe (Iringa) was necessary before the Germans could make their penetration effective. Then, fifteen years later, in 1905, came the sudden, unexpected and well-concerted outbreak of the southern tribes, beginning in July in the Matumbi Hills behind and between modern Kilwa and Mohoro on the chief southern mouth of the river Rufiji. This rising spread to the middle of the Territory, and it

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took two years of hard fighting, in which naval and military forces co-operated, together with guerilla warfare, to reduce the tribes to submission: a submission which, it is admitted, was only given after 75,000 of their people had perished, and a yielding which was followed by a punishment involving the deaths of 120,000 persons through starvation following the purposeful destruction of their crops and stock. The chief matters in its subsequent history under the Germans, and the principal events in the War that brought about its loss to them, are shown in the following table, which tells at a glance the story of the Territory.

HISTORICAL SUMMARY OF EVENTS

- 1505.... Foundation of Kilwa fort by the Portuguese.
- 1587.... Sack of Kilwa by Zimba.
- 1698.... Occupation of mainland of Zanzibar by Muscat Arabs.
- 1784.... Revolt of Mombasa against the Seyyids of Muscat.
- 1832.... Seyyid Said subdues Mombasa and makes Zanzibar his capital.
- 1832-40 Extension of his rule on mainland.
- 1856.... Death of Seyyid Said.
- 1858.... Burton travels through Unyamwezi to Ujiji.
- 1858.... (Aug. 3) Speke discovers south coast of Victoria Nyanza.
- 1861-62 Speke's second expedition to Victoria Nyanza.
- 1870.... Seyyid Majid dies and Bargash succeeds.
- 1877.... Lease of the mainland offered by Bargash to Mackinnon.
- 1884.... Peters obtains his first treaties from the natives.
- 1886.... First agreement with England.

- 1887.... Charter given by Germany to the German East African Association.
- 1888.... Occupation of the Coast and Arab rising.
- 1889.... German Protectorate proclaimed (Oct. 22).
- 1890.... (July 1) Treaty with England.
- 1891.... (Jan.) Imperial Government takes over East Africa from the German East African Association.
- First Governor appointed.
- Usambara Railway begun.
- (Aug.) Destruction of von Zelewski's expedition.
- 1892.... (June) Fighting at Tabora, Kilosa and Kilimanjaro.
- 1893.... Tabora Boma stormed.
- Usambara Railway opened to Pongwe.
- Fighting near Kilwa.
- Exploration between Victoria Nyanza and Lake Tanganyika.
- 1896.... Severe fighting in Uhehe. Iringa taken.
- 1897.... Hut-tax introduced.
- 1900.... Steamer launched on Lake Tanganyika.
- 1902.... Usambara Railway opened to Korogwe.
- 1904.... Usambara Railway reaches Mombo.
- 1905.... Central (Dar es Salaam to Tabora) Railway begun.
- Outbreak of great rising in the south.
- 1907.... Suppression of rising.
- 1908.... Central Railway reaches Morogoro.
- 1909.... Central Railway reaches Kilosa.
- 1910.... Boundary Protocol between Great Britain and Germany and Belgium.
- 1912.... Usambara Railway extended to Moshi.
- Central Railway reaches Tabora.

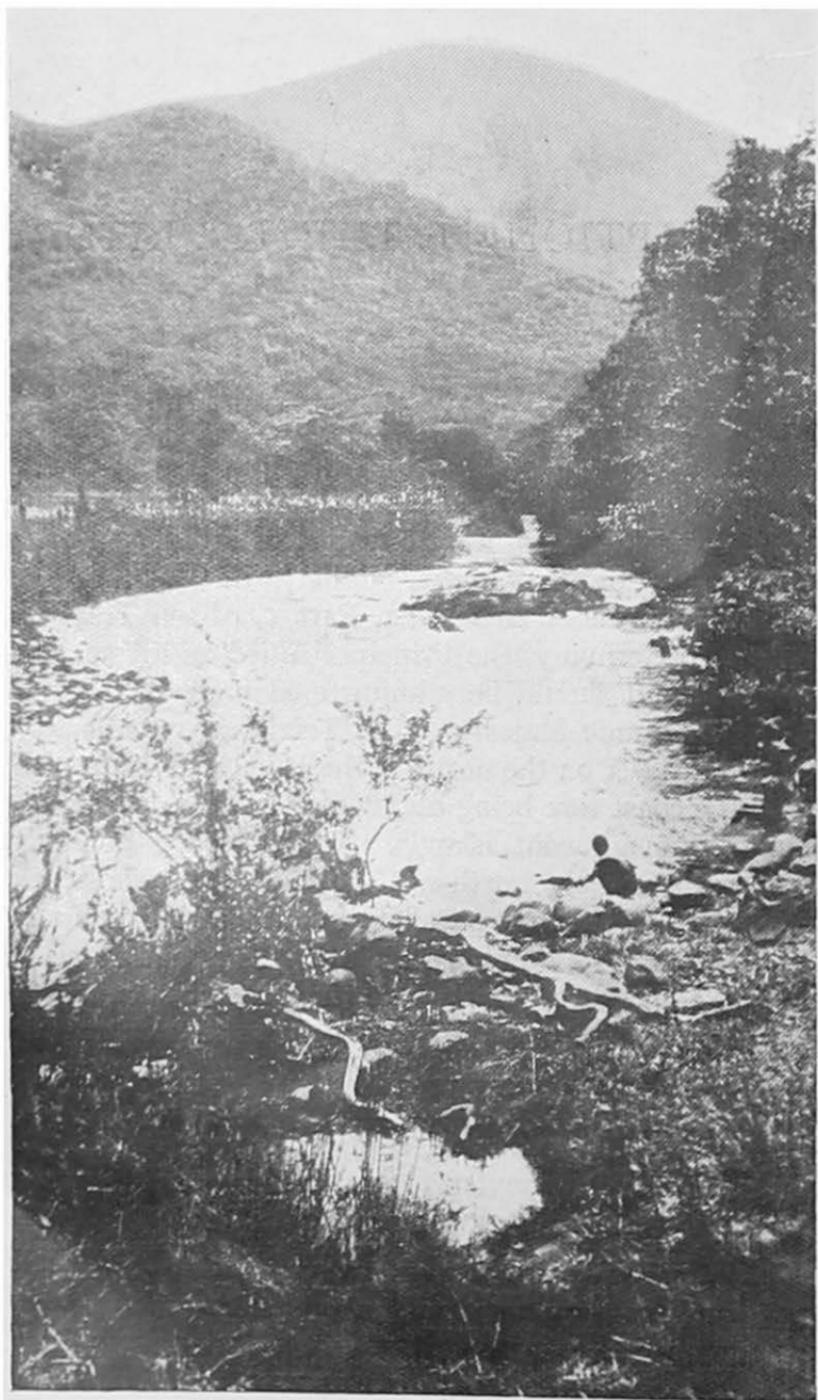
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- 1914.... Central Railway reaches Kigoma, on Lake Tanganyika.
Outbreak of the European War.
Hostilities between British and German forces on the northern frontier.
- 1916.... Germans defeated by General Smuts at the foot of Kilimanjaro. Moshi occupied.
Occupation of Territory north of the Central Railway.
- 1917.... Provisional Civil Administration established north of Central Railway; Sir Horace Archer Byatt, K.C.M.G., first Administrator.
Germans forced across river Rovuma into Portuguese East Africa.
- 1918.... Provincial Civil Administration extended to the greater part of the Territory.
Surrender of the German forces.
- 1919.... Sir Horacé Byatt appointed Administrator of the whole Territory.
- 1920.... Office of Governor constituted by Order in Council, and Sir Horace Byatt appointed first Governor.

DESCRIPTION OF THE TERRITORY

POSITION

The Tanganyika Territory is roughly speaking a block of Africa between the Great Lakes of the Continent and its eastern side washed by the Indian Ocean ; it is the only country in the world whose boundary on two of its sides consists largely of a fresh-water coast. It comprises that portion of the former Colony of German East Africa which, under Article 22, Part 1, of the Treaty of Peace with Germany, the Principal Allied and Associated Powers agreed should be administered under a mandate by His Britannic Majesty. The Territory extends from the Uмба River on the north to the Rovuma River on the south, the coast line being about 500 miles in length, and includes the adjacent islands. The northern boundary runs approximately north-west to Lake Victoria at the intersection of the first parallel of southern latitude with the eastern shore (Mohuru Point). The boundary on the west starts at a point where the frontier between the Uganda Protectorate and ex-German East Africa cuts the River Mavumba, and follows roughly the eastern boundary of the former districts of Ruanda and Urundi to Lake Tanganyika. The western boundary then follows the middle of Lake Tanganyika to its southern end at Kasanga (formerly Bismarckburg), whence it goes south-east to the northern end of Lake Nyasa. Rather less than half-way down the lake the boundary turns east and joins the Rovuma River, whose course it follows to the sea. The total area is about 365,000 square miles.



A MOUNTAIN STREAM—LUKOSSE RIVER, IRINGA DISTRICT.

CLIMATE

In trying to imagine what kind of land Tanganyika is to live in, the first considerations have to be given to climate, and of this we are faced with two kinds: the general climate, dependent mostly on the situation of the country in relation to continental and ocean areas; and the local climate, affected to the greatest degree by height above sea-level. Tanganyika has three general and six local climates.

GENERAL CLIMATE.

The climate of Tanganyika is determined by its latitude and its position relatively to the Indian Ocean, which is considerably warmer than the Atlantic. Generally speaking the rainfall is low for a tropical country and varies greatly from year to year, while in some years there are great droughts. Three types of general climate are to be distinguished: (1) the Indian or trade-wind type, which prevails over the greater part of the country; (2) the monsoon type, which prevails in the north-east; (3) the equatorial type, which prevails in the north-west.

(1) The first type of climate is influenced primarily by the south-east trade winds. It has only one rainy season in the year, and its hottest period is at the end of November, immediately before the beginning of the rainy season. The coolest and driest period of the year is from June to August, when the south-east trade winds blow. Thereafter it becomes increasingly warmer until the rainy season, which lasts from December till April, with the heaviest rainfall from December to February. The winds during the rainy season are weak, and vary from north-east to south.

(2) The region where the monsoon type of climate prevails is bounded by a line running from the mouth of

the Rufiji through the Territory to the north-west, including the countries of Uluguru and Unguru, together with most of the smaller northern lakes except Eyasi (Nyarasa). Usagara, Ugogo, South Unyamwezi and Tabora are included in this region.

The monsoon type of climate has two rainy seasons. The south-east trade wind prevails to a great extent from June to September, but gradually turns to the south and passes into the south-west monsoon. This period, during which the winds blow from south-east to south-west, is the cool dry season.

After the southern winter, the north-east monsoon gradually prevails. There is an interval of varying and gentle winds, which give rise to the lesser rainy season at the end of October or in November. When the north-east monsoon establishes itself there follows the driest and warmest period of the year (December to February). The hottest month is February, just before the beginning of the great rainy season.

During the interval of uncertain winds between the departure of the north-east monsoon and the return of the south-east to south-west winds, which prevail between June and September, is the greater rainy season, from March to May, with highest rainfall. In the mountainous districts there is generally a third rainy season in July.

(3) The north-west or equatorial region is bounded roughly by a line drawn from south of Kigoma to the southern end of Lake Manyara, and from there due north. It includes the country west of Victoria Nyanza and Victoria Nyanza itself, together with the large districts of Usukuma, North Unyamwezi and Uha, and the country round Lake Tanganyika as far south as Kigoma.

The equatorial climate is distinguished from the other two in that it has two warmer and two cooler seasons,

with two rainy seasons separated by a short abatement of the rains. The two warmer periods are October and February-March, the two cooler July and November-December, *i.e.*, the warmer periods are when the sun is above the equator, the cooler when it is at its farthest north and south. The variation in temperature between the coolest and warmest months is slight. In Kigoma, for instance, which has an average yearly temperature of 75° F. (24° C.), the seasonal range is only about 4·5° F.

Easterly winds prevail in this district. From May to August the south-east trade wind blows hard, and the dry season lasts from May to September (Victoria Nyanza) or even October (Tanganyika). The rainy season is from October to May (Victoria Nyanza) or November to April (Tanganyika). There is a short abatement in the middle of the rainy season about January, which divides it into two parts. The influence of the north-east monsoon does not extend so far inland, and the climate is affected considerably by the local winds in the basins of the great lakes, and by calms.

LOCAL CLIMATES.

The varying heights above sea-level of different parts of the country give rise to a considerable variety of local climates, and from this point of view we may distinguish six climatic levels :—

(1) The warm and rather damp coast-region (up to rather more than 300 ft. above sea-level). The characteristics of this part of the country are high humidity of atmosphere, moderate rainfall, and a temperature moderated by the neighbourhood of the sea. Average yearly temperature 78° F. (25·5° C.); yearly variation on the northern coast 12° to 14° F., on the southern coast 20° F. Daily variations in the extreme months on

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the northern coast 11° to 16° F., on the southern coast 20° to 22° F.

(2) The hot and moderately dry zone between the Coast and the ranges which bound the central plateau (300—1,600 ft.). Here the characteristics are low humidity of atmosphere, less rain, and a rather lower yearly temperature, but greater daily and yearly variations.

(3) The moderately warm and moist zone of the eastern slopes of the ranges which bound the central plateau (1,600—6,500 ft. and above). The characteristics are high humidity of atmosphere, heavy showers almost daily, and a somewhat lower temperature, although with greater extremes.

(4) The hot and dry zone of the central plateau (average height 4,000 ft.), the climate of which of course varies greatly in different places. Its prevailing characteristics are, however, very low humidity of atmosphere (at Tabora under 40 per cent.), little rainfall (at Tabora 32 in. or 810 mm.), a fairly high mean temperature (at Tabora, July, 70° F. or 21° C.), and great daily and yearly variations (at Tabora sometimes exceeding 36° F. or 20° C. daily).

(5) The cool and moist zone of the sub-alpine heights (6,000—10,000 ft.). To this belong the lower parts of the heights mentioned under (6), and the higher peaks of Usambara, Unguru, Usagara, Uluguru, Uhehe and Konde, with the Livingstone Mountains and the volcanic district west of the Eastern Rift. The characteristics here are high humidity of atmosphere, much mist, and fairly low yearly temperature, with great extremes.

(6) The cold and dry alpine zone above 10,000 ft. This includes Mounts Kilimanjaro, Meru, Rungwe, and a few other mountains. The characteristics of this zone

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are low humidity of atmosphere, little rain, snow, and a low temperature, with very great extremes.

GENERAL DESCRIPTION

SURFACE.

Along the Coast lies a plain, varying in width from 10 to 40 miles, behind which the country rises gradually to a plateau constituting the greater part of the hinterland. This plateau falls sharply from a general level of 4,000 feet to the level of the lakes (Tanganyika, 2,590 feet; Nyasa, 1,607 feet), which mark the great Rift valley extending northwards to Lake Naivasha.

The highest points in the Territory are in the north-east, where are the extinct volcanoes, Kilimanjaro, which rises to 19,720 feet, and is snow-capped, and Mount Meru (14,960 feet). In the south-west are the Livingstone Mountains, where the highest peak is over 9,000 feet.

Portions of the great lakes of Central Africa are included in the Territory, viz. : the southern portion of Lake Victoria, the eastern shores of Lake Tanganyika, and the northern and north-eastern shores of Lake Nyasa. There are four smaller lakes and numerous rivers.

VEGETATION.

The kind of vegetation found in any part of the country depends much more on the climate than the soil, and especially as regards the existence of forests, is affected to a great extent by the degree to which the native cultivator has been enabled or found it expedient to burn away the natural cover of the land. This primary dependence of vegetation on climate enables what has been said already about the latter to be used to give a general indication of the kinds of vegetation that we find in the different parts of the Territory ; but it has to

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be realised that the conditions are such that any given area of it almost always shows considerable variation in the types of cover that exist there.

In the regions that are periodically dry and possess little moisture in the atmosphere, there is firstly the steppe, chiefly of the inland plateau, with its tall waving grasses springing up in the rains and later dying down to leave as the sole cover sparsely scattered small bushes. A more attractive kind of open country arising from the same conditions is the savannah or parkland, given its name from the bushes or trees or clumps of them that are characteristic, these trees being often the branching doum palm, the weird baobab, or the Euphorbia of the Nyika. Then there is the steppe or myombo forest, more restful and of a more familiar kind to the European eye, especially through its absence of doum palms and baobabs, still sufficiently open to permit of easy progress through it and often affording cover to that scourge of man and beast the tsetse fly. In the driest places of all, too dry to afford adequate cover of grass, are the acacia and thornbush steppes, the Nyika: deadly to the eye of the newcomer in their monotony and unrelieved even by the baobab and doum palm of the savannah; but only wanting water and a willing population to change it to a land smiling with cultivation.

In other regions that are periodically dry but possess a more humid atmosphere is found the impenetrable evergreen bush of a type nearer to the tropical forest than the myombo forest just described, but without the tall trees of the former. It is this bush that appears as we leave the creeks and mangroves of the coast; and we often find it again when we have travelled far enough inland to reach the lower slopes and foothills of the mountains of the inland plateaux.

In Tanganyika the regions that are always humid are few and scattered ; but on mountains at heights varying from 1,500 to nearly 5,000 feet, especially on the eastern sides wetted by the winds from the sea, we find one of the characteristic features of such regions : the tropical rain forest, with its huge trees standing in thick underwood and reaching more than thrice the height of the highest trees of the myombo forest or the bush, and engaged in an eternal struggle with the giant creepers that encircle and festoon them. Dark, almost impenetrable and difficult to clear, these areas, like their opposite, the areas of the dry steppe, afford fertile soil responding readily to cultivation. Above them, beyond 6,000 feet, the same conditions produce the mountain forest, still with huge, evergreen trees but competing with fewer creepers : often with bamboos below and invariably with dry-climate bushes and grass above until the barren heights of low temperature are reached. But we do not always find the mountain forest where it once was, for the interference of man, with his helper and enemy Fire, has destroyed the massive cover that once existed ; and its place is taken by the high meadow lands, where cattle can be raised, free from most of their enemies, large and small, and the European can grow the crops and fruits that belong to his more temperate home.

For the remaining kind of vegetation we must go right down to the river levels, through the evergreen bush, and then to their mouths with the creeks through which they often wander deviously to the sea. Then firstly we come to the rain forest called gallery forest that we find near the banks of rivers, often whether the latter run throughout the year or are dry during the greater part of it : forest kinder than that of the heights to the passage of man, and like that affording a soil suitable for cultivation by the

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European, who must however be prepared at present to face and probably suffer from the tropical complaints whose past empire over him is gradually falling to the assaults of medical science. Passing down these rivers, we reach their mouths and creeks, from the noisome mud of which rise the mangroves: marches of monotony and useless to mankind until their bark has yielded its tannin, or habitations or bridges have been raised on their cut and seasoned poles, sought for before the European had learned to use them by the denizens of dry and treeless Arabia.

ANIMALS, WILD AND TAME.

A general description of the Territory would not be complete without reference to its teeming hordes of game on the one hand, and on the other its wide steppes and great lake highlands with their domesticated stock and its possibilities of development. Both of these receive detailed attention later: we need only stop here to emphasize in regard to the former the claims of the Territory to be a Sportsman's Paradise and to refer to the latter as a possession capable of being made into an asset of the greatest importance. For the former Game Laws and a Game Department exist to protect the rarer game from extinction by the hunter, indigenous or not, and the native inhabitant from the ravages of that which menaces him and his crops and stock; as well as to give the sportsman definite information as to the permissions and limits for his activities. For the latter there is a Veterinary Department, chiefly concerned with the fighting of disease, and a partner with the Game Department in reconnaissance for the scarcely-opened battle with the dreaded tsetse.

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THE HUMAN ELEMENT.

The country is populated by negroes of the Bantu race whose numbers, customs and language have been influenced by invading peoples, among them other Bantus such as the Wangoni-Zulus from the south, the Hamitic pastorals called Wahima (Watusi), the Hamitic warlike nomads often read of as Masai, and chief of all in influence the Arab-Swahili of the Coast and great trade routes. All these, as well as others, receive more detailed attention below.

The non-native population includes the Europeans employed in commerce and as planters, prospectors, officials, soldiers and missionaries; British Indians in commerce, planting and as small shopkeepers; plantation-holding Arabs; and Goans from Portuguese India, who do most of the work of commercial and Government clerks in the country. Figures of the census of the Territory are given in Appendix II.

TOWNS AND COMMUNICATIONS.

Towns.—The chief seaports are: Dar es Salaam (20,000); Tanga, the terminus of the railway which connects the Moshi and Kilimanjaro area with the Coast and traverses that portion of the Territory containing the greatest number of European plantations; Lindi (4,300); Bagamoyo (5,200), the principal dhow harbour of the Territory and the most accessible point from Zanzibar; Kilwa (2,200); and Pangani (2,200).

Dar es Salaam, the seat of Government, is a modern town founded in 1862 by the then reigning Sultan of Zanzibar, Seyyid Majid bin Said, and subsequently occupied and developed by the Germans in 1887. It is the Coastal terminus of the main trunk railway of the Territory which



A HEAVY TASK."—NATIVES LANDING A HIPPO' SHOT IN THE MALAGARASI RIVER.

connects Lake Tanganyika with the Indian Ocean, and thus forms the natural outlet for the eastern side of the Congo. The Government offices are spacious and avenues of ornamental trees line the main streets, bringing relief from the glare of the sun and at certain seasons forming a mass of colour. The most important inland town is Tabora, with a population of 25,000, situated at the junction of the old caravan routes from the Coast to Tanganyika and from Victoria Nyanza to Nyasa.

Railways.—There are two railway systems, the Central Railway from Dar es Salaam to Kigoma, a distance of 772½ miles, and the Tanga Railway from Tanga to Moshi, 219 miles long (see below). The latter it is proposed to extend to the Sanya River in the direction of Arusha. The military railway between Kahe on the Tanga Railway and Voi on the Uganda Railway in Kenya has been in use since the War, and is to be maintained.

Shipping.—The following ocean-going steamship lines call regularly throughout the year for passenger and freight traffic:—

Union-Castle Mail Steamship Company, Limited,
 British India Steam Navigation Company,
 Limited,
 Messageries Maritimes,
 Holland East Africa Line,
 German East Africa Line.

Frequent coastal communication between the various ports of this and adjoining Territories is maintained by the British India Company, the Zanzibar Government steamers, Messrs. Cowasjee, Dinshaw and Bros., and the Government steamer "Lord Milner." There are regular services of steamers on Lakes Nyasa and Tanganyika,

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whilst the ports of Mwanza and Bukoba are served by the Uganda Railway Marine.

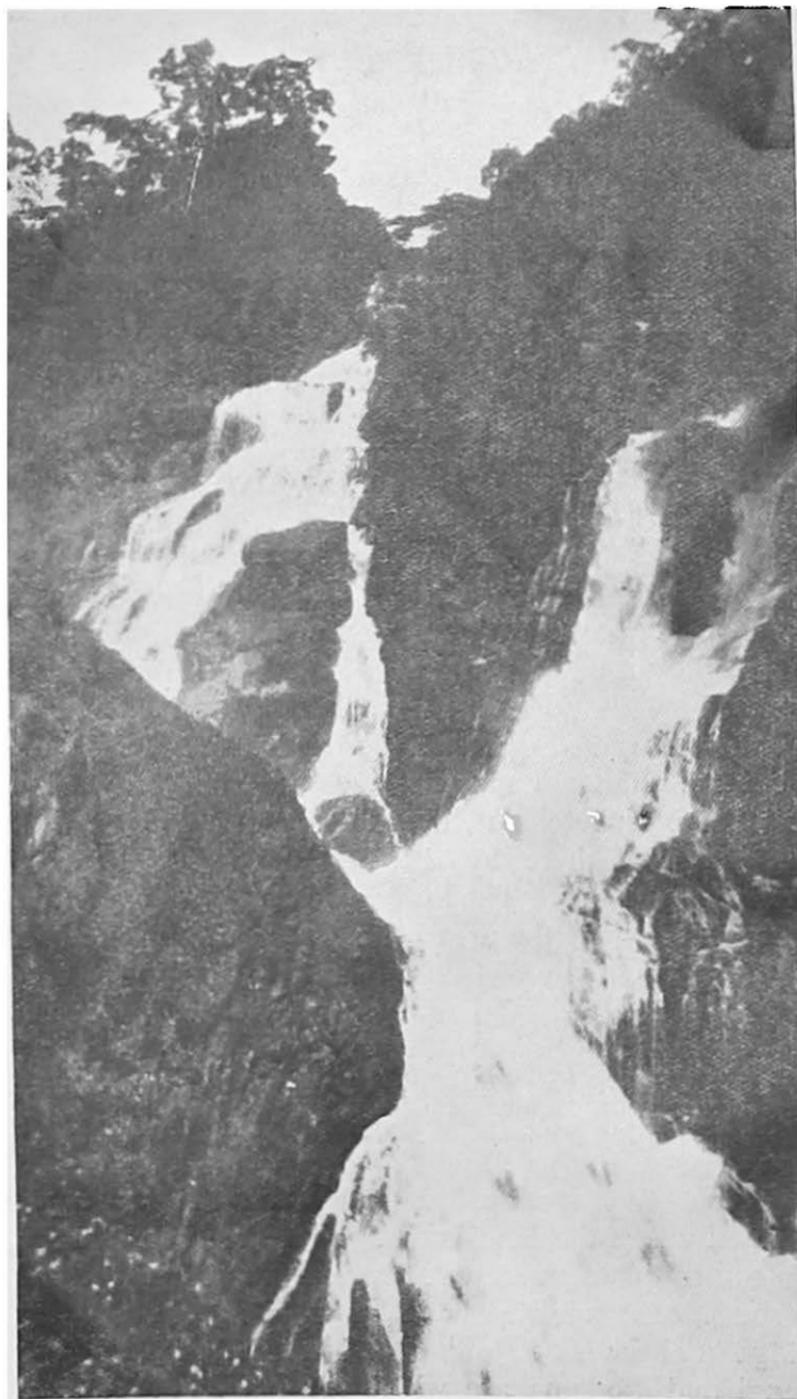
Roads.—The principal highways are Tabora-Mwanza, Kilosa-Mahenge and Kilosa to Iringa and the South Western area, and Moshi-Arusha. There are 2,455 miles of track along which light motor vehicles can pass in the dry season, but nearly all roads are impassable in the rains and for some time after. There are few roads, too, free from tsetse fly, so that horses and mules or ox transport cannot usually be employed. Travellers must be careful to avoid the spirillum tick which infests the main highways, the Kilosa-Iringa road being a frequent source of infection; and should not camp in old rest-houses. Appendix III gives details regarding the roads of the Territory.

DISTRICTS.

Of the twenty-two Administrative districts with their forty-seven sub-districts (not all of the latter however possessing separate Administrative Officers), shown in the Map and Appendix IV, we may visit in imagination first the Coast districts, starting with Lindi in the south and passing northward through Kilwa, Rufiji, Dar es Salaam, Bagamoyo and Pangani and reaching Tanga south of the Kenya border. Of these, Lindi, Pangani and Tanga are the only ones in which planting by Europeans is carried on to any large extent, the chief crop being the well-known and valued Tanganyika sisal; first in the world's markets, with cotton to an important extent in Lindi; there is however a little plantation cotton in Dar es Salaam and Rufiji, and a growing interest of uncertain future in this crop in Tanga. The last-named district shares with Morogoro the chief areas where Ceara rubber was planted in German times,

the plantings in these and other districts such as Lindi and Pangani having by 1912-13 reached a total area of 175 square miles, or one larger than Barbados in the British West Indies, which supports nearly 200,000 souls. All these coastal districts, and the island of Mafia counted in the Dar es Salaam District, export copra from the coconut plantations of the coastlands, owned or mortgaged by Arabs, Indians and Swahili. Of native crops in the districts being dealt with the most important, cotton, is showing great promise in Lindi, Kilwa, the Rufiji District with the long valley of the river that gives it its name, and Bagamoyo ; and very large increases of production are expected in these areas. Lindi and Kilwa, extending far inland toward the northern part of Lake Nyasa, are the richest producers of simsim (beniseed, gingelly) and the ordinary native food crops such as millets, beans and rice, although Bagamoyo probably grows the best varieties of the last. Pangani may be mentioned partly for its production of betel nut, the areca palm having probably been brought there by the Persians from India eight hundred years ago. The lower reaches of the river Rufiji, near Mohoro, and the area behind Pangani, on the banks of the river which gives its name to the town, are of particular interest in that these alluvial lands are used, chiefly by Arabs, for growing sugar-cane for making the raw sugar called gur ; whilst Bagamoyo, Rufiji (Mohoro) and Lindi export the finest fossil gum in the world : the gum animi, falsely called " Zanzibar copal."

Behind the more central of these Coast districts, and situated where the land is rising from the Coast plain to the central plateau, are the districts, roughly from north to south, of Arusha, Kondoa-Irangi, Dodoma, Morogoro, Iringa and Mahenge ; and of these Arusha, Kondoa-Irangi and Dodoma are wholly or partly in those two



WATERFALL—PANGANI RIVER.

curious areas of the Territory, around part of the Great Rift Valley and its branches, where there is no run-off for the streams and generally salt lakes, whose only "outlets" are therefore evaporation and the disappearance of their water underground. In this area are parts of Arusha, Kondoa-Irangi, Dodoma, Iringa (and Ufipa and Rungwe) constituting the most rainless area of the Territory with a rainfall of less than 30 inches; here and in Morogoro where the fall is greater, what is received is precariously distributed from area to area and from year to year, the largest and most dependable rains being received in the Mount Meru area of Arusha and the area round Mahenge. Of these districts Arusha, Morogoro and Iringa are the only ones in which European planting is done to any extent, by far the greatest amount being in Arusha, where coffee planters work their estates keenly on the slopes and foothills of Mount Meru; and Morogoro with its cotton and sisal plantations. It is in the latter district and Mahenge that native cotton growing is exceedingly promising; but owing to the distance of the latter from the railway and the sea-coast the quantity of the excellent cotton that has been already produced will increase but little until ginneries and improved means of transport are provided. Of other native crops in the area of these districts, groundnuts come chiefly from Dodoma and Kondoa-Irangi, millets from Dodoma, and rice and beans from Morogoro, the last being also of special interest as a potential large producer of beeswax as well as a provider of fruits and vegetables (including potatoes) for the Coast towns; whilst there is a large production of rice, chiefly for internal consumption, in Mahenge. Dodoma is essentially a cattle district, and produces important quantities of hides as well as ghee (clarified butter), the cooking fat

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so highly esteemed for native cooking both in Tanganyika and India and made by heating butter until it contains little or no water.

We now pass west of these districts, over their bordering mountain systems upward on to the central plateau with a general level of 4,000 feet above the sea and comprising the greater part of the district of Tabora and parts of Dodoma, Iringa, Ufipa and Kigoma, the two former of which have just been described whilst the latter two really belong to one of the Great Lake areas to be dealt with presently. In the district of Tabora which chiefly fills the central plateau, there is virtually no European plantation activity; but its northern part (Shinyanga, Kahama) is showing great promise of success with native cotton which with the other products of this area of it, groundnuts, hides and ghee and gum arabic, find their outlet at present northward through Mwanza on to the great Lake Victoria and then by the Uganda Railway for shipment from Mombasa. Groundnuts are however produced in much greater amount in other parts of Tabora, south of these areas: so much so that it is from Tabora that the largest quantity of groundnuts reaches Dar es Salaam by the Central Railway, mostly for shipment to Marseilles. Minor industries of Tabora are the cultivation of the date palm, far from its home, by Arabs; and a growing production of chillie peppers used largely for making sauces such as Tabasco and welcomed in America for making more interesting the drinks of those for whom prohibition is a fact.

Pursuing our imaginative journey, if we leave the central plateau over its western or its southern boundary, we go down quickly from its level (4,000 feet) to that of one of the Great Lakes: Tanganyika (which gives its name to the country) 2,590 feet or Nyasa 1,607 feet; if however

we go north, to Lake Victoria, we remain almost at the same level at 3,900 feet. We shall now become acquainted with the Great Lake districts, as follows: Mwanza and Bukoba near Lake Victoria, Kigoma (recently called Ujiji) and Ufipa east of Lake Tanganyika, and Rungwe and Songea north and east of Lake Nyasa. Of these six districts the two northern, Mwanza and Bukoba, are the richest: the former with its cotton, groundnuts, hides and ghee, beans (chiefly green gram, called chiroko locally), sugar and gum arabic; and the latter producing two or three thousand tons of mostly native-grown coffee yearly, in the prized banana groves, the chief source of native food, as well as important quantities of hides and groundnuts. But we must pause in Mwanza to look at the cotton, for it is this district that grows more cotton than any other in the Territory and holds the greatest promise for increase of production under good cultivation. Nevertheless, all the cotton, coffee and groundnuts that reach the outer world across the sea from these districts have to pass over the great Lake Victoria and thence by the Uganda Railway to the port of Mombasa in Kenya, so that no transport agency in Tanganyika obtains any benefit from its production.

The districts of Kigoma (containing the town Ujiji where Livingstone was found by Stanley) and Ufipa, bordering on Lake Tanganyika, have not yet attained the importance of the two just considered, chiefly through natural conditions, including the nature of the inhabitants and their distance from seaports: in the former, Kigoma near Ujiji, which it has supplanted as the chief town of the district, is the western terminus of the Central Railway, 772½ miles from Dar es Salaam. Kigoma District produces a fair quantity of rice, chiefly in the Luiche Plain, mainly for internal consumption; and is the only district

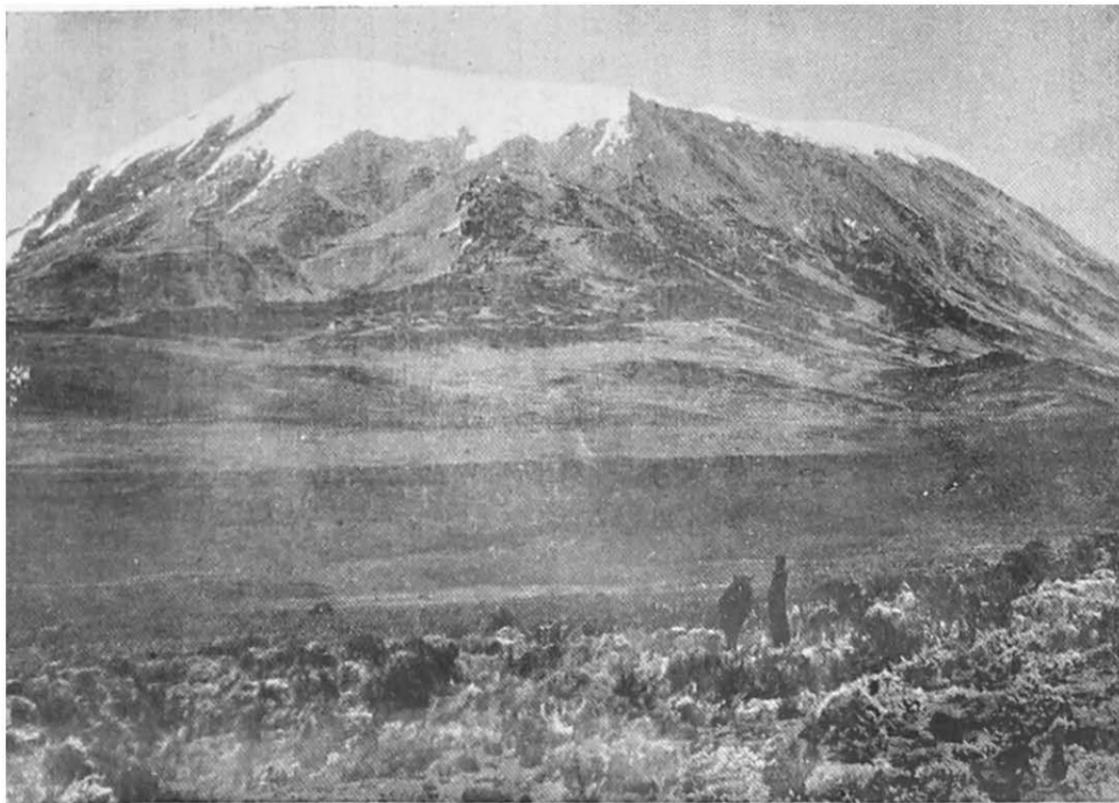
in the Territory in which the oil palm occurs in important numbers ; whilst it counts among its inhabitants a tribe, the Watusi, mostly however settled in the neighbouring Belgian provinces of Ruanda and Urundi, which possesses an important number of cattle. The picturesque district of Ufipa, for reasons already mentioned, has not yet attained importance in the export trade of the Territory ; although together with Kigoma just described it has present potentialities as a supplier of native food to the mining districts of the Belgian Congo.

Lastly, the equally remote districts of Rungwe, exceptional as a district growing large quantities of sweet potatoes and wheat for native food (one tribe living almost entirely on wheat bread), and Songea noted for its supply of labour to the plantation areas of the Territory, need that prime necessity of development—transport—before their possible products can figure in the export list of the country. Given transport, then of the six lake areas just described Ufipa and Rungwe can bring their quota to add to the comparatively small resources possessed by the Territory for settled European planting.

The only districts that we have not yet visited will be reached by a long journey into the north-east of the Territory : they are Usambara, with the mountains of that name, and Moshi, likewise mountainous, for it contains Kilimanjaro, the highest mountain in Africa ; whilst the Pare Mountains extend through both districts and lie between Kilimanjaro and the Usambaras. In Moshi the European plantations are chiefly in the hands of its energetic and enterprising coffee planters, who produce the famous Kilimanjaro coffee, reckoned by many as the best coffee in the world : there is also an increasing interest in the production of plantation cotton in this district ; but many of the estates are too near the mountain

clouds for a steadily successful output year after year. As in Moshi, the chief European production in Usambara is coffee, and with better transport and lower railway rates there are good prospects for the similar production of maize and beans ; whilst West Usambara lends itself well to these two crops, and to the growing of apples, quinces, apricots, peaches, cherries and grapes : names sweet-sounding and fruits welcome to the thirsty dweller in the more tropical lowlands. Of the natives of these areas the most promising are the Wachagga of the slopes of Mount Kilimanjaro and the Wapare of the Pare Mountains : the former are making good progress as coffee growers, and in suitable parts of their districts both tribes are likely to attain importance as producers of cotton and beans. Like the inhabitants of Bukoba, those of the Tanganyika slopes of Kilimanjaro and of the Western Usambaras are banana eaters, possessing extensive groves which however no fruit ever leaves for export.

In taking the journey that has just been made throughout the Territory the reader must have noticed how restricted and scattered are the areas, as compared with those in Kenya, for instance, in which the European can settle domestically, without frequent visits to Europe, as a planter or farmer. On looking back over his journey he will realise that the parts of the Territory where it is likely that the European from the higher latitudes of that continent, from the countries whose shores are not washed by the waters of the Mediterranean, can possibly settle down to a healthy and self-supporting existence with his family are restricted to Arusha, Moshi and Usambara in the north-east, Ufipa and Rungwe (when better transport facilities come) in the south-west, and between these possibly scattered, comparatively small areas in Kondoa-Irangi, Mcrogoro, Mahenge and Iringa.



MOUNT KILIMANJARO (19,230 feet). THE KIBO PEAK FROM THE SADDLE.

HEALTH AND SANITATION

Tanganyika Territory, in common with other East African Colonies situated within the Tropical Zone, contains areas which vary widely in hygienic conditions. The coastal region is hot, humid and generally less healthy; similar conditions are found in the low-lying portions of the interior. On the other hand, the mountainous districts, situated for the most part in the north-eastern and south-western areas, are for the greater portion of the year fairly cool and compare favourably with other tropical regions.

It is essential that any person who intends to make his home in Tropical Africa should commence his career physically fit. A planter or settler must spend many hours each day exposed to the sun, and no one suffering from organic disease can do satisfactory work under these conditions.

A young intelligent man, physically fit, can by the exercise of care and restraint keep himself in good health for many years even under adverse conditions. It is essential that excess of all kinds should be avoided. It is recognised that, even in a temperate climate, moderation in all things is required to maintain good health; and moderation is still more necessary for those resident in tropical countries. Provided that a newcomer realises this and recognises that his chief enemies are sun, bad water, flies and mosquitoes and is prepared to take reasonable precautions against them, then there is no reason why he should not spend many years in the tropics without serious detriment to his health.

Malaria is common among European residents in Tanganyika Territory, the malarial incidence varying between 120 per thousand in the comparatively healthy Kilimanjaro area to nearly three times this figure in the

coastal and central areas. The average European is careless and finds it too much trouble to protect himself by the proper use of a mosquito net, mosquito boots and prophylactic quinine. Very few deaths in the Territory are directly due to malaria ; but constant small attacks, together with irregular dosage with quinine, are probably the predisposing causes of blackwater fever, a very serious disease with a high mortality rate.

Diseases due to intestinal parasites are very common among the natives of the Territory and infection is sometimes carried to Europeans by contaminated food and water. Water should invariably be boiled, and milk and food stored in fly-proof safes or covered in such a way as to prevent infection by flies. It is a wise precaution to be inoculated against typhoid and the paratyphoid fevers before leaving England.

Smallpox is endemic throughout the country : during the last few years very large numbers of natives have been vaccinated and the danger of a severe epidemic has diminished greatly. Small outbreaks continue to occur, and any person who intends to reside in the Territory would be well advised to be vaccinated before leaving England, or immediately on arrival.

In common with all other tropical African Colonies, Tanganyika Territory suffers from other endemic diseases. Plague, cerebro-spinal meningitis, sleeping sickness, leprosy and yaws all occur, but the European runs little or no risk of infection. Among the many insect pests in the country two in particular must be guarded against : the spirillum tick and the chigger flea. The tick, which carries African relapsing fever, is common in native houses and in old rest-camps along the roads. No European should sleep in a house which has been occupied by natives, and it is wise to avoid old camping

grounds when travelling by road. As this tick lives in the cracks in floors and walls and only emerges at night, a small lamp burning on the floor at the side of the bed affords considerable protection. The chigger flea, although not dangerous, can be an intolerable nuisance. The female burrows under the skin, generally in the neighbourhood of a toenail, and there lays her eggs. A severe irritation is set up and unless the insect and her egg-bag are completely removed an indolent sore may result. Where chiggers are common the bare foot should never be put on the floor of the room, particularly in houses where the floors are not made of cement. Snakes, scorpions and poisonous spiders are found in some parts of the Territory, and it is a wise precaution to shake out boots and shoes before they are put on. While it is true that a little knowledge may be a dangerous thing, yet complete ignorance is a greater danger. In Tropical Africa distances are great and doctors few and far between, and every European should have some knowledge of simple remedies, home nursing and first-aid work.

Small accidents and injuries, which if neglected may lead to weeks of disablement, are common. A knowledge of the general principles of sanitation and preventive medicine in the tropics, especially as applied to native settlements, is of great value to settlers; and care spent on these matters is well repaid by a contented and efficient labour force. The Health Department, Nairobi, Kenya Colony, has published a useful brochure on the ailments of natives, and excellent advice on the sanitation of native compounds is to be found in Section I of the work of A. Pearson and R. Mouchet entitled "Practical Hygiene of Native Compounds in Tropical Africa," published by Baillière, Tindall and Cox, London. This book,



A VIEW ON THE TANGA RAILWAY—MOMBO BRIDGE.

although intended for medical men working in Tropical Africa, contains excellent advice on the sanitation of native compounds which the layman can readily understand and apply on his own estate.

The Government maintains hospitals for Europeans at Dar es Salaam, Tanga, Tabora and Arusha ; and small cottage hospitals at Mwanza and Moshi with one or more European nursing sisters in residence at each.

COMMUNICATIONS

A general idea of the internal and external means of communication possessed by the Territory is given under the heading Towns and Communications. The following more detailed information regarding the Railways, Roads and Postal Facilities of the Territory is included for the information of readers of the Handbook who desire further particulars of these services.

RAILWAYS.

The railways in Tanganyika Territory consist of the Central Railway from Dar es Salaam to Kigoma on Lake Tanganyika, and the Tanga Railway from Tanga to Moshi.

The construction of the Central Railway was originally commenced in 1905 by a German private company, the Ost-Afrikanische Eisenbahn-Gesellschaft (O.A.E.-G.), to whom land and mining concessions were granted. This company constructed the line as far as Morogoro, kilometre 202, and ran it as a private concern. The German Government decided in 1908 to extend the railway ; it bought up 88 per cent. of the capital of the company, and supplied all capital funds required thereafter for extensions. The O.A.E.-G. was kept in existence to run the railway, but the land concessions, other than

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those directly attached to the railway itself, and the mining concessions, were transferred to another private company, the Ost-Afrikanische Land-Gesellschaft (O.A.L.-G.), which remained thereafter quite distinct. The railway itself was completed shortly before the War, and a branch was commenced in 1914 from Tabora, kilometre 841, in a north-westerly direction towards the Kagera River, via St. Michael. About 40 kilometres of this had been completed before the War, but 29 kilometres of the rail were picked up and used by the Belgians in continuing the Katanga Railway to the Lualaba, the sleepers being stacked at Tabora.

The standard of construction of the Central Railway is high. From Dar es Salaam as far as kilometre 225 the rail used is of a section weighing 42 lb. to the yard, but from there to Kigoma, kilometre 1,244, a 56 lb. rail of German section is used. The heavier rails and sleepers are of excellent design; the line is fully ballasted throughout, except between Tabora and Kigoma. Between these points sufficient ballast to complete up to full section was stacked along the line, and is still available.

The alignment now in use is the final one, as re-aligned by the Germans, except at kilometre 164, where, owing to the circumstances that one of the bridges demolished during the War has not yet been repaired, the original alignment is used.

The maximum gradient throughout is 2 per cent., compensated; in both directions. The maximum radius of curvature is 300 metres, except on the temporary diversion noted above.

The buildings are of solid construction, generally of stone, the larger station premises being double-storeyed, with quarters for the European staff in the upper storey.

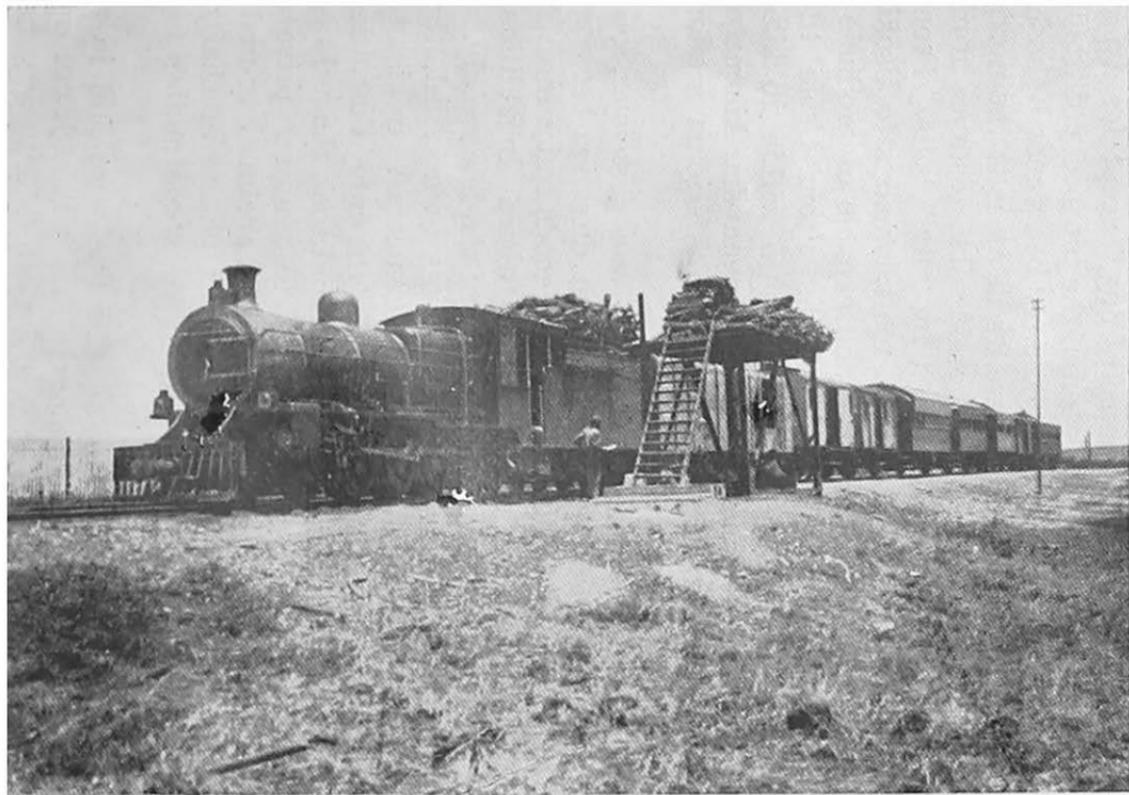
From Dar es Salaam to Kilosa, kilometre 283, cotton

and sisal are grown, and the traffic prospects are good ; from Kilosa to Igalula, kilometre 805, except for a few local requirements round Dodoma, the prospects of traffic along the route are poor, the country being mostly bush, and full of tsetse fly. There are fertile areas to the north and south, but they are a considerable distance from the railway, and cut off from it by " fly " belts. From Igalula there is a zone of about 100 kilometres to Usoki, kilometre 902, which is fertile and capable of producing traffic. This zone includes Tabora. From Usoki the country again becomes fly-ridden, until within 16 kilometres of the terminus on Lake Tanganyika, kilometre 1,244, the only traffic from the Usoki-Kigoma section being from the salt mines at Nyanza.

The present service of trains is one passenger, one mixed and two goods a week in each direction between Dar es Salaam and Kigoma, and two goods trains in each direction between Dar es Salaam and Tabora. In addition, a water train has to be run throughout the line weekly.

The Tanga Railway—or, as it was then called, the Usambara Railway—was also commenced originally by a private company. When this got into difficulties the German Government stepped in and took the railway over, ultimately leasing the line to another private company, the Deutsch Kolonial Eisenbahn Bau-und-Betriebs Gesellschaft, which also was placed in charge of the extension to Moshi, and acted as contractors for the construction.

The first 91 kilometres of this line were laid in a 31 lb. rail, the remainder being 40 lb. Although not up to the same high standard as the Central Railway, the buildings and construction as a whole are good and substantial, the former being distinctly superior to those on the Uganda Railway.



A TRAIN ON THE CENTRAL LINE.

The maximum gradient is 2·5 per cent. in both directions, and compensated for curvature. The radius of the sharpest curve is 300 metres.

The present service is one passenger train per week in each direction between Tanga and Moshi, and a daily train between Tanga and Korogwe.

All the railways, except the Tabora-Kigoma section, were handed over from the British Military to the Civil Administration on the 1st April, 1919. The physical damage done to the lines had not yet been made good; all efforts had naturally been concentrated on military objects, and the railway service was regulated with that view. Maintenance of buildings and track was only carried out in so far as it was necessary for those objects, and the work of all the Departments, including the Accounts and Stores, was governed quite rightly by the same principle. Consequently the Civil Administration, when it took over, had not only the task of straightening out the confusion consequent on the War, but also had to build up a working organization suitable for peace conditions. This task was not simplified by the fact that a permanent appointment to the post of General Manager was not made until late in 1920.

The section Tabora-Kigoma was only handed over in March 1921 by the Belgians; both the track and equipment, when handed over, were in bad condition.

The peace-time organization is thus gradually emerging, and the Railway Department is still striving to get it into proper working order. In any conclusions as to the methods of administration, allowance must be made for this, especially in any comparison with other railways, which although they may have been severely tried during the War, have had the advantage of an

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uninterrupted working organization for many years previous to the present time.

Metric standards were employed by the Germans. It would entail considerable expenditure in re-chaining, purchase of new weighing machines, etc., if these standards were changed, and they have consequently been adopted. It has therefore been necessary to use them in this account.

ROADS.

As is usual in Tropical Africa, three kinds of "roads" exist in the Territory: metalled roads, ballasted, surfaced and rolled; earth roads kept open and repaired by native labour possessing small skill; native tracks: detailed information regarding the localities and lengths of these is given in Appendix III. The first kind and, in the dry season, a large proportion of the second kind can be used by light motor vehicles; and both classes (the latter largely in the dry season only) are mostly suitable for light hand-drawn or animal-drawn vehicles and motor cycles with side-cars. Pedal bicycles and motor cycles can be used very largely on native tracks, the former of course to a much larger extent than the latter. The safest but slowest means of using native tracks is walking; but the fatigue of the latter is often lessened by the use of chairs slung on poles (*machela*) carried by natives, or that of donkeys.

POSTS AND TELEGRAPHS.

Telegraphs. The part that communications play in commerce is one of considerable importance, and although the work of consolidating the hastily constructed war lines and the war-damaged German plant into one satisfactory telegraph system has been one of considerable

difficulty, the main routes of the country are now in fair order.

Communication is good between all the larger towns, and the lines are capable of carrying far more traffic than at present offers.

Fair communication is also maintained to the outlying districts in the south-western area, and these lines could be readily improved should commercial needs warrant a better service. The traffic carried on these lines is at present negligible.

There is overland communication with each of the surrounding dependencies, and a cheap overland service exists to South Africa, messages taking on an average two days in transmission. The cable is available for more urgent telegrams.

There are 3,391 miles of pole line in the country and 36 telegraph offices excluding those at railway stations.

Telephones. Telephone exchanges exist at Dar es Salaam, Tanga, Tabora and Morogoro, and are capable of extension when need arises.

Telephones are not yet provided on plantations, but should there be a sufficient demand in connection with commercial development the question of their supply would be considered.

Mails. Mails from and to places abroad arrive and are despatched at about fortnightly intervals.

The Inland mail service is approximately three times weekly for places on the railway, and once a week for places served by native runners.

Other Services. British postal orders are on sale at all post offices, and arrangements are in hand for commencing a money order service at the principal towns.

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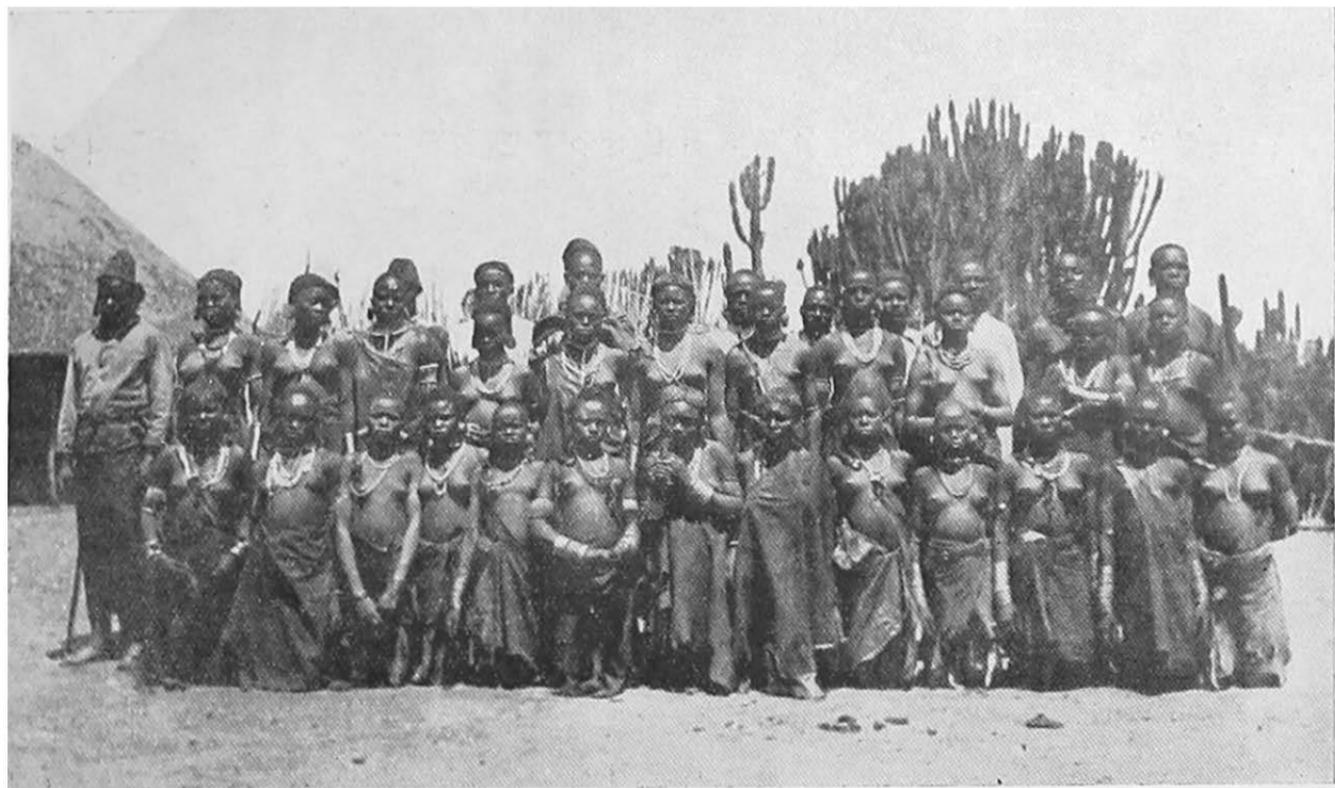
Private boxes for the delivery of correspondence are available at the larger offices and the system is being extended. This method of delivery is a convenience to planters and commercial houses, as it enables them to obtain their letters independently of the hours of public business at the post office.

PEOPLE

The peoples of the Territory were described in a general way under the heading The Human Element. If we go into more detail regarding them we shall have naturally to concern ourselves principally with its predominating population (see Appendix II) : negro inhabitants, indigenous in Africa and subject to migrations and periods of dominance and conquest like the races of any other country. As in other countries, too, we find both the folk of pure race and those where the pure racial characteristics are being lost either through mixture of blood or by the overweening influence of the dominating or more definitely characterised races. Of the former, the pure, there are in the country the much preponderating anciently-settled Bantu tribes, the later pure Bantus such as the Wangoni and the Yaos, the Hamitic Masai and Somalis, and the Pygmies ; and of the latter, the mixed, the Bantus influenced physically or politically by the Hamites (called here for brevity Hamite-Bantus), and the degenerate Swahili of the Coast derived from Persians, Arabs and Bantus and now often containing pure Bantus or Hamite-Bantus who like to call themselves Swahili. Ethnologists do not all agree as to the correctness of the classification of the races here given ; but some definite system must be followed, in order to afford a simple general view of those races.

The simplest way to appreciate the distribution of the pure, old Bantus is to regard them as occupying the whole of the Territory except a large area in the north-east comprising eastern Mwanza, Arusha, Moshi, West Usambara, Kondoa-Irangi and eastern Dodoma, which we will call the "Hamitic Block;" a smaller but extensive area comprising Mahenge and a large part of Songea and Lindi, which we will refer to as the "Wangoni Block"; a nearly equal one on the northern side of the River Rovuma stretching from the western part of Lindi towards Lake Nyasa (Yaos and Wamakua); areas belonging to two mixed tribes (Wahuma and Washashi, etc.) near Lake Victoria; and of course the Swahili Coast area. With the exception of these areas and a few Wangoni outliers (such as one near Kisaki) all is old Bantu, a race tall and black or chocolate-coloured. Of these old pure Bantu tribes the best are the Wanyamwezi and Wasumbwa of the central plateau and the Wasukuma of Mwanza, all good farmers responding readily to agricultural propaganda, the first and third being also cattle breeders and supplying the best labour in the Territory. It is these Bantu tribes in the far interior who are superior to all others; those nearer the Coast, such as the Wamakonde and Wamwera of Lindi, are more backward in relation to their usefulness for the development of the country. Among other tribes of pure old Bantu origin the Wahehe of Iringa and Mahenge are of interest in that they adopted the customs and weapons of the invading Zulus (Wangoni) and lived on the neighbouring tribes until suppressed by the Germans in 1891.

The other pure, later Bantus are the more recently arriving Wangoni, and Yaos and Wamakua. The former chiefly occupying the "Wagoni Block," already described and now much mixed, are the descendants of Zulu cattle



A GROUP OF IKOMA NATIVES.

rearing and slave-hunting tribes which invaded the country in the middle of last century ; since they were almost exterminated by the Germans after the great rebellion they have become good cultivators, possessing very few stock ; like the old Bantu Wanyamwezi and Wasukuma, they make good labourers. The Yaos and Wamakua are populating the country between Lindi and Lake Nyasa by " peaceful penetration " from Portuguese East Africa over the river Rovuma. The former subsist by farming and hunting, and resemble the Wangoni in that they make good labourers ; the Wamakua are a warlike tribe, ancient enemies of the Yaos, subsisting by farming and possessing a racial pride that prevents them from hiring out their services as paid labourers.

The fifth division of the pure races of the Territory, the Hamitic Masai (with the Wakwafi) and Somalis, are found in the north-eastern " Hamitic Block," which the nomadic Masai, with the related hunting Wanderobbos conquered by them, fill almost completely, the Somalis (Wafiome and Wambulu) only being present in any number in a small part of southern Arusha and northern Kondoa-Irangi. Over this great area, largely occupied by the Masai Steppe, wander the slender, lighter-skinned Masai, subsisting alone by their herds, strong in tribal organization, and refusing until lately to cultivate the land, either as squatters or labourers. The Masai may be regarded as the most interesting and " picturesque " people in the Territory.

The old, pure-blooded people in the country that it remains to mention are the reddish-yellow Pygmies (Wakindiga, Wanenge and Wahi) inhabiting small areas round Lake Eyasi (Arusha), and found also in and near northern Dodoma (Wasandawi) and (outside the Territory) in Urundi and Ruanda (the Batwa), now included

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in the Belgian Congo. They are supposed to be the descendants of the original inhabitants of the country, who are thought to have come from India many centuries ago.

Leaving the pure races, we have now to consider the others: the "Hamite-Bantus," the Swahilis and a couple of smaller, indefinitely distinguished tribes mentioned above. As may be guessed, the Hamite-Bantu mixtures are commonest on and near the edges of the "Hamitic Block" (and have been included in the area⁽ⁱⁿ of that block for convenience of description), in what would be naturally the regions of mixing. Kondoa-Irangi, Dodoma, Moshi and a small part of Arusha and Usambara contain most of them. The chief of these mixed tribes are the Waniramba, the caravan robbers of old called Wagogo, Wairangi, Wachagga and Wapare, all subsisting by a mixture of cattle-keeping and farming, as may be expected from their Bantu-Hamitic origin; and of these the Wachagga are particularly interesting in that, although they are heavy drinkers at the time of the harvest of their small millet (Eleusine) and live mainly on the easily-grown banana, they raise their cattle largely by stall feeding, extremely rare in Africa, are good irrigators, and show promise as coffee and cotton growers. Less scattered than these Hamite-Bantus of the "Hamitic Block" are the Wahuma or Watusi of the area west of Lake Victoria (Karagwe in the Territory): Hamites like the Masai, but unlike them intermarrying commonly with the local Bantus, whom they have largely constituted as a slave class serving an aristocracy constituted of themselves, and whose language they have adopted. Lastly there is the small area in Northern Mwanza occupied by the Washashi and Waruri tribes of similar origin, and through this origin nomadic peoples living by stock-raising, agriculture and the chase.

Last of all, but greatest in influence through the might of the Arab in the days of his ascendancy, is the far more greatly mixed Swahili of the Coast and trade routes, whose origin has already been described. The Swahilis are an unwarlike people (to use no stronger expression), who could be made to do a little fighting under Arab leadership, but preferred to stand aside and throw in their lot with the winner. They are largely traders, and supply most of the domestic servants and artizans of African origin in the Territory; although as one proceeds from Tanga southward down the Coast they are found increasingly to follow agricultural pursuits, and to some extent fishing, until when Lindi is reached, where the bulk of them are, they form a considerable agricultural population. They cannot however be reached easily by agricultural propaganda, being suspicious in nature, prone to the borrowing of money as a substitute for the exhibition of energy, and easily discouraged from farming if they have to face any doubts or difficulties in regard to cultivation or marketing.

LANGUAGES

Throughout the whole of Africa south of a line drawn from the Cameroons (roughly on Lat. 4° N.) to Uganda, and thence in a south-easterly direction to a point on the East Coast not far north of Mombasa, the native population (with relatively small exceptions) use in various forms a single type of language, called Bantu. The dialects are very numerous and may be reckoned by hundreds. They exhibit every degree of difference among themselves, from close similarity to wide diversity. Even neighbouring tribes, when separated by tribal feuds or the physical features of the country, may only with difficulty understand each other. But the grammatical type of



NEW NATIVE MARKET, DAR ES SALAAM.

expression, the mould into which all thought and speech runs, is fundamentally the same, and one which is for the most part simple, clearly marked, and characteristic, and for the size of the area singularly uniform. Moreover, a very considerable number of words in common use, and denoting common objects and actions, are ultimately traceable under various disguises to forms common to a large proportion of the dialects spoken and point to a common original form, from which they are descended as from a common ancestor. For instance, the word "Bantu" itself, originally chosen by the famous philologist, Dr. W. H. I. Bleek, of South Africa, as the name of this family of human speech, is used in one form or another in a large proportion of its dialects to mean "persons" or "people," from the Cape to Uganda and from the mouth of the Congo to Zanzibar.

Tanganyika Territory lies in the Bantu area and illustrates the above remarks. Within it dialects may be reckoned by dozens, according to the standard or definition of dialect held in view. But whatever their differences in words, phrases and pronunciation, the underlying grammar or scheme of expression is, broadly speaking, the same. It follows that any dialect may be used as a key to all, and used as a groundwork on which to build, or as a standard of comparison with which to approach other dialects and note their characteristic differences. There is, however, one, and only one, notable exception in Tanganyika Territory. The Masai tribe is an element intruded from the north of the northern boundary line of Bantu, as indicated above, and uses a quite different type of speech, which is commonly described as Hamitic.

The most commonly used Bantu dialect is Swahili, in which the poverty derived from its Bantu origin has been

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somewhat lessened by the incorporation of words chiefly from the Arabic and Portuguese. This is the language of the Coast towns and railway and caravan routes, and of Zanzibar: a circumstance, combined with its common ancestry with the other Bantu dialects, that gives assistance and power to its spread; and it is at least understood, if not spoken, through large areas of the Territory. It is however by no means the universal language of Tanganyika Territory, for there are many tribes, notably in the districts of Rungwe, Mwanza, Bukoba, Arusha, Kondoa-Irangi, Kigoma, Ufipa, Moshi, Iringa, Songea and Lushoto, and even in parts of Lindi, Kilwa, Bagamoyo, Tabora and Morogoro, who do not understand the dialect, and for whom interpreters are likely to be necessary. Where it is spoken, Swahili is useful as the language of administration and trade; but its poverty, comparative inability to absorb from the northern European languages, and the involved methods of expression required by its extended use, make necessary its replacement by English for acquiring any standard of education beyond the very elementary.

The Swahili spoken in the Territory follows Zanzibar rather than Mombasa, and the most suitable books for the beginner are:

Swahili Exercises, Steere. S.P.C.K.

Swahili Handbook, Steere. S.P.C.K.

Swahili - English and English - Swahili Dictionaries, Madan, are published by the Clarendon Press, and an English-Swahili Vocabulary (Madan) by the S.P.C.K. Æsop's Fables in Swahili, entitled Esopo and also published by the S.P.C.K., will be valuable in the early stages to any student of the language.

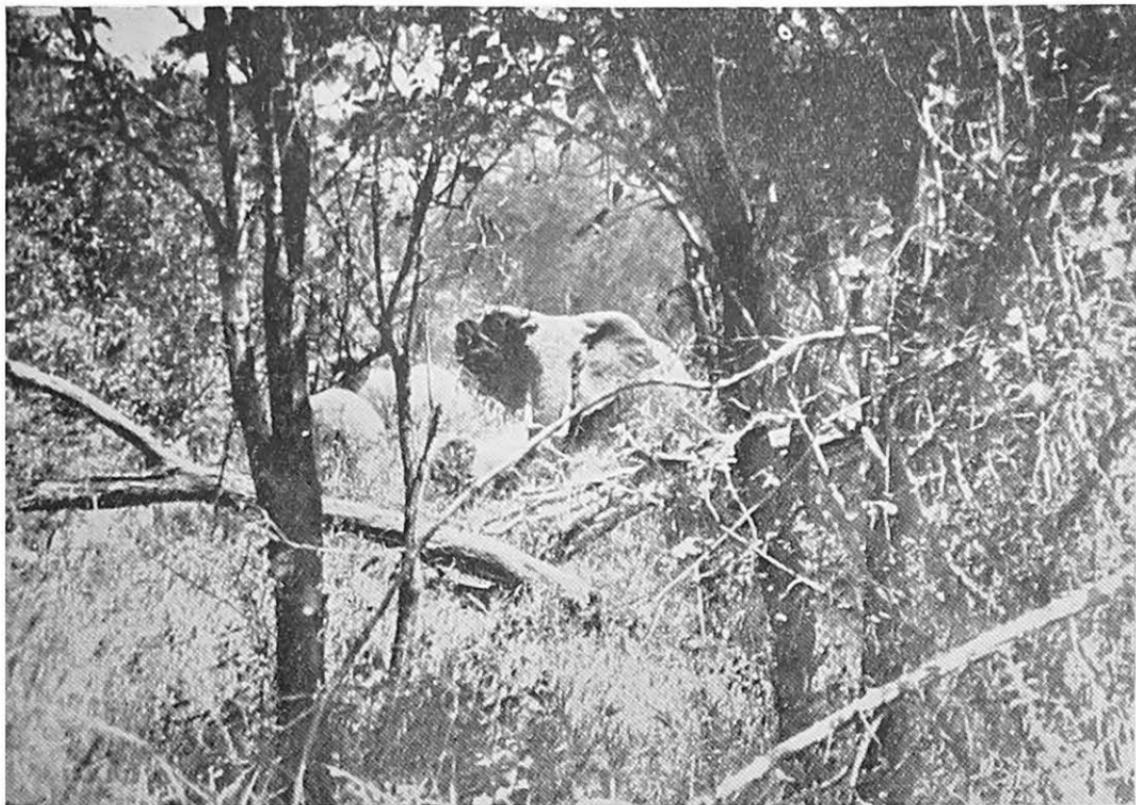
GAME

Very broadly, as a basis for an account of the distribution of its animals, we may divide Tanganyika Territory into four great forests, the term forest, again, being used in its widest sense. These forests find their south-eastern, north-western, south-western and southern limits respectively in the nearly gameless Iringa highlands, the meeting point of them all.

The Great Western Forest consists chiefly of Myombo trees (*Brachystegia* and *Berlinia*) and sweeps in from North-Western Rhodesia through the gap between Lakes Tanganyika and Nyasa. Thence it extends right up to Lake Victoria, with Kazi-Kazi on the Central Railway, and the Mwanza Gulf in the north, as its western limits. It is roughly 400 miles long and 260 at its greatest breadth. It is divided from the Great Southern Forest, also of Myombo, by the barrier of the Uhehe (Iringa) highlands.

The Southern Myombo Forest comes in on a broad front from Portuguese territory and fills the width of the country north of the Rovuma. Northwards it extends to Kilwa on the Coast, and in places, well into Mahenge. Its greatest length (from west to east) is 300 miles and its greatest width 150. In the Coast-belt both of this and of the forest next to be mentioned the wooding has largely given place to scrub.

Myombo trees, tall, slender for their height, and with broad feathery crowns that in the spring combine the tenderness of sea-weed with the autumn tints of England, grow mainly on soil that is suffering its first denudation. In swampy ground in their own areas they are replaced by Acacias and Combretums (*Mlama*), and even on ground that is not swampy but was originally formed by silting, by the *Mkambala* (*Acacia*) and trees that are found in



TYPICAL ELEPHANT COUNTRY.

association with the Mkambala. The Rukwa Depression affords an instance of such a replacement.

North of the River Matandu (Kilwa), the general conditions are more favourable to these woodland formations than to Myombo, so that although the latter still occurs over great areas of hill-side or on other suitable ground it is no longer continuous and yields second place to these others, while large and small areas of dense thicket, often amounting to forest, through some of which one may go for days, are also exceedingly prevalent. This area then, is worth regarding as a separate forest—the Eastern Forest. Its length is 250 miles and its width in the south is hardly less, but it tapers to a point on the northern border of the Territory. It forms on the east of the country a northward-stretching arm that corresponds to the broader arm of Myombo forest on the west.

The North-Central Forest fills the space between these arms to a width, at its widest, of 300 miles, and a similar depth at its deepest ; and is an area, for the most part, drier as regards rainfall and characterised by flat "camel" thorns (*Acacia spirocarpa*) as well as by other and yet drier types of bush and, in one part in particular, west Kilimatinde, by enormously extensive thicket useless to man or game. It contains some magnificent game plains and it is divided for some distance southwards by the striking Rift Valley country ; it is broken in places by large populations (as in Shinyanga, Mwanza, Mbulu) that keep the bush down and produce, while they last, the most open of grass-country and the human conditions for easy development.

Lions, Leopards, Warthogs, Giraffes, Elands and Zebras are more or less common throughout the Territory, both in plains and in woods, except in areas that are in general gameless ; and Reedbuck, Bushbuck, Duiker and

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Dik-Dik are common; the Impala, in the park-like country of scattered small thickets it favours, the Klip-springer on rocky hills, and the Wildebeest where there are plains, are equally widely distributed.

The characteristic large mammals of the Myombo are the Sable Antelope and the Lichtenstein's Hartebeest; and, broadly viewed, the Fauna of the Western, the Southern and the Eastern Forests are those of Angola, Rhodesia and Portuguese East Africa and the conditions of hunting the same. Kenya Colony fauna and hunting conditions—"nyika," dry thorn and open plain—prevail on the whole in the great North-Central Forest.

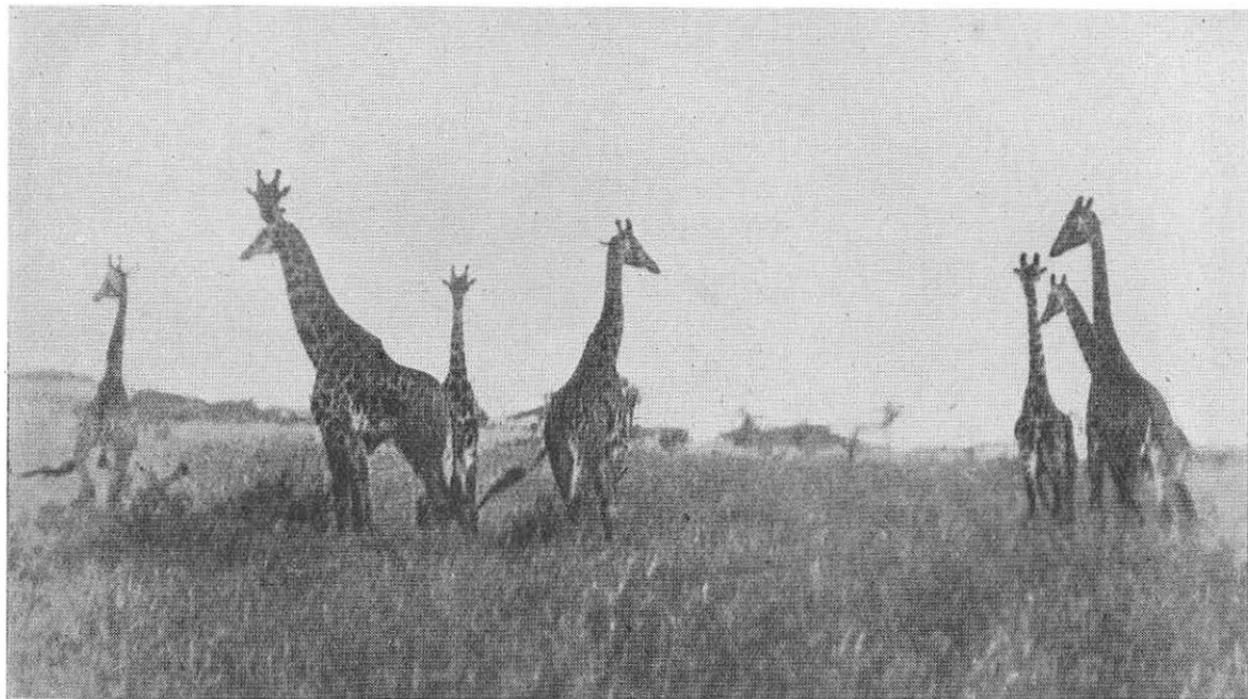
For the regulation of the hunting of game in the Territory, a Game Ordinance gives wide powers to the Governor to make regulations for the pressing needs of the day and it creates eleven "full" Game Reserves—that is, reserves in which no animal whatsoever may be hunted, game or otherwise—and two "partial" reserves, in which only particular animals are thus protected; and regulations 6 to 11 lay down further rules to be observed by the public in relation to the Reserves. The Ordinance should be consulted for their boundaries.

The Game Licences which may be taken out are laid down as follows: a Visitor's Full Licence and a Resident's Full Licence, a Visitor's Temporary Licence, and a Resident's Temporary Licence, each of these four licences authorising the holder to kill the animals specified in the appropriate column of the First Schedule; an "Elephant and Giraffe Licence" which may only be taken out by a person already holding one of the more general Game Licences; a Resident's Minor Licence authorising the killing of the animals in the Fourth Schedule; a Governor's Licence allowing the shooting of any animal under specified conditions, and granted only for very special

purposes, scientific or administrative; a Professional Hunter's Licence, at a nominal fee, the idea of which is to have the power to prevent a "white hunter" from practising his profession in the Territory if he, or his clientèle, break the Game Laws or he is otherwise unsuitable; and a Trophy-dealer's Licence, allowing only its holder to deal in trophies, which also has control for its subject. For the purposes of any Game Licence one female killed counts as two head.

A Visitor's Full Licence costs £75, and a Visitor's Temporary Licence £10. A Resident's Full Licence costs £15 and a Resident's Temporary Licence £3. A Resident's Minor Licence costs £4 and, giving its holder a fair number of the common animals, is intended to serve the needs of those who get but limited shooting or whose shooting is mainly for porters. Shooting for porters without a licence is not allowed. "Resident" includes, in addition to actual residents, any Commissioned Officer in His Majesty's Army or Navy on the Active List, and European Government Officials serving in Zanzibar, Kenya Colony and Protectorate, and Uganda. The full schedules relating to the licences are given as Appendix VII of the Handbook.

No person who within three years has been convicted of an offence against the Ordinance or whose licence has been cancelled or suspended may be granted a licence without the Governor's special consent; the Governor may, at any time, without assigning a reason, cancel a licence or direct its refusal; and in the case of cruelty or wasteful killing or wounding being persisted in after warning, any Administrative Officer or Game Ranger may suspend a licence and apply to the Governor for its cancellation. Cruelty and unsportsmanlike conduct is thus as far as possible provided against.



A HERD OF GIRAFFE.

DESCRIPTION OF THE TERRITORY 57

The rest of the Ordinance (19 to 26) gives the guardians of the law facilities for dealing with breaches of it.

The Regulations may be quoted further. Amongst other prohibited methods of hunting figure pursuit in a motor car, the use of light for dazzling and the firing at game from trains and public passenger boats; and the giving of a firearm to a native for the purpose of hunting game. Gun-bearers may assist the holder of a licence but shall not discharge any fire-arm against game except in defence of themselves or any other person," their employer being held responsible. Every holder of a Game Licence shall keep an accurate register of all game animals killed by him and hand it in at the end in the manner prescribed in Regulation 20. A person who has obtained a licence to shoot an elephant may obtain a refund of the amount paid if he produces such evidence as the Game Warden may require that he has not fired at an elephant. No person shall sell or buy any trophy unless it is accompanied by a certificate of ownership, granted only on proof of legal killing. Any person killing an elephant or rhinoceros shall produce the trophies to the nearest Administrative Officer for registration within a month, nor may he sell or transfer them before registration. Any person importing elephant ivory or rhinoceros horn shall within a week produce it to an Administrative Officer and obtain a certificate of ownership, granted only if it was lawfully exported from its country of origin, and no export of any trophy is allowed from the Territory except at a recognised Customs station. Regulations 53 to 60 of the Ordinance specify measures to be adopted for the protection of crops and of life. Game killed without a licence in defence of crops or person is the property of the Government and the trophies must be handed in.

MOUNTAINEERING

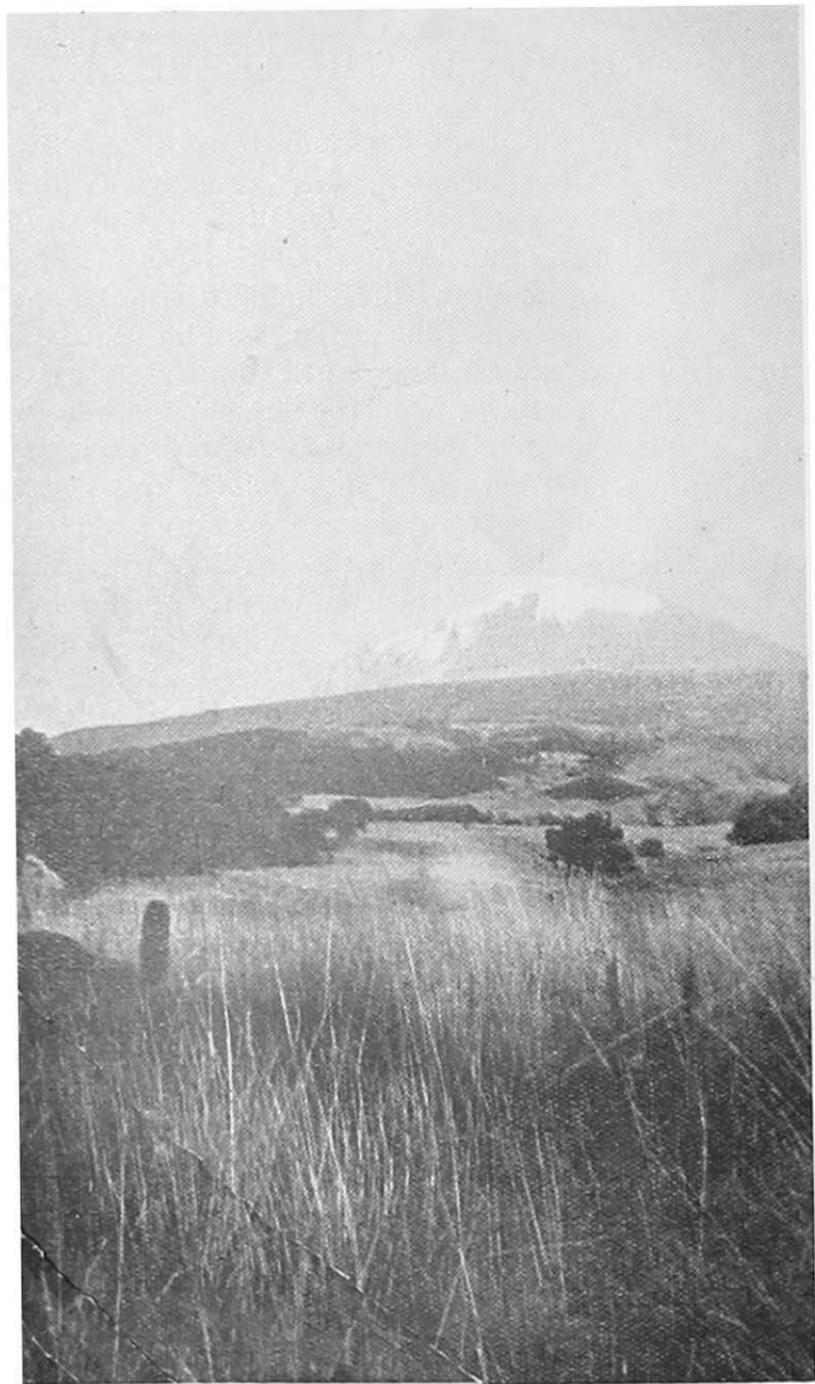
Although Tanganyika Territory possesses no high mountain chains, the fact that its vast old tablelands have been broken up during a comparatively recent geological period by tectonic disturbances which led to the formation of great rifts with steep scarps on the one hand, and to the piling up of huge volcanoes on the other, offers a wide scope for mountaineering activity. And, in addition to the pursuit of climbing and scrambling, the strange—and to many new—environment as well as the scenic beauty and variety of its mountain forms should go far towards attracting to this Territory mountaineers who are looking for fresh enterprise in a field only trodden so far by a few individuals.

Most of the "mountains" of East Africa are in reality the high and often precipitous scarps by which wide undulating plateaux break on one or more sides into the surrounding lowlands, scarps intersected by wild valleys, or steep ravines, often crowned by rocky cliffs or buttressed by sharp-cut ridges: in short, country that, though possessing none of the particular attractions of the world's ice-covered chains, has many features which will appeal to the lover of mountain lands. Many are the places along the lower slopes of these scarps where he can establish his base for scrambles which will take him to anything between 7,000 and 10,000 feet. Usambara and Pare in the north, Uluguru, Kaguru and South Usagara along the Central Railway, are all within easy reach of the Coast, whilst the Livingstone Mountains with their sheer drop into Lake Nyasa and long stretches of the east coast of Lake Tanganyika make excellent climbing ground practically untouched by civilisation and only waiting for the mountaineer-explorer.

A second characteristic mountain type of East Africa is afforded by the volcanoes which, usually in groups, occupy areas of intersecting lines of fracture. The Rungwe massif to the north of Lake Nyasa (Rungwe Peak, over 10,000 feet) and the Mfumbiro Volcanoes, the latter not however in Tanganyika, but on the border between Uganda and Ruanda, are two minor such areas, of which the last-named, with some of its mountains still in the eruptive stage, is likely to add strange excitement to the ordinary adventures of mountaineering. But the finest collection of great volcanic cones is to be found in and along both sides of the Great Rift Valley between Kondoia-Irangi and the Kenya border, many of the little-known mountains there rising over 10,000 feet and some even to 12,000 feet.

For mountaineering enterprise on these volcanoes or on the "scarp-mountains" ordinary camp equipment is all that is required. Strong boots, not too heavily nailed, are of course necessary; whilst for minor scrambles lighter boots made of soft leather and having rope soles will be found useful. A rifle is indispensable as encounters with rhino are not uncommon in country where their tracks often form the only means for getting through the dense and thorny mountain scrub. A good supply of matchets of the best quality for bush-cutting should be carried by anyone proposing to leave the beaten track; and the dryness of the lower as well as the uppermost slopes of many mountains being one of the main difficulties of African mountaineering, large water carriers for the porters as well as for the members of the party are essential. So are blankets for the porters whom one intends to take above 8,000 feet.

Finally, and forming a group by themselves, there are the two giant volcanoes Meru and Kilimanjaro, on



**VIEW TAKEN DURING THE ASCENT OF KILIMANJARO.
KIBO FROM EDGE OF FOREST**

whose mighty domes one can enjoy real alpine climbing in the heart of the Tropics, rockwork of the most difficult kind on Meru (15,000 feet) and on Mavenzi (17,300 feet), the lower of the two Kilimanjaro peaks, and rock combined with ice-work on Kibo (19,500 feet), the highest summit of the "Monarch of African Mountains." Although none of these can any longer be classed among the fast disappearing category of "virgin peaks" they still offer unsolved problems galore, among which a traverse of Kibo from west to east, an ascent over its southern glaciers, the conquest of the central cone in its ice-filled crater, or attempts on Mavenzi and Meru through their forbidding calderas are some very promising instances.

As, however, alpine conditions so near the Equator can only be expected at a very high elevation with its correspondingly rarefied air, the first requirement for all mountaineers wishing to fight these African giants are perfectly sound heart and lungs. Given these Kibo may even be tackled on ski by tourists having ample time to wait, if necessary, for favourable weather conditions. For the rest, Kilimanjaro climbers must bring a complete alpine outfit, supplemented by sleeping-bags and a small, light, strong and, as far as possible, wind-proof mountain tent. And they should not forget that, besides clothing designed to protect them from the cold and wind, a sun helmet is absolutely essential on high altitudes under the Equator where there is very little air between one's skull and the sun. Boots, socks, puttees, sweaters and warm overcoats must be taken for a limited number of porters whom one may require above 14,000 feet.

Suitable headquarters for alpine expeditions are Moshi at the foot of Kilimanjaro, 220 miles by train from Tanga; and Arusha, on the lower slopes of Meru (60 miles from Moshi by motor road).

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ADMINISTRATION AND LAW

We have already made a quick journey over the Territory, and become broadly acquainted with the chief features of its twenty-two Administrative Districts with their total of forty-seven sub-districts into which they are divided. All these Administrative Districts are in charge of a Senior Commissioner or an Administrative Officer in Charge, having officers of junior grade to assist them in most of the sub-districts. In Dar es Salaam are situated also the Head Offices of all the other Government Departments except two (the Forestry and Game Departments); there are with the Governor's Office and the Establishment of the King's African Rifles altogether twenty-two Government Departments, of which Agriculture, Customs, Forestry, Game, Lands, Survey and Mines, Posts and Telegraphs, Railways and Veterinary come into most direct connection with the public for the development of the Territory. There is in addition the Enemy Property Department, whose work has been the care and disposal of the large amount of valuable and important ex-enemy property in the Territory. The work of all these Departments receives attention in the appropriate sections of the Handbook, the information having been usually supplied at first hand by the Department concerned.

These Departments have of course officers stationed in out-districts where it is most important that their work should be carried on at the present stage; and these officers work in co-operation with the local Administrative Officer for the furtherance of progress affected by the aims of the Department concerned in his district. In several of the Departments, however, in some cases where it is not considered feasible or expedient

to station one of its officers, the work of the Department, directed from Headquarters, is carried out by the Administrative Officer in the district, who requires therefore to be the possessor of considerable energy, patience and versatility. We have to remember that it is due to the groundwork of such officers that the extension of the work of technical departments is facilitated when the happy time comes that brings them means and staff for uns^o extension.

The judicial system consists of the High Court, and Subordinate Courts of three classes.

The High Court comprises a Chief Justice and two Puisne Judges, and has unlimited jurisdiction. It also exercises an appellate jurisdiction over the Subordinate Courts and, in addition, revises their judgments. There is an appeal to the East African Court of Appeal in certain cases. The Subordinate Courts are held by Resident Magistrates, in the larger towns, and by the Administrative Officers, who have judicial powers varying with their rank.

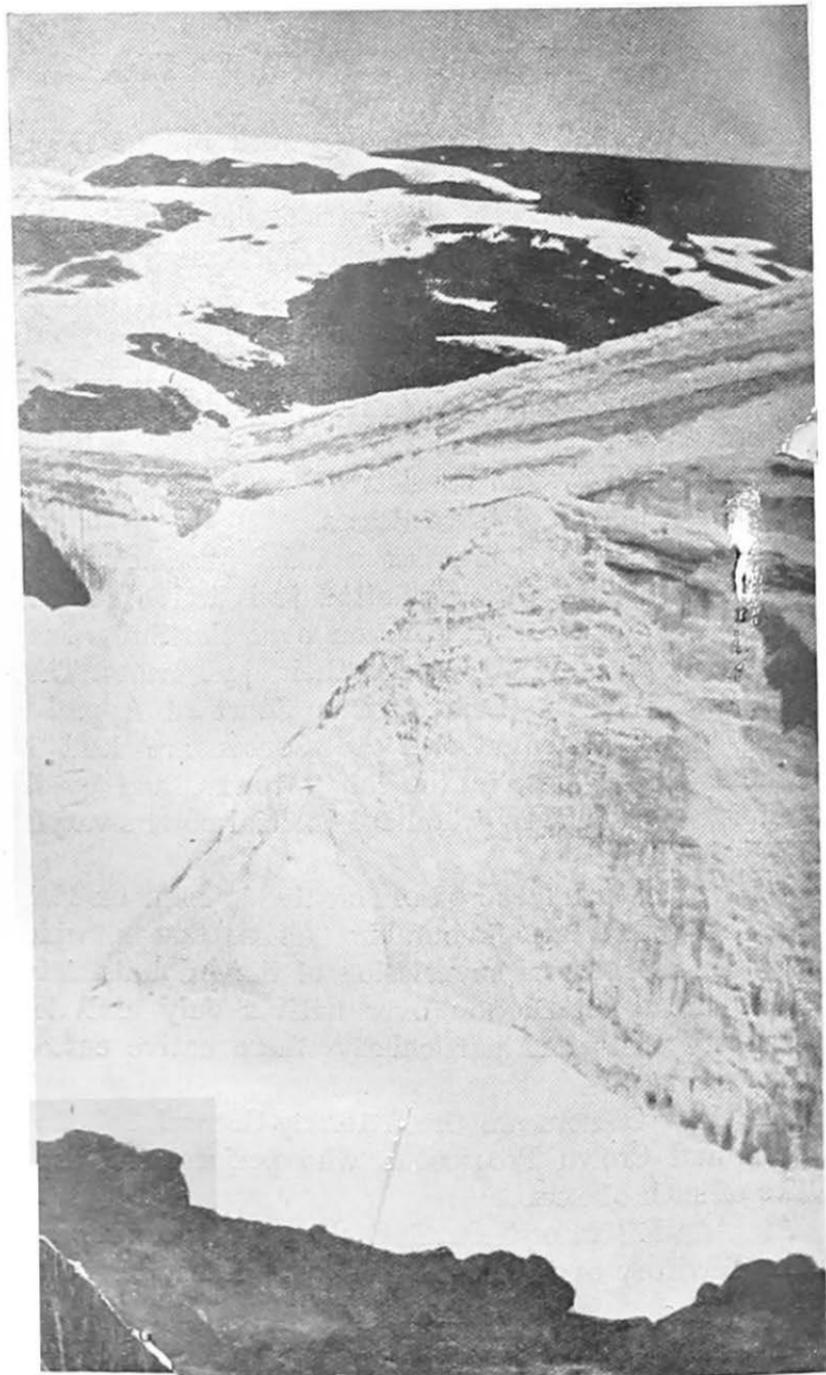
Native Courts have also been created in some districts, where conditions are favourable. These Courts, which are under the general supervision of the Administrative Officers, have jurisdiction over natives only and deal with petty cases and particularly where native custom is concerned.

The Law Officers are the Attorney-General, Solicitor-General and Crown Prosecutor, who perform the usual duties of such officers.

An Administrator-General deals with the property in the Territory of all non-natives dying intestate.

EDUCATION

The work of re-establishing the education of the Territory, which had to a large extent



VIEW TAKEN DURING TEN DURING AN ASCENT OF KILIMANJARO.
KIBO FROM . POINT OF KIBO CRATER (19,000 FT.)

as a result of the War, was begun in the latter part of 1919 by the opening of a limited number of elementary schools under the supervision of the Administrative Officers in the different districts.

The Education Department proper was created in September 1920 by the appointment of a Director, and since that date the work has expanded rapidly, though shortage of staff has militated against exercising the unsue of supervision which will enable the work to be put on a really satisfactory basis. This obstacle to progress is gradually being removed, and with an increased European personnel in the near future there is every reason to anticipate that the work will within a few years have surpassed that undertaken by the late Administration.

The scheme embraces Elementary or Village Schools and Primary or Central Schools to which are attached industrial branches. Attention is being directed at the present time to an endeavour to evolve a system of elementary education closely associated with the village life, as an undoubted danger in the systems of native education is a tendency to destroy tribal tradition before creating a satisfactory sociological system to replace it. To this end agricultural development is always kept to the fore, and every village school has, where possible, its plantation attached so that the manual part of the instruction may be associated definitely with the home life of the child. A considerable number of these schools boys from a distance are housed under home conditions, so that the primary object of the school garden is to ensure the food supply, and this has already been successfully accomplished in a number of instances. The second object of the garden is to create a convenient centre of for the general economic development of

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and successful economic experiments have already been carried out with the advice of the Director of Agriculture.

The chief difficulty which has been experienced up to the present time is that of finding efficient teachers, and until such time as teachers can be trained on lines in conformity with the general scheme of development, a high standard of efficiency cannot be looked for; but what has been accomplished by men with no previous agricultural training may be looked upon as an earnest rapid development a few years hence.

A Teachers' Training Centre was established in 1922 in Dar es Salaam and is shortly to be transferred to Morogoro. This centre has been selected as it is already the site of an Experimental Station of the Department of Agriculture; and the course in agriculture which every teacher will be called upon to undergo during this training will be carried out under the supervision of Agricultural Officers.

In addition to work in the school garden, obligatory for every elementary schoolboy where facilities exist, an attempt will be made at suitable centres to establish cottage industries; and hand-loom weaving has already been started in two districts among tribes already possessing a knowledge of the art. A weaving class is also attached to the Central School in Dar es Salaam. It is too early yet to say definitely whether the industry can be largely developed: much will depend on whether the women take up spinning; but in view of the large number of natives engaged in hand-loom work in India, no effort could be spared to establish the industry in a Territory where the possibilities of cotton growing are so great.

The demand for education has been particularly high in those districts where the old Chiefs and Sultans still retain their authority: is in fact greater than can be

met, owing to the lack of teachers. The schools are built under the supervision of the Administrative Officers and in accordance with the reasonable demands of the Education Department. They are almost without exception well suited to local needs. In addition to providing the building quite a number of the Sultans clothe the boys who attend, and all have shown the greatest willingness to make a grant of land for the school plantations. Although the plantation scheme was only initiated two years ago the food supply of more than one school will in the very near future be assured, and satisfactory areas under permanent economic crops will be in bearing.

The number of Elementary Government Schools in 1923 was 67 with a total roll of 4,431.

Central Schools have been established at Dar es Salaam, Tanga, Bukoba and Tabora. In addition to the elementary classes which include three standards in the vernacular (Swahili), provision is made for a further four-year course in English, called the primary course of study, for selected boys who have reached the necessary standard, subject to an age limit. Trades so far established in Dar es Salaam and Tanga include carpentry, tailoring, masonry, blacksmithing, printing, boot-making and weaving. An experiment is also being made to initiate the elementary training of hospital attendants in connection with the school dispensary.

The schools at Bukoba and Tabora are intended primarily for the sons of Chiefs and their education is designed to be a judicious combination of secular and manual instruction to equip them for their future calling. A system of definite apprenticeship to trade has been introduced into these schools.

In addition to the teaching of actual industry in the school shops, apprenticeship in the R

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shops, Transport Department and the Post Office has been begun. In some cases boys thus apprenticed continue to attend school in the afternoons for further instruction in drawing and arithmetic.

It will be seen therefore that vocational training is the chief aim of the education programme, and although the Department has been in existence too short a time to give effect to any wide scheme of development, already arrangements are being made to attach cattle to larger schools in the cattle districts, so that boys may be taught better animal husbandry and the advantages of mixed farming. Nurseries are being started at a few centres with the object of planting wind-breaks for the school gardens and further to establish the school fuel supply in the future. There is no reason why a small beginning of this nature should not be extended in order to bring a larger acreage under timber ; and it is hoped that eventually, by organising an annual tree day when every schoolboy will plant a tree, the schools may eventually take their share in the afforestation of the Territory.

Three schools for the children of the Dutch settlers have been established in the Arusha District, at Engare ol Motonyi, at Engare Nanyuki and Mdonyo Sambu. These schools receive a grant-in-aid from Government and are subject to inspection by Officers of the Education Department.

AGRICULTURE

GENERAL

Agriculture, including cattle farming, is the principal wealth of the country ; and far exceeds in importance any other industry, such as mining, although the strong development of the latter would be welcomed. As we discovered during our journey over the Territory, the native is the greatest producer of agricultural wealth ; although the non-native producer, from the very fact that he is a planter of commodities for sale and not a direct provider of his own needs, makes his weight most felt in the exports of the country. Through his Bantu origin the native cultivator does not go beyond the use of the hoe ; and this is still usually found in the hands of his wives rather than in his own : even in heavy soils such as those of the Rufiji valley, stiff when wet and hard when dry, it is observed that the women perform the arduous work of preparing the land, whilst their men-kind will permit themselves to go as far as sowing the seed. Cultivation on European plantations is mostly done by labourers with hoes ; but there is an increasing tendency toward the employment of mechanical tillage, the nature of the chief crops grown (sisal, coffee, cotton) making it impossible however to extend the principle to the use of mechanical harvesting. Of non-native cultivators besides Europeans, although he is usually a trader, the Arab is the best : he pays attention to a small area of mixed cultivation ; date-palm gardens (mostly in Tabora) are season man-made oases in a thirsty land.

NATIVE AGRICULTURAL INDUSTRY

GENERAL LIST OF CROPS.

The crops that are of chief general distribution throughout the Territory (although there usually exist striking differences, and quick changes, from locality to locality, in the kinds grown) are as follows. (1) The different kinds of beans (varieties of Lima beans, cowpea, pigeon pea, green gram, woolly pyrol or mung, bonavio^o or hyacinth bean, and to a much smaller extent the sw^{ade} bean). (2) The various grains, including dura (sorghum millet), maize, rice (many kinds), pearl millet, bajri and coracan, ragi or eleusine. (3) Oil seeds, of which the chief are: the groundnut, the Bambarra groundnut, simsim, castor seed, Telfairia (for cotton, see below under fibre plants). (4) Root and rootstock food crops, principally cassava, sweet potatoes, yams, taro, eddo, potato. (5) The only fibre plant that is definitely cultivated, cotton; others that receive some cultivation are: hemp, Ambari or Deccan hemp. (6) Various gourds, including pumpkin, gherkin and cucumber kinds, and the loofah. (7) Condimental or luxury plants such as the onion, chillies, betel pepper, tomato, egg plant, brinjal or aubergine, ochro, roselle, etc.; ginger, turmeric, tobacco, hemp (see (5) above); coffee, sugar-cane. (8) Fruit plants (which, however, receive little attention beyond (possible) planting and care when young), such as: the banana and plantain, pineapple, pawpaw, mango, coconut. (9) Plants semi-cultivated for various uses; among these are: hedge plants, physic nut and a Euphorbia; fish poisons, species of Euphorbia and a Tephrosia; arrow poisons, of which Euphorbias appear to be cultivated; dyes, species of Euphorbia, Amaranthus, henna and turmeric (see above). (The larger numbers of poisons and dyes are wild plants.)

Among all these crops grown by natives, those receiving the best cultivation are naturally the ordinary food crops such as the beans, grains, most of the oil seeds, roots and rootstock crops and edible gourds; it is these alone that are likely to be found occupying the largest farmed areas. Certain of those classed above as condimental or luxury plants, such as the onion, ginger, turmeric and tobacco, are also (necessarily) grown with a certain amount of care; but usually only in comparatively small patches, generally near dwellings: although the onion and tobacco are also to be found in fairly large plots of pure cultivation, the latter being by far the more widely spread of the two. The list given is sufficient to show that the betterment and extension of native agriculture are matters of some complexity; and that there is a wide field for enquiry concerning the improvement of the existing kinds of plants belonging to it and the introduction of better sorts that may or may not prove to be suited to the conditions of the country.

FOOD CROPS.

The variety of food crops compares well with that in other regions of Tropical Africa; it is to be remarked however that much less use is made of the yam and the ochro than in regions farther west, and in the case of the former this may be attributed largely to the lack of thoroughness of cultivation that appears to be common in the Territory. The scheme of planting followed is the usual in Central Africa: a kind of "simultaneous rotation" whereby plants of several different kinds occupy a patch of ground at the same time. This is modified in river valleys receiving periodic floods as in the Rufiji valley; or often where terraces are employed, as on the slopes of Mts. Meru.

or where the nature of the crop indicates its raising in pure cultivation (rice, tobacco, onion, coracan); or where the natural preferences of the people are such that one food crop occupies a predominating position (bananas, Bukoba; sorghum millet in many areas). The mixed-cultivation, for crops other than those suited only to the pure culture, is little to be objected to in the conditions of native farming: it is beneficial in certain ways and ensures that something equivalent to rotation is carried out. The serious failing in native cultivation is the almost universal lack of adequate preparation of the land although Shinyanga and Mwanza afford welcome exceptions, where ridging and the burial of weeds and plant refuse (the latter an extremely exceptional feature of African agriculture) are often carried out thoroughly: there are actually all gradations to be seen, from the mere scratching of the soil and planting on the flat, common in Morogoro for instance, to the careful cultivation just described. In the present conditions of the native farmer, the poorness of his methods is of little importance in normal times, although he would be a better and more prosperous man if he did good work. It is in bad seasons that he suffers for his laziness and ignorance: very often good cultivation would bring sufficiency where the actuality is famine. In a land of precarious rainfall, like Tanganyika, the improvement (not substitution) of native methods of husbandry is of paramount importance.

The extent of the production beyond local necessities, of a whole of certain commodities used either as or with somewhat noteworthy feature of the agriculture of the territory. In the year 1923, Central Line areas each with an export of about 7,500 tons of ... Lindi, with its shipments of well over

1,500 tons of simsim, form notable examples of this over-production (from the aspect of domestic needs). Other products that are exported in varying amounts are sorghum millet, maize, bajri, rice and chillies. As to how far this over-production is due to favourable seasonal conditions, or (Lindi) increase of activity through usury, farm advance in standards towards luxury, or an effect of taxation and preparation towards tax collection, it would be difficult to tell. That it should be encouraged in every possible way cannot be gainsaid.

OIL SEEDS.

The chief of these for export are groundnuts, simsim and cotton seed. Little is known regarding the varieties of groundnuts and simsim that are grown and of their comparative productivity and suitability for various districts ; this is especially the case with respect to simsim, a plant that has seemed largely to have escaped botanical and experimental enquiry in relation to the agricultural and economic value of its different kinds. Conditions are suited to the ordinary groundnut over large areas, and further extension of its cultivation for export is now virtually limited by the need of transport facilities ; although there is room for a much greater production, given means for export and transport, from the area north of the river Kagera, and Karagwe, in Bukoba, and the more remote areas north and south of the Central Railway. The Bambarra groundnut has special usefulness on dry hillsides, where in many areas such as Bukoba, it may be successfully sown in the small rains so as to bring in its harvest when the supply of the common food crops be short.



It is regrettable that the conditions of the Territory do not admit of the planting by natives of the oil palm on an extended scale for its products, valuable both in domestic and export economy. When however the moister internal districts, of no great elevation, are opened by transport facilities, this palm may come to supply a perennial native crop in those areas; and the varieties near Lake Tanganyika, suited to comparatively high altitudes, are worthy of observation in this connection.

COTTON.

It seems that for some time the chief production will continue to be in the districts Mwanza, Morogoro, the Rufiji valley, Kilwa and Lindi, where it now exists; although Bagamoyo (with possibly part of Pangani) and Shinyanga are showing encouraging signs of the extension of the production on definite lines. The production on the plains in Moshi, and in Tanga, is so far experimental: lack of population in the former case will severely limit output for some time; and it is considered very doubtful if the climatic conditions of much of the Tanga area will permit success with cotton. The broad conditions under which cotton is or can be produced are those of: (1) ordinary valleys and the lower hill-sides; (2) the interior tablelands where hill systems do not bring clouds and irregular rainfall (Mwanza, Shinyanga); (3) river valleys having large periodical floodings (Rufiji, Rovuma), where young cotton is often seen growing among the drying rice. It is apparent from the extent to which the third of these conditions differs from the others that care must be taken to avoid the down of hard-and-fast rules for all districts, times of sowing, methods of cultivation, completing pulling and burning after harvest.

The free distribution of first-grade cotton seed to native growers appears to be successful in encouraging sowing; but experience shows that this distribution requires to be closely controlled and watched by Agricultural Officers with the aid of a sufficient number of instructors, in order to ensure that the seed is sown, and sown properly. The fact that this distribution is free should bring additional willingness on the part of growers to follow the advice and instructions issued by Agricultural and Administrative Officers in consultation.

The selling of native-grown cotton at auction markets conducted by Agricultural Officers has so far been very successful. The special value of these markets to the native grower is that he obtains a fair price, that he is paid in cash which he is certain to receive on the day that he brings in the cotton, and that he gets a fair return for trouble taken in grading. Their success is all the more important, as the native of this Territory possesses no permanent export crop (such as cacao on the Gold Coast and the oil palm in Nigeria) as a continuing basis of his agricultural activity, and it is evident that the existence of a stable cotton industry would go far to supply this need.

OTHER FIBRES.

Other fibres are exploited to a comparatively small extent, either as a subsidiary crop in the farm or by collection from wild plants: an example is the Ambari Deccan hemp. The experience of India shows that growing of the two plants yielding jute (only one of which is apparently known in the Territory) is eminently suited to native husbandry; but in districts having a climate not caused chiefly by rainfall, so that the development of an extensive native jute industry

in Tanganyika. Ambari hemp and Sunn hemp have more promise, as they give good results under moderately dry conditions.

CONDIMENTAL OR LUXURY PLANTS.

There is not much to add concerning these to what has been stated already. Those among such plants showing the best present prospects of extension of production are chillies, tobacco and coffee; and the first is receiving attention chiefly through seed distribution and instruction for growing, whilst in the case of the second, trials are being made of the rustica species of tobacco for producing nicotine. The raising and preparation of tobacco, on a large scale for export, by native farmers is doubtful in prospect on account of the difficulty of ensuring a uniform product from them: any possible success is so far only indicated (by signs rather than trials) in the case of the Wachagga, on the slopes of Mount Kilimanjaro, where are combined the existence of suitable volcanic soils with careful agricultural methods on the part of the inhabitants; and possibly by the Washambaa (of Usambara and Tanga). Native coffee production deserves consideration by itself, as it is the only true perennial crop grown by natives. It is well known that it finds its greatest extension in Bukoba, where more than two-thirds of the country's coffee is produced: an extension that has been brought about simply by the encouragement of the owners of banana plantations to plant coffee in them; so that the district can now produce two to three thousand tons of coffee of a fair market value. Some native production of coffee exists on the slopes of Mount Kilimanjaro, and may be extended there, a circumstance that is due to the fact that banana plantations are already a common feature of native agriculture.

areas. It may be said here that the provision of nurseries of well-grown plants is regarded as an important means for obtaining this extension; and work for this has been begun.

NATIVE CATTLE PRODUCTION.

This is dealt with below, when cattle and cattle products are being considered. It need only be stated in this connection that the first step towards substantial agricultural progress appears to be to give the native stock a greater commercial value, and for this the export of canned products or chilled meat, or both, appears to merit serious consideration. The realization that his cattle has this value would doubtless encourage the owner to adopt rational ways of feeding (the Sultans in Shinyanga for instance are usually men of reasonable intelligence), and the present wasteful and insufficient method of feeding by grazing alone would be gradually supplemented by the use of cattle cake made from his own groundnuts and delinted cotton seed, raised in turn in quickly increasing quantities by the employment of part of his cattle for ploughing.

THE PLANTATION INDUSTRY

ACTUALITIES AND SUGGESTIONS

CROPS GROWN AT PRESENT.

The cultivation by Europeans is chiefly concerned with sisal in the Tanga, Pangani, Morogoro and Lindi coffee in Usambara, Moshi and Arusha, and wheat in Rungwe; cotton in the Morogoro, Lindi and Lindi areas; coconuts (to a comparatively small extent) chiefly in the Tanga District; tobacco

and settlers' crops needing high altitudes when grown in the tropics, in Usambara; and some exist in Rungwe, Iringa and Dodoma. This activity is (as is well known) only now able through the circumstances of the Territory to begin to attain a stable condition in which a state of progress and extension commences to appear. The large areas of Ceara rubber in the country, and the extent of the exports of wild rubber that existed for a short period, testify to the interest that, in abnormally favourable conditions of market, was taken in rubber at one time: an interest that has naturally almost disappeared in the recent circumstances of the rubber market, but has lately shown some revival.

The conditions of European agriculture in the Territory are such that its chief weakness consists in the circumstance that individual planters or firms usually confine their attention almost entirely to one crop, thus decreasing the efficiency of their production and increasing their risks. There is no doubt that it will be well for these producers, with the help of the Department of Agriculture, to consider the usefulness of growing and extending other crops such as cacao, Liberian coffee, fruits, cinchona (for quinine), coca, oil palm, flax, New Zealand hemp, kapok, pineapple and related fibres, camphor, areca nut, nutmeg, vanilla, ylang-ylang, Aleurites oils, wheat and maize.

SISAL.

The main problem in regard to this crop in several localities is the obtaining of a sufficient supply of water for manufacture; and this difficulty is likely to result in a restriction of sisal production. A matter that has attracted the attention of planters is the treatment of land on which sisal growing has ceased for the time being. It should remain in rough fallow until

whether the benefits of fallowing should be combined with those of the cultivation of crops of value but not likely to cause soil exhaustion ; the latter scheme would help to pay for the clearing of the land of sisal, a matter of difficulty and expense, although the cost is partly met at present by the exploitation of old, remaining sisal. Some planters appear to consider useful a long " fallowing " of the land under light timber. Another subject worthy of consideration is the growing of cotton (in localities that are suitable) as an intermediate crop with young sisal ; this has been tried to a useful extent, and the present indications are those of success. As regards sisal generally, its simple methods of growing and manufacture, and its comparative freedom from harmful enemies, leave little to be done at present in the directions of expert enquiry and advice for the crop, although the question of the utilization of sisal refuse requires urgent investigation. Sisal occupies the position of the premier export (not production) of the country : shipments have recently increased from 7,923 tons worth £238,172 in 1921 to 12,845 tons worth £367,228 in 1923.

COFFEE.

This is a far more interesting crop, and planters can be most usefully helped in regard to the problems that arise in connection with it by means of the importation for trial of special kinds and varieties, assistance in regard to nursery work, experiments in planting, shading, manuring, investigations regarding enemies of the plant and protection of the coffee in the Territory from such enemies. The strong position of coffee, the export value in 1922, is shown in that the shipments were 176,557 cwts. worth £138,397 in 1921 to 276,557 cwts. worth £203,784 in 1922 ; but it must be

remembered that over two-thirds of this export is non-European grown coffee from Bukoba.

COTTON.

In normal circumstances there is no likelihood that this will come under cultivation to any great extent by Europeans. It is a fact that cotton is grown commercially by Greeks, in the areas mentioned above; but the prices usually obtainable for the kind raised (the descendant of ce ganda Upland) make the industry precarious, and it is doubtless for this reason that these planters have in the past shown keenness on the impossible plan of the importation of seed of Egyptian kinds for growing by them. The existence of these planters complicates the introduction and extension of improved strains or kinds of cotton, for general husbandry, but difficulties are being lessened by their co-operation.

COCONUTS.

With normal markets, the production of copra should be profitable; but in so far as this is carried out in European plantations the necessity for other accompanying crops is indicated. The matter is simplified by the circumstance that the coconut areas in the Territory usually are or lie near areas equally fitted for sisal growing (separately of course from the coconuts); otherwise, the finding of other crops to accompany coconuts is usually a matter of difficulty, except when the plants are young and catch crops, preferably of local value, can be grown. In both European and other production of copra, stricter attention to plant sanitation is

TOBACCO.

The non-native cultivation and marketing are in the hands of Greeks, whose



affords a good example of a simple way of carrying out these activities. It is considered that European tobacco, wanting, like native, will flourish best on the volcanic slopes of Kilimanjaro and Meru; but planters are not advised to embark upon an export industry without permitting themselves first to gain experience of the crop and its markets in countries where this industry is well established.

'SETTLERS' SMALL CROPS AND PRODUCE.

The Usambara area exhibits at present the most promising prospects for these; but they are dependent upon a comparatively large increase of European population and more regular steamer transport in order that fruit, vegetable, meat or dairy production may become anything more than a precarious industry affording a bare competence rather than a stable prosperity. The conditions of the Territory do not admit of a very large extension of these activities.

RUBBER.

The great production of Para rubber in the East and in the wild areas of Brazil, and the extent to which reclaimed rubber and substitutes from such sources as the by-products of the United States maize industry (like those for making "rubber" sponges, for instance) are used, together with the reduction of the European demand through political causes, do not encourage present effort in the Territory for plantation rubber production especially with the existing necessity for schemes of restricted output in the countries of the East. Mention has already been made of the large areas of Ceara rubber and it is the exploitation of these. or.

their existence as areas affording conditions restraining agricultural production, that forms the chief present problem regarding rubber in this country. A likely plan of exploitation of some of these Ceara areas would be to allow the native freely to collect the rubber as he would wild rubber, for sale to the firms concerned, and thus to kill and weaken the trees, which would have thus been made to provide funds for their removal for better use of the land. The price given for such rubber would be comparatively low, and yet profitable to the collector, on account of the intensive existence of the supplying plants, as against the extensive scattering of the wild plants, especially after the ruthless exploitation of the latter during the rubber boom. The exploitation of the rubber should be profitable, too, to the buyer, as he obtains the product without having to incur any expenditure on direct overhead charges or the provision of labour and equipment for obtaining and treating the latex. The quality of the product would however form one of the less favourable circumstances of the scheme; but it is not considered to constitute a serious difficulty, as machinery for macerating and removing foreign matter from the raw material requires little monetary outlay and only hand-power for its working. As far as can be seen at present, it would be to the advantage of buying firms to instal on or near the rubber areas such machinery, as well as that for making up the cleaned raw product as partly vulcanized sheet, for export: a development in rubber production that has received successful trial in the Federated Malay States. This is a form of exported rubber that appears to be viewed with favour by manufacturers, and if its production in the way indicated can be encouraged, the rubber areas to become for a period of years a source of great usefulness (and doubtless at the same

time to be gradually reduced in extent), one of the developmental problems of the Territory will have received solution.

CACAO.

- There is no doubt that parts of the Territory, such as localities in the Tanga area, exhibit favourable conditions for this crop: the conditions at the foot of the Usambaras are often favourable, for instance; and cacao from Zigi Segoma in this district has shown that a good product could be obtained, with adequate fermentation. It is not considered that cacao production in the Territory can ever be more than a minor industry; but it may prove to have its value in supplying such an industry for planters, giving a product whose value in proportion to weight will allow a profit even where transport expenses are comparatively heavy.

LIBERIAN COFFEE.

There does not seem to be any reason why this should not be produced in certain districts, such as those mentioned above as suited to cacao; although the German is said to have experienced failure with it there (Magroto). It is certainly worthy to become the subject of careful experimentation; and if this coffee was put on the market under well-controlled conditions, there would be no risk of its harming the Kilimanjaro, Meru and Usambara arabica and robusta products through unfair practice^{rk} a fear that may have led to discouragement exploitation in the past.

FRUITS.

Districts near the Tanga Railway; as Muheza, and parts of Morogoro, ^{rk}

suited to the growing of tropical fruits, including citrus fruits ; but any export trade will depend upon the eventual finding of a market in Europe, with efficient transport facilities, working through the first stage of supplying railway and coast districts of the Territory, and possibly a part of the South African demand (although this is at present purely a possibility that requires investigation) when citrus and other fruits are out of season in that country. Activity in the direction of the production of citrate of lime is not recommended at present, on account of the large stocks (probably two years' supply) that exist as the outcome of the Sicilian industry. There is a great deal of land suited to the production of pineapples, especially in the coastal areas ; and a canning industry should be profitable.

CINCHONA (FOR QUININE).

The progress of plantations at Amani (Tanga District), and reports on their produce, indicate that this will grow well on the high hills where rainfall can be depended upon. It is however doubtfully useful at present for exploitation alone : a plantation system with coffee at about 3,000 feet and cinchona above is worthy of trial, provided that capitalization is sufficient. The present paramount position of Java in the quinine market, and the fluctuations of the prices in this, make it unwise for planters to depend upon cinchona alone ; and it is to be regarded a subsidiary, rather than a main, product.

source of cocaine is at present the wild coca
of Peru and Bolivia ; but there seems to be no
growing of the plants in the higher damper
part of the dried leaves, under proper

control, should not assist the planter as a subsidiary industry.

OIL PALM.

Where plants like cacao and Liberian coffee will grow, the oil palm will flourish ; and the growing of its products in plantations in a railway district, such as Tanga, should be profitable, seeing that commercial shipments of kernels are made from wild palms in the Belgian Congo, by the Central Railway through Dar es Salaam. The investigation of varieties such as those endemic near Lake Tanganyika would be useful.

FIBRE CROPS.

Flax growing is indicated for the higher plantations ; but should not be taken up without experience. New Zealand hemp is suited for damp localities at the cooler altitudes. The remains of the Germans' trials of kapok are very obvious in the lower plantation areas ; there are not many signs of profitableness of these, and where plantations have been made they have been largely damaged by elephant ; it does not appear that it was possible to gain the success of the Dutch in Java in exploiting this comparatively large tree, which gives at the most a gross return for each plant of about two shillings a year ; another adverse matter is the harbouring by kapok of staining insects dangerous to cotton. Pineapple and related fibres have caused and are causing much interest from time to time ; and enquiries have been recently received regarding a fibre apparently of the kind (Arghan), in connection with which it may be stated that the rainfall in the district is likely to be very deficient for its requirements.

in decorticating such plants arises from the present impossibility, caused by the structure of the leaves, of obtaining machinery for preparing the fibre.

CAMPHOR.

Experiments conducted by the Germans at Amani have shown fair success with this. The proportion of raw camphor to camphor oil was poor at first, but was increased by drying the leaves (the material used) before distillation; it was concluded from the experiments that a yield of about 120lb. of camphor and 40lb. of camphor oil might be expected from an acre planted as hedges, giving together (at recent prices) a gross return of about £20 from an acre. The yields reported are good, even when compared with those of successful plantings in Florida; and trial of the modern system of planting in hedges and distillation of the leaves and twigs appears to be well worth making at medium altitudes.

CINNAMON.

This has been grown as a plantation tree chiefly in the Usambara foothills, Pangani and Morogoro; but with little commercial success. The Germans evidently hoped that the discovery that the root contains camphor would increase its importance; but there appears to have been no result from this.

NUT.

The *Coccoloba* palm has been introduced into the Territory, and is now grown to Pangani and Tanga, for some time; but the reason why its exploitation in plantations is not more extensive is chiefly that it does not form a useful subsidiary industry.

NUTMEGS AND VANILLA.

In the first stage, nutmegs can be grown in the warm, moist valleys to replace the inferior nutmegs and mace imported into Tanganyika and Zanzibar from India. Vanilla was grown successfully by the Germans in Tanga, Bagamoyo and Morogoro; and its production forms a useful subsidiary industry, capable of affording easy work for women and children.

YLANG-YLANG.

Trial at Amani shows that the tree grows well in the lower valleys, and bears profusely the flowers yielding the perfume. The collection of the perfectly fresh flowers and the immediate efficient distillation of the essential oil from them form the chief difficulties in the exploitation of the plant.

ALEURITES OILS.

These come from several species of Aleurites, and are known as wood oil, Tung oil and candlenut oil. They have been introduced for trial: the second is best suited to the drier districts with the poorer soils; the third grows well at Amani. The commercial importance of these drying oils is increasing.

WHEAT.

This is mentioned, as it often forms the subject enquiry and there is a small production by the settlers in Arusha. As far as can be seen at present it is not likely to be useful as a crop for Europe on account of the small margin of profit available under successful conditions, and of its liability to be affected by rust. Observation and investment

that the Dutch production in Arusha is the result of arduous toil on the part of the farmer, and that he is likely to suffer serious loss from disease in unfavourable seasons. He is nevertheless hopeful that he can make wheat-growing a profitable activity, with the extension of rail transport in the direction of Arusha ; and special rust-resisting wheats are being obtained from India and South Africa for his assistance.

MAIZE.

Several districts, notably among those served by the Tanga Railway, afford favourable conditions for maize-growing by Europeans ; and with low railway rates the production may become profitable.

LAND CONDITIONS

Public Lands. The Land Ordinance 1923 defines and regulates the tenure of land. Under this the whole of the lands within the Territory are declared to be public lands, but the validity of any title to land or interest therein lawfully acquired before the date of the Ordinance is not affected thereby.

Grants of Freehold. No grant of freehold is to be issued except where this is necessary to give effect to any contract or undertaking by the former German Government.

Rights of Occupancy. A title to the use and occupation of land is termed a right of occupancy which may be for any definite term not exceeding ninety-nine years.

Fixing of Rents. When a non-native desires a right of occupancy in respect of public land the rent to be charged in the first instance is determined by public auction subject to a reserve or upset rent.

Revision of Rents. The initial rent is revisable at the end of 33 years and again at the end of 66 years.

Agricultural and Pastoral Land. As a rule the area to be granted for agricultural or pastoral purposes will not exceed 5,000 acres. The upset rent varies for different localities, the minimum being fifty cents of a shilling per acre per annum. The occupier has to undertake obligations as to cultivation, fencing or development to the use to be made of the land.

Exclusion of Certain Areas. It is not possible to alienate further areas of land for agricultural purposes in the district of Tanga.

LAND CONDITIONS

Usambara and Pangani north of the Pangani River, in the cultivated areas of Moshi and Arusha Districts round Kilimanjaro and Meru, or in the area which is reserved for the use of the Masai Tribe.

Township Plots. The standard size and the upset rent of township plots are as follow :—

Trading Plots ..	European ..	Size 10,000 sq. ft.	Upset rent shs.
			120/- p.a. per
			10,000 sq. ft.
" " ..	Non-European	" 5,000 "	do.
Residential Plots	European ..	" 1 acre ..	Shs. 120/- p.a.
			per acre.
" "	Non-European	" ½ "	do.

Building covenants are imposed which have to be fulfilled within a specified period varying from one to three years. During this period the occupier may not transfer his right of occupancy without consent.

Permits to Occupy. With a view to encouraging the production of cotton and foodstuffs, permits to occupy public land are granted to non-natives for a term of one year. The rent is determined in the same manner as in the case of rights of occupancy. Such permits may be renewed not more than twice without an auction when such a course is considered equitable to enable the occupier to reap a crop or to obtain the benefit of any improvement made by him.

DISPOSAL OF EX-ENEMY PROPERTY

This is in the charge of the Department of the Custodian of Enemy Property, the general aim of which from its inception has been to control, protect and conserve the assets of all enemy subjects and corporations within the Territory. The Department came into existence in March 1917, and the whole of the enemy property in the Northern Area was vested in the Custodian by Proclamation No. 5 of May 26th, 1917. This Proclamation was subsequently extended to include the Central and Southern Areas, which had hitherto remained under military jurisdiction. Enemy produce was in process of collection in 1916 by a Military Controller of Enemy Merchandise, and stocks of cotton, rubber, sisal and coffee had been accumulated. This Department continued as a separate Civil Department until July 1917, when it was absorbed into the Department of the Custodian. Strenuous efforts were made to secure shipping for this produce, but this was found to be extremely difficult owing to the urgent military requirements for shipping then existing. As a consequence considerable deterioration of the stocks ensued. Some stock were disposed of locally and the balance gradually, ork, patched to the London market, where satisfactory action were obtained.

Plantations. An Inspector of Plantations were appointed shortly after the the Department. Efforts were at c

temporarily such estates as were workable and to arrange for caretaking of the others. In cases where the enemy owners or their agents remained on the estates they were permitted to reside on and manage the estates subject to the financial and general control of the Custodian.

The principal industry of the Northern Area was the cultivation of sisal. The leases of these estates were thrown open to public tender; and although quite satisfactory rents were obtained it is to be regretted that owing to the uncertainty of the period of tenure and the heavy demand on the British population of the neighbouring Protectorates for military operations the majority of the lessees were aliens.

The leasing of the plantations in the Central and Southern Areas was severely handicapped by military operations and the lengthy period during which they had been neglected, consequently little could be done beyond conserving such assets as remained and collecting such produce as was found thereon. Later it was found possible to grant a number of leases of considerable areas, for seasons only, for the cultivation of cotton; and these areas yielded to the tenants highly satisfactory results. It is proposed to continue this policy until the properties are disposed of.

The Inspector of Plantations and Assistants attached to the Department have paid continuous and periodical visits to the various accessible plantations for the purpose of supervising and correcting the operations of the lessees.

Business Premises and Houses. As these were vacated various military units, tenants on temporary lease were found for them at reasonable rentals. The buildings generally are of sound and substantial construction and will form a very valuable asset in the future.

DISPOSAL OF EX-ENEMY PROPERTY 95

Disposal of Enemy Property. Stocks of trade goods belonging to the various commercial houses were found on occupation to be very low. These were disposed of by public auction. All furniture found a ready sale as the articles were essential to the community.

The first of the sales of real estate was held on May 2nd, 1921, and they have been continuing at regular intervals to date. Twenty-five sales have already been held and the sums realised at these amount to £989,160. Nine hundred and thirty-two properties have been scheduled and offered for sale, of which only 162 remained unsold near the end of 1922. These consist chiefly of Ceara Rubber Plantations, for which class of rubber there is no market. Considerable impetus to the sales was given by the institution of a 4 years' purchase system, which has since been extended to 5 years.

Much difficulty was and is still being experienced in tracing the documents and titles to what are definitely known to be ex-enemy owned plantations, and it is estimated that there are still some 150 properties awaiting documents.

A statement giving details of purchasers is interesting, and is included as Appendix V.

LABOUR CONDITIONS

Information given already shows that the best plantation labour is afforded by the Wanyamwezi of the central plateau (Tabora), the Wasukuma of Mwanza, the Waniramba of Kondoa-Irangi, the Wangoni of Songea, and the Yaos of the districts bordered by the River Rovuma. Labour for plantation work and other purposes is not yet as easy to obtain as is hoped will be the case later on. The conditions are contrary to those where there is competition for work through over-population: the ordinary negro cultivator easily gains his sustenance, and often a monetary return, from his farm, and does not yet possess to any extent an experience of life that increases the complexity of his needs.

For regulating relations between employers and native servants and to control the recruiting and engagement of natives for service, a Master and Native Servants Ordinance, 1923, has been enacted. This provides for contracts of service, care of servants, control of labour agents, punishment for breaking of contract and for offences, and settlement of disputes. By virtue of this Ordinance the Governor may make regulations dealing with the recruiting of natives for service outside of their districts, their engagement and embarkation for service in any part of the Territory, prescribing forms of contract, and the better effecting of the provisions of the

AGRICULTURAL ASSISTANCE

This is afforded mainly by and through the Department of Agriculture, having its Headquarters in Dar-es-Salaam and possessing at present a principal staff consisting of Director and Deputy Director, ten Field Officers and an Entomologist, the executive officers being stationed in the districts where it is considered that they are most usefully employed. For native agriculture the Department supplies instruction by means of teaching in the field and at agricultural stations and by the issue of agricultural leaflets: simply trained and closely controlled native agricultural instructors are being found valuable for assisting in this work and in agricultural propaganda. The native is also assisted by the distribution of seeds of good kinds, especially of cotton. Three agricultural stations, at Mpanganya (Rufiji), Morogoro and near Kilosa (Morogoro), are in use, largely for the work of cotton selection and experimentation conducted in co-operation with the Empire Cotton Growing Corporation. A further activity of the Department, recently initiated, is the supply of ploughs and ox-wagons to natives, and the teaching of their use. This is a work that should become of great value in open, tsetse-free country (such as parts of northern Tabora and Mwanza) where agricultural production is becoming so great that transport head-loads is insufficient for moving the produce to market.

For the principal native export crop cotton, all buying and selling is under the Department of Agriculture. This

included the holding of the cotton auction markets already mentioned, ensures a fair price to the native grower and gives him confidence in his market. The Department possesses similar control over the distribution of cotton seed to the native ; and is thus enabled to see that he is supplied (with the co-operation of the ginneries) with none but the best.

Non-native agriculture has so far been assisted by the Department through the provision of advice for coping with pests and diseases of crops, the supply of seeds of the best varieties for planting and trial and the devising of protection of planters' crops from the danger of introduction and spread of their enemies. The representations of the Planting Community to Government for assistance or for dealing with conditions that may be considered adverse to development are usually made through the Department of Agriculture ; and in this and other matters of co-operation the various Planters' Associations in the Territory play a useful part. Further development for the assistance of non-native agriculture will be in the direction of co-operative experiments with planters and the use of experiment stations.

Important assistance is afforded to planters in that no Customs duty is charged on imports of agricultural and irrigation machinery and appliances ; railway and tramway construction material and equipment ; traction engines and trailers and cart wheels ; lighters, boats, etc. ; materials for agricultural and railway fencing ; presses to produce ; planting material ; substances for pest control, and appliances for their use ; pre-tanning coagulating rubber latex and salt for agriculture ; manures ; creosote ; living animals ; and natural history specimens

CATTLE AND CATTLE PRODUCTS

For matters connected with these the Territory possesses a Veterinary Department. This Department came into being under British Administration early in the year 1919, when a start was made to repair the ravages of a four years' war during which, of necessity, veterinary administration and disease control measures were of secondary consideration in comparison to the main issues. The nature and vast extent of the terrain occupied by the opposing forces and the extraordinary conditions produced by the conflict were contributory causes to the state of chaos from which the Department had to restore order from a veterinary point of view.

General Functions. The Department is organised primarily and essentially in order to prevent, deal with, and if possible, suppress outbreaks of animal diseases in the Territory; and thereafter, by suitable instructional measures, demonstrations and judicious propaganda to build up a livestock industry on the best and most approved modern lines. The importance of the latter can only be appreciated by those who have, by experience, become familiar with the primitive and haphazard methods of stock-breeding in practice throughout the main cattle areas of the country. The work includes the institution of improved methods of production of such materials as dairy and farm produce, ghee, butter, cheese, hides, skins and wool. The inspection of meat is carried out by veterinary officers at abattoirs in all the principal towns, and by trained stock inspectors in the less populous centres. As we progress and the



CATTLE AND FARM BUILDINGS ARUSHA.

incidence of epizootics becomes decreased, more time can be devoted to such subjects as the selection of the best breeding animals, the use of suitable males, only, for breeding, improvement of breed by grading and mating chosen female stock with imported sires, and the gradual introduction of the non-indigenous woolled sheep into certain districts. Much of the spade-work already done by the Department is beginning to have its effects, and the fact that the flocks and herds show a noticeable increase from year to year since 1919, in spite of the ravages of disease, is a satisfactory indication that labour has not been in vain.

Pathological Laboratory and Research Institute. During 1921 work was begun for such an Institute at Mpwapwa on the site of the old German institute, with a view to the establishment of a laboratory and research station. Many difficulties had to be overcome: the existing buildings were out of repair and were inadequate for future expectations; the whole surrounding area had become overgrown with dense bush and scrub, thereby obliterating the very necessary grazing grounds; laboratory fittings and appliances had all been removed during the war; and a large area had to be entirely cleared of bush, stumped and prepared for the sowing of crops in this arid district to provide food for the animals, before any attempt at scientific work could be started. The Pathologist arrived on first appointment during March 1922, by which time most of the plant, apparatus and equipment had also been delivered at Mpwapwa. During the remainder of the year the various parts of the plant and equipment were gradually installed and the work of most immediate importance, that of anti-rinderpest serum manufacture, was rapidly progressing, with the available small staff of two Europeans and natives trained on the spot. By the end of 1922, about twenty

thousand doses of serum had been produced and much useful research and similar work had been undertaken, to the direct advantage of the department and the Territory.

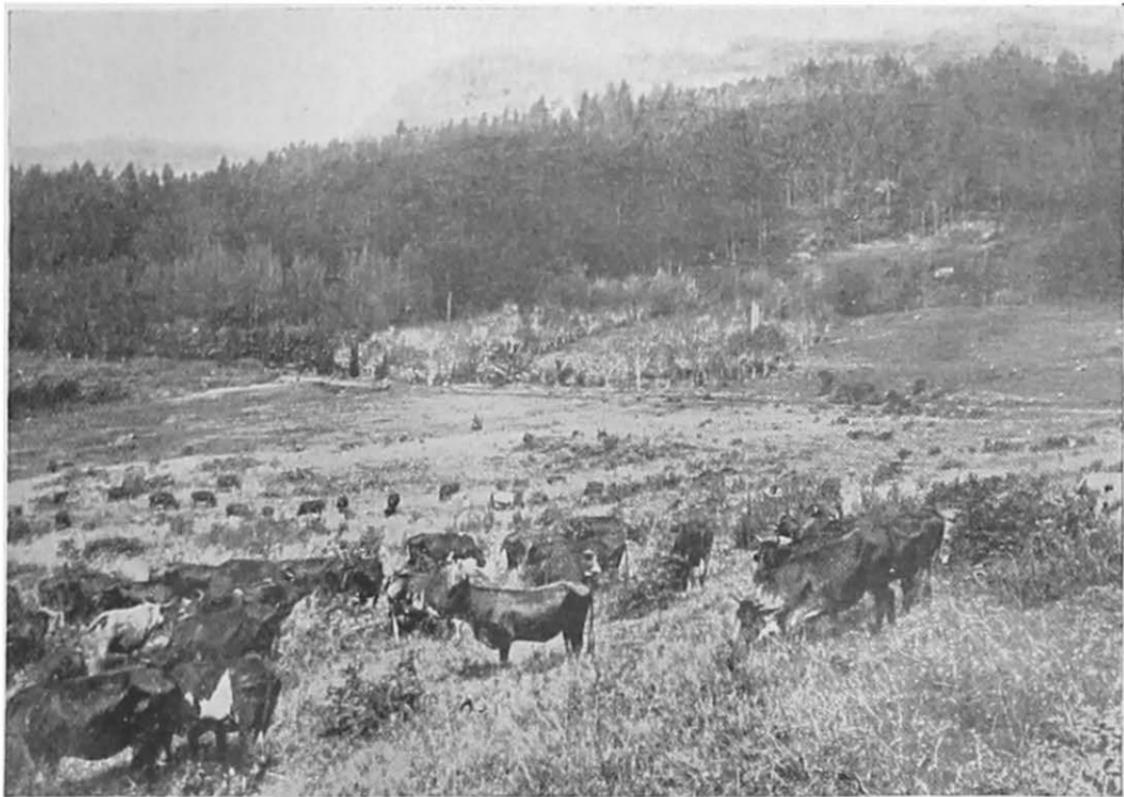
Where formerly the Territory was dependent for its supply of anti-rinderpest serum on another Dependency, it is now in a position to supply its own requirements and, in fact, has already disposed of serum to another Colony, during 1923, to the value of £500. Granted reasonable financial facilities there would appear to be nothing to prevent the Mpwapwa Institute from becoming one of the foremost in the British veterinary world. In the comparatively brief period during which anti-rinderpest serum has been produced, improvements introduced into the technique and actual process of manufacture have already considerably increased the regular output of this product, and there is every reason to hope that during the year 1924 the Institute will be in a position to prepare close on a quarter of a million doses if required.

The activities of the laboratory staff are not confined to the preparation of serum and allied laboratory products: the research and investigatory side receives full consideration, and the microscopic examination of blood and other smears and morbid specimens despatched from the field officers is routine. By means of reports on such examinations the latter are enabled to check diagnoses and maintain an intimate insight into investigations conducted at the Laboratory, where facilities are available which naturally cannot be obtained in the field. As an educational establishment, the Mpwapwa Institute will become increasingly prominent, and even now all officers on first arrival in the country are drafted there for a preliminary course of instruction in tropical animal diseases. Further, as opportunity offers and subject to the exigencies of the service, officers are afforded

facilities for undergoing periodic refresher courses to enable them to keep pace with the most modern investigations and results, and to apply them in their subsequent daily routine. By this means, every endeavour is made to preserve a uniform and universal progress throughout the department.

Progress and Development. That advance has been made since the inception of the department is manifest from the previous section dealing with the Mpwapwa Institute. Similar progress has been effected in other directions. Whilst rinderpest, our most formidable enemy, cannot be entirely eradicated from the Territory with the present available number of officers, much is done to keep it in check, to control its spread, and to maintain the uninterrupted course of the normal stock trade. This disease is confined to that portion of the Territory to the north of the Central Railway line (Dar es Salaam to Kigoma) and its spread into the areas to the south has hitherto been prevented, in the face of many difficulties, not the least of which are the tendency of the nomadic tribes and itinerant traders to keep moving their stock, the lack of grazing and drinking water during certain seasons, and the vastness of the districts under supervision. According as departmental conditions improve the incidence of rinderpest epizootics is gradually decreasing, and in time the problem of the eradication of this plague should not present an insurmountable task, provided reasonable facilities are afforded to those responsible for tackling it.

East Coast fever with rinderpest are the causes of over 90 per cent. of the mortality among cattle in the Territory. The remedy for the former is the destruction of the disease-bearing tick by the regular dipping of stock in a suitable solution. Wherever cattle-dipping tanks are established and regular dipping either



GRADE CATTLE, LUSHOTO.

encouraged or enforced, the mortality from this cause becomes negligible and the animals thrive. Since the Veterinary Department established various dipping stations, supervised by its officers, the decrease in mortality has been most pronounced. Manifestly, therefore, the present solution of the East Coast fever problem is a scheme for compulsory dipping in enzootic areas. The erection of tanks would, however, involve a large expenditure which cannot yet be considered.

Improvement of Breed. Already a few pedigree Ayrshire, Friesian and young shorthorn bulls have been imported by the Department, as well as two Ayrshire cows, both of which have produced pedigree bull calves since their arrival. The bulls have been mated with selected native cows of the best stamp, with highly satisfactory results to date. Although the imported animals have only been in the Territory little more than a year, good, sturdy, well-shaped half-bred calves have begun to arrive, all of which are strong and robust and show most of the characteristics of their sires. A herd of half-breds is being built up in this manner, with a view to the subsequent distribution of grade sires to approved cattle-owning Sultans and Chiefs, whose herds will thereby benefit greatly, and an improved type will be gradually evolved.

Training of Native Personnel. In a Territory like this, where livestock are distributed over wide areas in which transport facilities are lacking and means of communication primitive and slow, an intelligence system is most essential. In order to deal with outbreaks of animal disease promptly and efficiently, immediate information of their existence must be forthcoming, and consequently the need of an effective patrolling or inspecting organisation is apparent. In other words, constant supervision of flocks and herds

must be maintained. For this purpose native personnel is now largely used. Selected intelligent young men of good physique, who can read and write, are taught how to recognise the symptoms of the common contagious animal diseases and are trained in elementary veterinary science, the handling and control of animals, methods of dipping and animal management in general. After their initial training they are suitably equipped and provided with a distinctive departmental uniform and drafted to various areas to act as scouts for the District Veterinary Officers and to carry out the general duties of Sub-Stock Inspectors. In this way, the activities of the Department are being gradually extended and the stock interests of remote districts are safeguarded in a manner which could not possibly be undertaken with the present European establishment alone. Already, about a hundred and fifty of these trained natives are distributed throughout various districts, and carry out their duties in a most satisfactory manner. In addition, they act as a most useful link between the departmental officers and the various tribal chiefs in the districts, and are in proportion to their cost a distinct success.

Livestock Census. The count of all animals in the Territory for 1923 has not, at the time of writing, been yet completed, but the totals received from various districts up to date show a considerable increase over those returned for the same places for the year 1921, when the last census was taken. That we have already more than made good the ravages of war, in this respect, must largely be attributed to the campaign against animal diseases carried out by the Department and to the legislation enacted soon after the end of the war, whereby the slaughter of female stock and immature males was prohibited.

FORESTRY

Although forming but a very small percentage of the land area of the country, the forests of Tanganyika are nevertheless of considerable extent and importance. Some 4,000 square miles remain as a dwindling legacy of past centuries when vast continuous masses of dense forest covered the mountain tracts and endless parklike savannah dispelled the monotony of the plains.

The more valuable forest to-day is confined to the north-west, north and north-eastern regions, south of Victoria Nyanza, through the fertile highlands of Arusha and Kilimanjaro to the mountains of the east, and to the Livingstone Range near Lake Nyasa. The coast is not without its forest, which there takes the form of an association of semi-aquatic plants collectively known as mangroves. These mangroves are very extensive and of considerable commercial value.

The forests of this country are of many divergent types, whose distribution is controlled by conditions of climate and soil. Altitude is the principal factor as regards distribution. High up in the wet mountain ranges at altitudes of 6,000—9,000 feet are found the dense tropical and semi-tropical evergreen rain forest type. These are seen at their best in the luxuriant wooded belt surrounding the snow-capped dome of Kilimanjaro. The most prominent timber trees of the rain forests are the "Camphor" (*Orophea usambarensis*), the giant Mrie, yellow woods (*Podocarpus* spp.) and a Rosewood (*Royena* sp.). These species often form from ten to fifty per cent. of the growing stock.

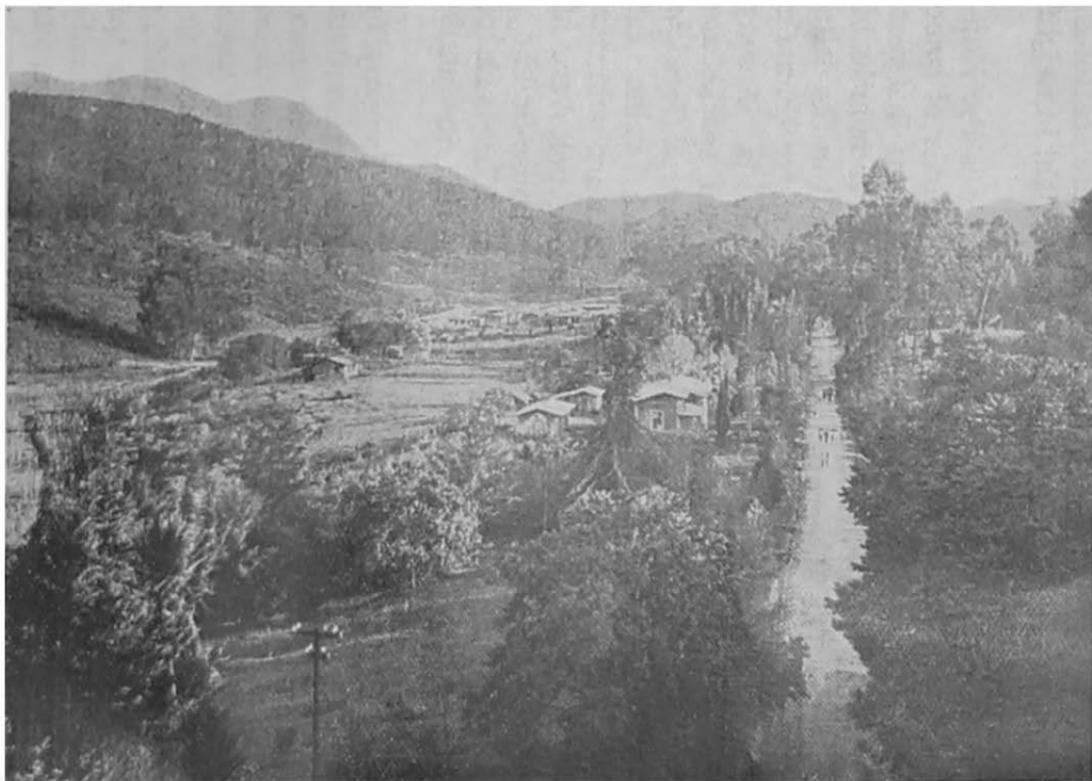
The second main type is the "Cedar" forest, characterised by a drier atmosphere and named after the East African Pencil Cedar (*Juniperus procera*), the most important tree of the country. These forests are found where to the west and north of the Kilimanjaro mountain mass the rain forest narrows to a thinner belt, and again in the Usambara Range, where with one exception (a small area of cedar forest on Zombe Mountain in Nyasaland) the cedar has reached its most southerly limit. The East African Cedar has been exported now for several years to Europe, where it has become established as a substitute for the true pencil cedar. Many other species grow in association with the cedar and overlap from the rain forest type into the dry forest. Olives (*Olea chrysophylla*), Greenheart (*Warburgia* spp.) and the yellow woods particularly are worthy of mention. On the foothills of the mountain ranges and in the coastal zone grow forests of a more open and less valuable type, yet containing several useful timbers such as West African Mahogany (*Khaya senegalensis*), the majestic Mvule or East African Teak and the good red wood (*Afzelia cuanzensis*) from which the Coast Arab has for generations carved the beautiful doors seen in Zanzibar and mainland Coast towns.

The fourth type, found at still lower altitudes, is the savannah or Brachystegia—Pterocarpus forests. These cover vast areas of plain in the central and south-central parts of the country. The savannah is park-like with scattered, wide-crowned trees lightly shading a grassy carpet, vivid green in the rainy weather and frequented by an interesting variety of big game animals, among which the magnificent sable antelope is conspicuous. The savannah forest is highly pyrophytic, and its scattered boles resist the fire which sweeps them almost

every dry season. The most important timber is the Mninga (*Pterocarpus Bussei*), of which the aggregate quantity is great although the individuals are scattered. This Mninga is a good reddish-brown wood, light in weight and very workable.

The last type and at the lowest altitude is the Mangrove swamp forest, which forms dense stands of some eight species covering the sticky mud slime between high and low water levels in creeks and river mouths of the Coast. The Mangrove is seen at its best in the delta of the Rufiji River, a dreary maze of water channels surrounding innumerable tree-covered islands. Among East African Mangroves the most important species are *Rhizophora mucronata*, *Bruguiera gymnorrhiza* and *Heritiera littoralis*. The timber is not of much value for sawn goods owing to its propensity to warp and the frequency of twisted fibre, but mangrove poles are in great demand for scaffolding, native house-building, fuel, and a variety of other purposes. The bark of *Rhizophora* and some other species is rich in tannin and is exported as a tanning agent.

There is every indication that the forests of Tanganyika have at one time been of infinitely greater extent than they are at present. The hand of improvident man, helped by fire, has reduced this fine natural asset to its present diminished state. But for the last twenty years protection of the law has been accorded, the forest reserves have been proclaimed, and the State is making every endeavour to institute ordered methods of protection, exploitation and reafforestation. Annually increasing numbers of the more valuable indigenous species are artificially propagated and planted out in the forests, whilst assistance is also given to the natural process of regeneration by careful selection or improvement fellings.



GENERAL VIEW OF LUSHOTO, USAMBARA DISTRICT

Hitherto the forest resources of Tanganyika have been tapped only to a small extent, a circumstance which is attributable to the comparative inaccessibility of the woods and the lack of knowledge as to the exact nature of their contents. As mentioned above, much of the best timber is situated in high mountain ranges unreached at present even by road and of a topography presenting engineering difficulties to transport, which, though not insuperable, will necessitate large capital outlay if they are to be overcome.

There is still wide scope for research along the lines of timber cultivation and winning of by-products from the forests. Several fine woods are locally well known but have not yet succeeded in surmounting the barrier of conservatism which excludes them from the timber trade. Doubtless research will reveal yet other timbers among the hundreds of species hitherto unknown even locally, which may possess special qualities of particular value in one or another branch of industry. The forests of Tanganyika remain as yet but half-explored from a scientific point of view. For many years the local timber demand could be placed far short of supply if the full possibilities of the forests were exploited. The future lies in an export trade to the less remote markets such as the Union of South Africa, Egypt and Zanzibar, and in that of pencil wood to Europe. Quantities of mature and over-mature trees await the axe. The trees are far past the stage of maximum increment and in many cases are laying on no increment at all. They are like idle capital producing no interest, and are an example of the under-exploited natural wealth of the British Empire.

The only minor forest products at present collected are gum copal (gum animi) both fossil and fresh, gum arabic, and

a little fibre from a *Raphia*-like palm found in the swampy forests near Lake Victoria. Wild rubber (*Landolphia* spp.) is abundant in some forests but does not pay for collection at the present low prices. Large areas of a bamboo suitable for paper pulp exist, whilst the baobab, of which there must be millions, is suitable for this purpose.

Experiments have been made with likely exotics, and plantations exist of true camphor from Japan (*Cinnamomum Camphora*), tanning bark Acacias (*A. decurrens*) and certain eucalypts (*E. globulus*, *saligna* and *citriodora*) whose phenomenally rapid growth in the highlands of East Africa make them specially suitable for fuel production on short rotations. The railways of the country depend entirely upon wood for fuel, and in consequence supplies situated close to the lines have become depleted. Plantations of *Cassia siamea*, casuarinas, albizzias and some indigenous species are being formed to ensure a sustained supply of fuel.

MINING AND MINERALS

MINING

Prospecting Licences valid for one year are obtainable from the Controller of Mines, Dar es Salaam, and from Administrative Officers in Charge of a district or sub-district for a fee of ten shillings each. Application for a licence must be made by the applicant in person except in the case of a corporation or partnership when this may be made by a duly authorised agent or attorney.

Right of Prospecting. The holder of prospecting licences is entitled to prospect for gold, precious stones or minerals on any land in the Territory (except certain excluded areas) and may peg out a claim in respect of each licence held subject to the proviso that no person may hold more than one alluvial claim for gold or precious stones.

Claims. Claims must not exceed the following dimensions :—

(a) A gold claim reef or banket : 300 feet in length along the line of reef or banket and 600 feet in width.

(b) A gold or precious stones claim, alluvial or placer : 150 feet by 150 feet.

(c) A precious stones claim other than alluvial : 20 acres.

(d) A mineral claim : 500 acres.

Registration. All claims pegged have to be registered within 30 days.

Mining Leases. The area of land which may be leased under any gold mining or precious stones lease must not exceed 25 acres, and under any mineral lease 500 acres. Any number of mining leases may be held by one person. The rent payable is at the rate of five shillings per acre per annum.

Royalty. There is also payable a royalty of 5 per cent. of the value of the ore as raised to the surface and before treatment.

Ordinances and Regulations. Full particulars are contained in the Mining Ordinance 1920, the Mining Regulations 1921 and the Mineral Oil Mining Ordinance 1922, which may be obtained from the Controller of Mines or the Government Printer, Dar es Salaam.

MINERALS

The mineral resources of this Territory appear to be of such importance as to call for a complete geological survey. Various geologists in German times have published reports enumerating various minerals found in the Territory, but no further investigations to prove their economic values were made by the Government or private enterprise except in regard to gold and mica.

GOLD.

Gold has been profitably worked during the German times, and since our occupation of the Territory, in two districts, namely Mwanza and Kondoa-Itang. A new alluvial goldfield was opened up during the last six months of 1923 and the output has been extremely satisfactory. This is situated in Rungwe District, east of Lake Rukwa and along the River Lupa.

Mwanza District. In this district the gold-bearing formation is much more extensive and consequently

has attracted more prospectors both in German times and at present, and from the point of view of future development must be regarded as the more important locality. Eight gold mines have been discovered in the district, some of more or less problematic value, others of known economic worth. The latter will be dealt with in order of importance as gold mines.

(a) Ngasamo Gold Mine. This is situated about 22 miles south-east of the village of Nassa on the southern shore of Speke Gulf. During the German times this mine was a source of profit to its owners. The principal reef worked here is said to be of considerable width and payable over the whole. The mine was well equipped before the War and suffered somewhat during hostilities. The plant consists of one set of 5 gravity stamps, amalgamating and banket tables but no cyanide plant. The owners intended, had not the War intervened, to have installed another set of 5 stamps and a cyanide plant.

(b) Kilimafeza Gold Mine. This property reached the status of a mine just as war broke out; it is equipped with two Tremaine steam stamps and a cyanide plant. The expectation is that with a little careful exploitation and modification of the existing plant by an experienced mining engineer, this mine will take its place amongst the gold-producing properties of the Territory.

(c) Ikissu Goldfields. These are situated approximately 22 miles north of the eastern extremity of the Speke Gulf and consist of prospecting claims pegged on reefs discovered both in German times and recently. The ex-enemy claims have lately been purchased, and it is hoped that the new owner will be able to bring these areas from the position of probable gold producers to actualities. The older and more important property is situated approximately midway between the Chanyare Mountains and

Chamasaveta Hill. Here a large quartz reef extends roughly from east to west with approximately the same strike as the country rock. The payable ore is at present being extracted from two offshoots from the main reef, roughly 100 yards apart and striking at right angles to the mother lode. Open stoping and an adit is the method of working employed at present, and development by drives is now being undertaken. Values from the property are approximately $2\frac{1}{2}$ ozs. to the ton. The gold is "free milling" and the principal accessory minerals are oxides of iron.

(d) Buhemba Goldfields. The goldfield is situated about 30 miles to the south-east of Musoma, to which it is connected by a road. It has been divided into two areas, north and south, situated about three miles apart; and in both these areas the quartz reefs appear to be in the nature of lenticular masses interfoliated with the schistose country rock. The southern area has an outcrop of approximately 400 yards, and panning and bulk samples have revealed values up to $3\frac{1}{2}$ ozs. per ton. Two rich shoots are stated to exist here, but no exploration at depth has yet been undertaken. In the northern (Piatika) area four different reefs have been located. The principal property on these reefs is known as the Goldsmith Estate. Widths vary from 6 inches to 6 feet and, on first being opened up, one of the reefs gave values of 3 ozs. per ton; but the latest and most reliable figures show the average value of this part of the reef to be 27 dwts.

The remaining four goldfields are of problematic value; they are largely ex-enemy property, and the present day prospector has not paid much attention to them.

(e) Majiti. This area is situated on the Mrangi Peninsula between Baumann Gulf and Majita Bay.

The reef here is traceable for about three miles ; several attractive hand specimens have been seen from this locality, and it is not unlikely that a rich shoot may be found in an outcrop of such a length. It is ideally situated from an industrial viewpoint, being only about three miles from the lake and abounding in bush timber suitable for fuel and underground purposes.

(f) Nigodi Goldfield. Several claims were pegged in German times on this reef. It appears that these were afterwards let out on tribute and about 2,000 tons of ore were crushed. These ex-enemy claims are now for sale.

Kondoa-Irangi District. Sekenke Gold Mine. This mine, the largest in the Territory, is situated about 160 miles in a south-easterly direction from Mwanza and about 140 miles from Manyoni Railway Station on the Central Railway, to which it is linked by a road suitable for ox-wagon transport. It was worked extensively in German times and produced gold during the War. The ex-enemy property comprises an area of freehold with mineral rights. A lot of work has been necessary in re-conditioning and dewatering, and crushing begins early this year. The plant comprises 25 stamps, cyanide plant, electrically driven pumps, etc. The ore here is a greasy-looking, whitish quartz ; and the reefs, four in number, are roughly parallel in strike and are interfoliated with the country rock, which is of a talcose nature.

Rungwe District. This deposit of alluvial gold was discovered in January 1923 in the Lupa River, which runs into Lake Rukwa. There are now 23 claim holders working and obtaining very good results. The gold is free and of an unusual nature, being like coarse-grained sand, sometimes flaky ; and nuggets up to $\frac{1}{2}$ oz. have been found. The gold exported from this area up to

31st December, 1923, was 1,009 ozs., valued approximately at £4,701.

General. It is becoming apparent daily that this Territory, for gold mining, will be a "small mine" country similar to Rhodesia rather than the Transvaal; and consequently capitalisation would also be of a modest nature. Labour properly recruited and cared for should present no difficulties; and, compared with that of other African mining countries, is cheap. Most of the gold fields are situated in the comparatively healthy uplands, so that European supervision should not suffer unduly from the usual tropical disabilities.

MICA.

Mica, of the size and quality to produce a marketable commodity, occurs in the Morogoro, Usambara and Ufipa Districts of the Territory. This was the mineral principally exported by the Germans, and most of the ex-enemy claims have been disposed of and many new claims pegged on new discoveries. The principal established mines were in the Uluguru Mountains (Morogoro). The mineral occurs in pegmatite veins intrusive in the country rock in which the accessory minerals vary considerably. They include tourmaline, garnet, biotite, pitchblende, plumbo-niobate, zinblend, galena and bismuthinite; and in East Uluguru chalcopyrite has been found. The Mica is of the Muscovite variety and varies in colour in the different districts. "Ruby" is found in the Mikese area of Morogoro District, and "Bottle Green" and "Amber" in the other two districts.

Since the reopening of the late ex-enemy mines and the opening of new mines, the export of mica is increasing.

COPPER.

Copper ores have repeatedly been located in various parts of the Colony. The best known finds have been at Ujiji, where principally malachite ore was found, the primary ore of which was found to be, on examination, cuprite. Another important find was in the Ubena District of Rungwe. The primary ore, more or less thickly covered with malachite, was discovered here to be copper glance (chalcocite), the richer samples of which contained 49 to 56 per cent. of metallic copper. This area is at present being exploited.

The Winza district of Mpwapwa is rich in deposits of azurite and malachite; and judging from the various reports on this area, warrants a thorough examination. The Germans did much mining in this area of what is believed to be tantalite.

COBALT AND NICKEL.

These have repeatedly been found in the bed of streams rising in the Uluguru Mountains, also in a stream in North Uluguru Mountains.

COAL.

Coal has been located in three regions in the Territory; and although these occurrences were known in German times, it was not until 1921 that reliable information was obtained, when the Government formed a Geological Survey to report on these occurrences and their commercial possibilities. The Survey reported very fully on two of these regions, and in both cases located the coal seams. In the Ufipa District coal seams undoubtedly exist and are being opened up, but here again the lack of reliable transport tends to nullify the value of the deposits.

PITCHBLENDE.

In the pegmatite veins the interesting discovery of pitchblende was made. It appears, unfortunately, that uraninite is only present in small quantities and can only be said to be of secondary importance. It forms fine crystals of regular shape, cubic or octahedral, which are covered over with a thin yellow crust from exposure to weather; they are very pure, and contain a $\frac{1}{12}$ proportion of uranium. These ores are very strongly radioactive. So far as is known, uranium is still only won as a by-product.

An equally interesting find, in the pegmatite veins of the Uluguru Mountains, was a mineral similar to rutile belonging to the euxenite group, containing 10 per cent. uranium and 14 per cent. rare earths (cerium, thorium), 3 per cent. of which was thorium. So far, however, as is known, only one deposit of these ores has been found. They also contain radium.

MANGANESE.

This mineral was found at Tandala in Rungwe District in more or less sporadic deposits, but the cost of transport would have exceeded the value.

BITUMEN.

Travellers have often mentioned that they have seen bitumen floating in Lake Tanganyika. In 1910 a sample was examined in the chemical laboratory at Amani and as a result this product was classified as ozokerite, similar to the American products gilsonite and elaterite. The German geologist, Dr. Reck, who visited the neighbourhood, stated that the bitumen is brought down by rivers to the Lake and that its origin may be in the Ufipa Mountains.

MARBLE.

The same authority has reported that there appears to be a marble reef running from south to north from the Rufiji almost as far as the Pangani River along the east side of the Uluguru, and Nguru Mountains.

SALT.

Valuable salt deposits exist in the Territory, the principal of which is at Gottorp, at present worked by the Government. There are also immense soda and potash deposits at Lake Natron.

GRAPHITE.

This mineral occurs in various parts of the Territory, but has not been found in large deposits sufficiently crystalline to be of economic value.

ASBESTOS.

This has been located in the Uluguru Mountains, but the fibre was very short. A further discovery has been pegged in the Lindi District, the primary deposit being serpentine.

DIAMONDS.

Many claims have been pegged for diamonds in the Mwanza District; and the mythical stage has been succeeded by the actual discovery of diamonds, two stones weighing 2 carats and 7 carats having been obtained in the course of excavation.

IRON ORE.

Vast iron ore deposits exist in the Territory; but transport facilities are necessary to tap the main ore centres at Karema, Rungwe, Iringa, Mahenge and Kisasi

and to establish iron foundries. The presence of coal in the vicinity of the Rungwe iron ore deposits will greatly contribute to the success of their exploitation. One of the principal iron ore areas lies north-west of the northern end of Lake Nyasa. In the Liganga Hills enormous magnetic iron ore deposits of 10-metre boulders can be traced for a distance of $4\frac{1}{2}$ miles.

EXPORTS.

The principal exports of minerals from the Territory during the year 1923 have been as follow :—

GOLD.		
District.	Amount, ozs.	Value, £
Mwanza District Reef..	309	1,390
Tukuyu (alluvial) ..	1,009·1	4,541
Total ..	1,318·1	5,931

MICA.				
District.	Amount.			Value, £
	Tons.	Cwts.	lb.	
Morogoro	20	8	101	} 19,172
Usambara.. ..	10	8	46	
Ufipa	1	1	77	
Total	31	19	—	19,172

TRADE AND COMMERCE

This, the most important section of the Handbook, has been left until last because the matters that have already received attention naturally lead up to the results that are obtained through the development of resources of the Territory by means of the machinery that has been devised for assisting that development. For readers who desire a general view of these subjects an account is given which avoids tables of statistics as far as possible ; whilst for those who require more detailed information this is presented in Appendix I.

GENERAL CONSIDERATIONS.

In obtaining a comparison between the sterling value of the productive power of the Territory at the present time and that before the War, difficulty arises because of the well-known differences of prices now and at that time ; and the figures of value for 1922, the year of the turning point (nearly 1½ million pounds sterling), are likely to be reduced greatly in imagination when they are contrasted with those of 1913 (more than 1¾ million pounds), on account of the idea that the " prices of everything are much higher nowadays." But this reduction is not justified to the extent to which it is usually made, for the prices of some of the chief exports of the country (such as hides and skins, copra, beeswax) were in 1921 and 1922 considerably lower than before the War ; and there are other considerations which will be brought forward later. The only fair method is to begin by comparing the values on the basis of prices in 1913 ; or as it is usually expressed, on the par of that year. (See Appendix I.)



DHOW ANCHORAGE, TANGA

Let us do this, taking the quantities in 1922 of the ten chief exports of German times and calculating their value at 1913 prices. We find that if these commodities exported in 1922 are valued in this way their total is worth 66 per cent. of the pre-War value on the same basis : that is, just over one million pounds as against nearly $1\frac{1}{2}$ millions. In other words, if there had been no change in prices or products since 1913, the value of the ten chief exports would by 1922 have been about two-thirds of that of the German times.

Such a comparison is however by no means fair, for a very good reason. Since 1913, for causes other than those existing in the Territory, and therefore unavoidable by any means that could be possibly devised therein, the country has lost an industry that held second place in export value just before the War, and accounted for nearly one-fifth of the total value of the ten chief German exports : actually in round figures as much as £300,000. This is the plantation rubber industry. The records of the Department of the Custodian of Enemy Property, together with the export returns, show that since the War it has hardly been considered worth while to buy or work rubber properties on the basis of their capacity to produce rubber : in fact, a large proportion of these properties still remains unsold, in spite of offer. Similarly, hides and skins, whose exploitation was the third industry of importance before the War, with an export value of over £270,000, or nearly equal to that of rubber, had by 1921, partly owing to the fact that the provinces of Urundi and Ruanda passed to the Belgians under the mandate, almost met the fate of the latter. Already by the end of 1922, if the price of rubber in the world's markets had merely remained at that of 1913 (by which time Plantation Para had fallen from 13s. to 3s. per lb.), or six times as

much as in 1922, as valued for export, so that it had been worth while to make every effort to regain and increase the production, and if we had been able to add the sum that was lost on hides and skins, copra and beeswax directly and simply through decrease of prices, not of production, of these since 1913, and provided that the exports of rice, ghee and chiroko from Mwariza had not been greatly lessened through an import duty into Kenya, we should by then have probably equalled the volume by value of the before-War export trade. The continued improved conditions of the next year, 1923, transform this supposition into a certainty. In fact, the value of the ten chief exports of last year (£1,441,041) is only just over £160,000 less than that of the ten principal German exports in 1913 (£1,606,485), showing that the loss of rubber is being quickly made up by progress in other products.

But the order of the ten chief agricultural crops of the Territory (excluding wild rubber, for obvious reasons), in relation to their actual value, is now by means the same as that in German times. The first, sisal, retains its priority; and (speaking of 1922) has reached one-half of its former output by weight. The place of the second, plantation rubber, has been taken by coffee, which now produces the one-fifth of the value of the ten chief exports previously given by the former. The third, hides and skins, partly through the entire lack of demand caused by the great decrease of prices in the world's markets, as mentioned above, had descended to sixth place (ninth in 1921). Cotton, the fourth, had been maintained at the same place; and copra likewise remained unaltered at the fifth. The sixth, groundnuts, had risen to the third place; and beeswax, the seventh, had descended to tenth. In 1913 coffee was

as low as the eighth place instead of the second, with an export by weight almost exactly one-quarter of the present. Simsim was ninth; now eighth. The tenth, ghee, like rubber, no longer appears among the first ten principal exports. Last year, the order remained the same, except that groundnuts changed place with coffee, becoming second; and simsim rose to seventh place.

Of these products, all after sisal have moved up one place through the loss of rubber; so that, with the loss of ghee, we have so far mentioned only eight of the ten of our exports of principal value at the present time. What are the products that have now found their way into the first ten? These are millet (mtama), with an export weight and export value in 1922 both more than eleven times those of 1913, the latter value having increased to more than sixty thousand pounds, bringing it to seventh place; and rice with an export twice as great as in 1913. If we calculate the value of our first ten exports on the basis of 1913 prices, we find that this was in 1922 81 per cent., and in 1923 95 per cent., of the value of the same ten exports in 1913. This means that if rubber had maintained its importance we should by now have well surpassed the highest value of the ten chief exports in German times, even if our exports were valued at the (mostly lower) prices of that period.

Before the war, 63 per cent. of the total export value of agricultural and animal produce was divided between three products only: sisal, rubber, and hides and skins, with respective percentages of 30, 17½ and 15½. By 1922, the same proportion of that value was filled by four instead of only three such products, namely sisal, coffee, groundnuts and cotton, with respectively 22·3, 15·7, 14·7 and 10·8 per cent.: coffee, cotton and groundnuts having actually increased from 2·6, 6·7 and 5·3 to the above

proportionate values; in 1923 the similar percentages were: sisal 22.2, groundnuts 15.9, coffee 12.4 and cotton 10.7. The result is the attainment of a safer agricultural position, and a greater weight of export for the ten chief products of to-day, the latter having increased from nearly 912,000 cwts. to more than 990,000 in 1922 and over 1,146,500 cwts. in 1923—gains of 8 and 25 per cent., respectively.

If we proceed to a consideration of production in and importation into the Territory in the most recent years, we shall come to the conclusion that progress has continued to be well maintained in spite of the very adverse conditions of 1921 that it shared with the rest of the world. Returning again to the present ten chief exports of the country (which account for 88 per cent. of all its domestic shipments), the quantity of these exports was 9 per cent. greater in 1922 than 1920, and in 1923 26 per cent., in spite of the discouraging conditions of the intervening year of slump, in which their weight was actually reduced by 7 per cent. of that of 1920. We can find evidence of the continually increasing prosperity in another way: the ability of the country to buy cotton goods. Substituting as far as possible again the basis of weight for that of value, and therefore avoiding errors in comparison due to the drop in prices that has been taking place, we find that the percentage of imports of these goods (of which a steady proportion of about 93 per cent. by weight is retained for consumption for the country) in 1922 was 23 over that of 1921 and 46½ over that of 1920. That is to say, the Territory was importing in 1922 for its own use a quantity of cotton goods nearly one and a half times as great as that consumed in the last year but one before. Doubtless lowered prices contributed materially to this result; but

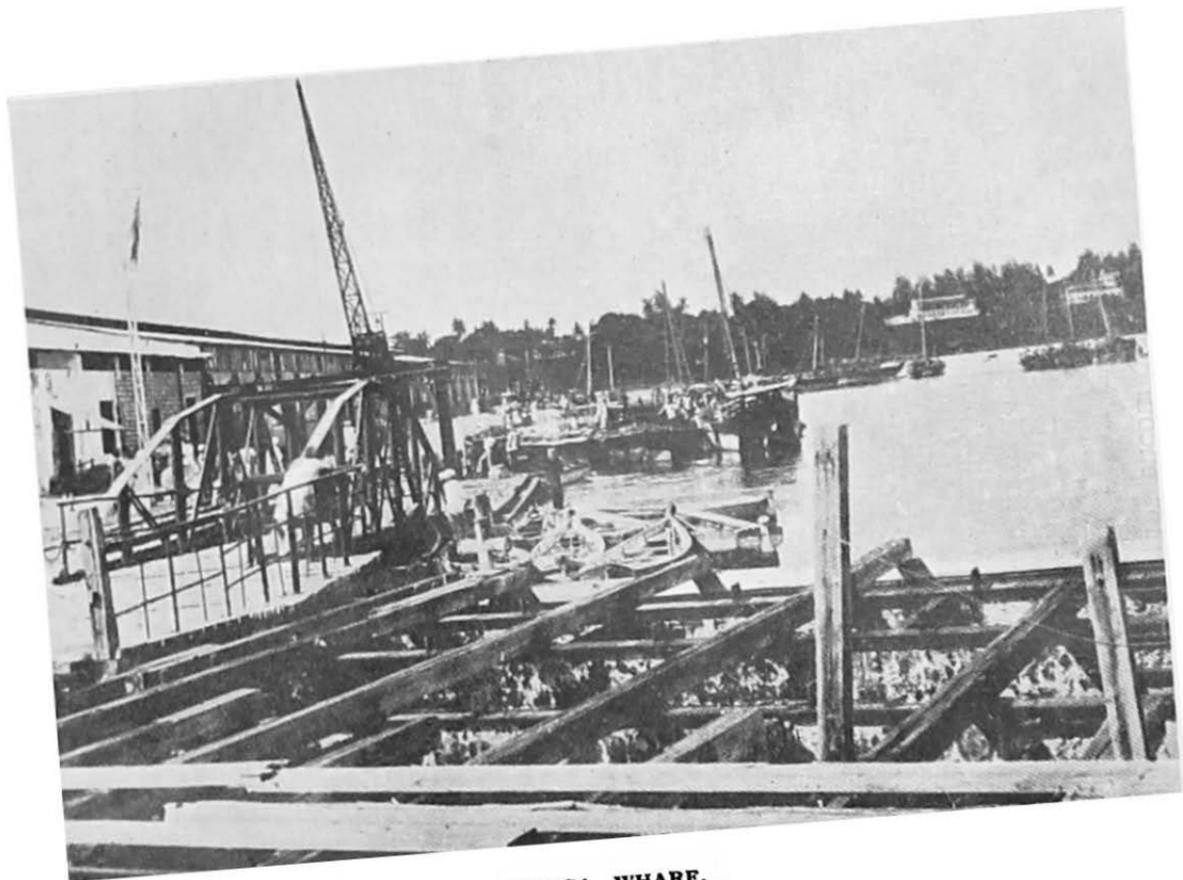
taken together with the fact of largely increased production for export, just pointed out, it cannot but constitute a reason for encouragement.

PRESENT POSITION.

Reference to the returns for 1922 (the year described already as that of the turning point) and other years, given in Appendix I, shows that there are satisfactory increases in the principal exports over those of the immediately previous years, and that the great damage of the War to commerce, which unlike that of most countries virtually ceased during the fighting, is being steadily repaired. Further encouragement is to be derived from the circumstance that the exports of 1923 (£1,657,601) exceeded in value those of 1922 (£1,300,083) by as much as 27·5 per cent. Notwithstanding a slight decrease in the value of imports, caused by declining prices of manufactured goods and reduced freights, the total trade (imports, exports and transit trade) of the Territory increased from £2,815,759 in 1921 to £2,978,680 in 1922; whilst by the end of 1923 it had reached about three and a half million sterling.

COMMERCIAL ACTIVITY.

This is of course concerned with the principal agricultural products of the Territory, sisal, coffee, groundnuts, cotton, copra, millet, simsim and rice, in order of value in 1922, and with hides and skins and beeswax and such products as the gum animi of Coastal districts, the gum arabic of Mwanza and Tabora, and the ghee chiefly of the former District and Dodoma: the export of the last-named product, already in 1922 above that of 1913, increased by the end of 1923 to 19 per cent. over that of 1913, in consequence of the removal of the prohibitive



TANGA WHARF.

import tariff into Uganda and Kenya. Among minor agricultural products, through the unavoidable neglect of plantings, the export of kapok or silk cotton decreased from 52 tons in 1912 to 6 tons in 1921; but recovered to 30 tons in 1922. Further, an increasing native interest is being taken in chillies, a small production of 12 cwts. in 1921 having become 188 in 1922. Of mineral products, mica is the chief, with an export of 32 tons worth £19,172 in 1923, or about three times that of 1922. The principal timber export is mangrove poles, valued at £2,925 in 1922; but the disposal of the large timber areas of New Hornow in Usambara is expected to have a notable effect on these exports. Last but not least of the non-agricultural exports important in the trade of the country is ivory, 205 cwts. of which (worth £11,425) were exported in 1922.

COMMERCIAL ASSOCIATIONS AND FIRMS

DAR ES SALAAM CHAMBER OF COMMERCE

Office Bearers :—

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Vice-Chairman	I. W. Massie.
Secretary and Treasurer	R. Dimech.

MEMBERS

EUROPEAN ADDRESS AGENT OR REPRESENTATIVE

The African Mercantile Co., Ltd.	8 King William Street, London, E.C. 4.
The Agence Commerciale Belge.	
The Banque du Congo Belge	20 Copthall Avenue, London, E.C. 2.
The British American Tobacco Co., Ltd.	7 Millbank, London, S.W. 1.
Boustead & Clarke, Ltd.	Robert Brooks, Boustead & Co., 11 St. Benet Place, Gracechurch Street, E.C. 3.
A. & R. N. Clark, Solicitors.	
The East African Engineering and Trading Co., Ltd.	4 Devonshire Square, London, E.C. 2.

The East African Lighterage and Stevedoring Co. (Dar es Salaam), Ltd.	London Representative: Commander S. A. Brown, 147 Leadenhall Street, London, E.C. 3.
Gade, Mackay & Co.	
The National Bank of India, Ltd. . .	26 Bishopsgate, London, E.C. 2.
The National Bank of South Africa, Ltd.	Circus Place, London Wall, London, E.C. 2.
The Standard Bank of South Africa, Ltd.	10 Clements Lane, Lombard Street, London, E.C. 4.
Rosehaugh Co., Ltd.	4 Buckingham Gate, London, S.W. 1.
The Rufiji Delta Trading Co.	
Smith, Mackenzie & Co.	Gray, Dawes & Co., 122 Leadenhall Street, London, E.C. 3.
L. Besson.	
Karimjee, Jivanjee & Co.	
Mutopoulos, Lucas & Co.	
Societa Coloniale Italiana.	

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Office Bearers :—

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Vice-Chairman	A. B. Couper.
Hon. Treasurer	J. Paterson.
Secretary	M. A. F. Bocking.
Committee	J. A. Stark.
	N. J. Robinson.

MEMBERS

EUROPEAN ADDRESS
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The African Mercantile Co., Ltd.	
Alsatian African Trading Co., Ltd.	Alsatian African Trading Co., Ltd., 3 route de Rouffach, Colmar, Ht/Rli, France.
Amboni Estates, Ltd.	
British East Africa Corporation, Ltd.	British East Africa Corporation, Ltd., 35 Crutched Friars, London, E.C. 3.
Bird & Co. (Africa), Ltd.	Bird & Co. (Africa), Ltd., 7 Gracechurch Street, London, E.C. 3.
Coastal Trading Co.	London Agents: Japp, Hatch & Co., Ltd., St. Lawrence House, St. Mary Axe, London, E.C. 3.
Cairns Bros.	

- East African Lighterage Co. .. London Representative :
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 Leadenhall Street, London,
 E.C. 3.
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 Karimjee, Jivanjee & Co.
 Kilimanjaro Saw Mills.
 A. S. Monmas.
 Muheza Rubber Estates.
 National Bank of South Africa, Ltd. Circus Place, London Wall, Lon-
 don, E.C. 2.
- Reder Bros.
 Société Alsacienne des Plantations.
 Smith, Mackenzie & Co. London Correspondents :
 Gray, Dawes & Co., 122 Leaden-
 hall Street, London, E.C. 3.
- Twentsche Overseas Trading Co. .. Phs. Van Ommeren (London),
 Ltd., 27 Leadenhall Street,
 London, E.C. 3.

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 The African Mercantile Co., Ltd.
 The Kampala General Agency, Ltd. Bakubhai & Ambalal, Ltd., 53
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- The Nakasero Trading Co., Ltd.
 G. H. Abdulrasul & Co.
 Hasham Alibhai & Co.
 Anglo-Baltic Timber Co., Ltd.
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Hon. Treasurer	Keshavji Ananji.
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Jamal Walji & Co.	Nanji Haridass & Sons.
A. A. Putwa & Sons.	Hajibhoy Jiwan.
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Mahomedbhoy Noorbhoy.	Nurmahomed Murji.
Noorbhai Abdabhoy & Co.	Mahomedalli Hasham Murji.
Alibhoy Remtulla Kassum.	Akbarali Ratansi.

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Vice-President	Haji Khimji.
Acting Hon. Secretary	V. M. Nasurah.
Treasurers	Jaffer Somji & Co.
Auditors	Mulji Khatau & Co.

And eight members on the Committee.

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Honorary Secretary	E. L. Beech.

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E. F. Gerrard.	G. Emanuel.
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G. Goldenfahn.	E. W. Santen.
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N. Michaelakis.	E. C. Gordon Russell.
A. Papadopoulos.	W. H. Phelps.

MERU AGRICULTURAL SOCIETY, ARUSHA

Secretary	.. ..	A. Boshoff.
Chairman	.. ..	F. Malan.

COMMITTEE

G. Bloom.	B. Malan.
W. de Beer.	S. A. van Emmenis.

CUSTOMS

The Territory is well served as regards Customs posts. Following the Coast from north to south there are Customs stations established at Tanga, Pangani, Bagamoyo, Dar es Salaam, Tirene Bay (Mafia), Kilwa and Mikindani. On the northern boundary which marches with Kenya there is Moshi at the head of the Tanga Railway and connected with the Uganda Railway by the line from

Kahe to Voi. On Lake Victoria there are stations at Mwanza, Bukoba and Musoma, and on Lake Tanganyika at Kigoma, the western terminus of the Central Railway. In the south-western area there are stations at Mwaya and Manda.

The main exports and the import trade of the chief stations for the year 1922 are shown in Appendix I.

The values of the principal items comprising the import trade of 1922 are also shown in Appendix I.

The comparative value of the trade volume for the years 1921 and 1922 exclusive of bullion and specie but inclusive of Government imports (1921 £200,590, 1922 £148,126) is as follows:—

	1921	1922
	£	£
Imports	1,426,125	1,386,212
Exports	1,246,870	1,441,584
Transit	142,764	150,884
	<hr/>	<hr/>
	2,815,759	2,978,680
	<hr/>	<hr/>

The Customs Revenue for the year 1922 amounted to £248,180 and, it was anticipated, would exceed £300,000 for the year 1923.

A considerable transit trade passes through Dar es Salaam and Kigoma to and from the Belgian Congo and the Belgian Mandated Territory (Ruanda and Urundi). There is also a small transit trade to Northern Rhodesia. The value of the transit trade for 1922 was £151,713 and an increase was expected in 1923.

The following shipping returns for 1922 are of interest, and show that the Territory is well served as regards cargo carriers.

1922

NATIONALITY.	STEAMERS.		CARGO, TONNAGE.	
	Number.	Net. Regd. Tonnage.	Inward.	Outward.
British	512	526,195	18,188	35,017
Italian	2	5,396	37	543
Portuguese	2	7,758	—	—
French	31	111,538	202	1,487
Russian	9	28,043	923	98
Dutch	27	106,291	2,507	11,835
German	1	3,417	15	4
	584	788,638	21,872	48,984
From the Ports of Mwanza and Bukoba				
British	88	98,000	2,157	13,025

BANKS

THE STANDARD BANK OF SOUTH AFRICA, LTD.
 Dar es Salaam. Bukoba.
 Tanga. Moshi.
 Tabora. Lindi.
 Mwanza. Kigoma.

NATIONAL BANK OF INDIA, LTD.
 Dar es Salaam. Tanga.

NATIONAL BANK OF SOUTH AFRICA, LTD.
 Dar es Salaam. Tanga.

BANQUE DU CONGO BELGE
 Dar es Salaam. Kigoma.

HOTELS AND SHOPS

DAR ES SALAAM.

The Burger Hotel.
The Central Hotel.
The Africa Hotel.

TANGA.

The Grand Hotel.

TABORA.

Tabora Hotel.

KIGOMA.

Station Hotel.

MOROGORO.

The Africa Hotel.
The Station Hotel.

DODOMA.

Dodoma Hotel.

MWANZA.

Mwanza Hotel.

KILOSA.

Kilosa Hotel.

MOSHI.

The Africa Hotel.
The Railway Hotel.

ARUSHA.

Bloom's Hotel.

Shops. European goods, clothing, provisions, articles of household use and sporting and athletic outfits can be obtained at the principal European and Indian shops in the larger towns, and arrangements can be made for the equipment of shooting parties and tours.

APPENDIXES

APPENDIX I

IMPORTS AND EXPORTS

A.—PRINCIPAL IMPORTS, 1922

	£
Cotton piece goods	590,466
Foodstuffs	141,312
Building material	47,918
Kerosene and motor spirit	29,365
Cigarettes	16,028
Tobacco	29,443
Wines and beer	13,927
Spirits	30,122
Machinery	17,811
Sundry iron and steel manufactures	24,769

B.—DISTRIBUTION OF IMPORT TRADE, 1922

	£	Per cent.
Dar es Salaam	767,010	55·4
Tanga	254,230	18·4
Mwanza	90,094	6·5
Bukoba	82,057	5·9
Lindi	68,573	4·9
Other Ports	124,248	8·9
	1,386,212	

APPENDIX I.—continued

D.—DISTRIBUTION OF EXPORT TRADE, 1922

DAR ES SALAAM.*					£
Sisal Hemp	...	...	...	991 tons	32,508
Cotton	...	...	...	18,662 centals	79,528
Hides	...	...	...	7,005 cwts.	10,600
Skins (Sheep and Goat)	...	...	...	1,063 cwts.	4,125
Copra	...	...	...	1,158 tons	23,375
Groundnuts	...	...	...	5,218 tons	94,951 ^c
Ghee	...	...	...	3,254 cwts.	9,730
Grain	...	...	...	147,906 cwts.	53,449
Beeswax	...	...	...	5,527 cwts.	21,042
Simsim	...	...	...	320 tons	5,812
TANGA.*					
Sisal Hemp	...	...	...	9,178 tons	255,312
Hides	...	...	...	3,591 cwts.	7,146
Skins (Sheep and Goat)	...	...	...	330 cwts.	1,716
Coffee	...	...	...	18,177 cwts.	55,319
Grain	...	...	...	22,806 cwts.	4,607
Copra	...	...	...	1,486 tons	28,894
MWANZA.*					
Cotton	...	...	...	7,785 centals	22,448
Hides	...	...	...	11,751 cwts.	25,235
Skins	...	...	...	787 cwts.	3,961
Groundnuts	...	...	...	4,622 tons	58,308
Ghee	...	...	...	3,625 cwts.	6,921
Grain	...	...	...	21,793 cwts.	18,294
Simsim	...	...	...	364 tons	4,897
LINDI.					
Sisal	...	...	...	55 tons	1,567
Cotton	...	...	...	7,368 centals	35,904
Groundnuts	...	...	...	723 tons	11,586
Grain	...	...	...	76,114 cwts.	26,546
Beeswax	...	...	...	488 cwts.	1,900
Simsim	...	...	...	1,213 tons	24,624
BUKOBA.					
Hides	...	...	...	3,416 cwts.	6,681
Coffee	...	...	...	57,996 cwts.	113,387
Groundnuts	...	...	...	748 tons	9,734

* Dar es Salaam and Tanga receive the exports from districts on and near the Central and Tanga Railways respectively. The exports from Mwanza include produce from Northern Tabora.

APPENDIX II
CENSUS 1921
A.—NATIVE CENSUS

DISTRICT.	POPULATION, 1921 CENSUS.	GERMAN 1913 CENSUS.
Arusha	97,700	84,200
Bagamoyo	57,100	72,800
Bukoba	320,100	270,500
Dar es Salaam	149,100	161,500
Dodoma	270,900	299,400
Iringa	104,800	90,000
Kilwa	84,000	96,200
Kondoa-Irangi	196,700	218,300
Lindi	243,400	395,500
Mahenge	74,600	120,000
Morogoro	174,300	158,400
Moshi	158,200	118,300
Mwanza	702,300	620,000
Pangani	74,900	98,500
Rufiji	83,200	89,100
Rungwe	237,200	195,800
Songea	148,200	90,300
Tabora	502,100	437,500
Tanga	86,700	108,400
Ufipa	93,600	81,700
Kigoma	139,500	240,000
Usambara	107,400	98,600
TOTAL	4,107,000	4,145,000

DISTRICT	NATIONALITY.							OCCUPATION.						Total.
	American.	Belgian.	British.	French.	Greek.	Italian.	Other.	Agricultural.	Commercial.	Official.	Professional.	Other.	None.	
Arusha	2	—	258	15	15	—	97	100	9	9	5	5	259	387
Bagamoyo	—	—	9	10	—	—	1	—	—	4	16	—	—	20
Bukoba	—	—	25	19	6	4	22	3	5	8	43	3	14	76
Dar es Salaam	3	12	486	7	30	7	10	9	69	253	36	21	167	555
Dodoma	9	—	47	3	7	2	1	4	3	22	20	2	18	69
Iringa	—	—	24	—	—	4	—	1	3	10	9	—	5	28
Kilwa	—	—	8	—	—	—	—	1	—	5	—	—	2	8
Kondoa-Irangi	—	—	15	3	2	—	—	1	1	6	3	—	9	20
Lindi	—	—	57	—	2	2	3	5	2	18	33	4	2	64
Mahenge	—	1	8	4	—	—	—	—	1	7	5	—	—	13
Morogoro	—	1	73	21	40	3	7	46	7	31	22	4	35	145
Moshi	—	—	91	17	58	12	31	66	2	19	17	15	90	209
Mwanza	6	—	71	18	10	3	17	16	25	20	34	4	26	125
Pangani	—	—	15	—	9	—	1	5	—	6	—	8	6	25
Rufiji	—	—	8	—	8	—	—	8	—	5	—	—	3	16
Rungwe	—	—	29	3	—	—	1	—	2	21	6	1	3	33
Songea	—	1	17	2	1	—	2	—	—	12	7	2	2	23
Tabora	4	1	84	11	43	—	15	4	14	55	32	16	37	158
Tanga	—	1	166	3	22	11	21	17	4	59	28	30	86	224
Ufipa	1	3	16	19	3	—	24	1	1	9	48	2	5	66
Kigoma	—	23	46	2	14	1	7	1	27	31	9	11	14	93
Usambara	—	—	45	3	9	5	28	11	3	11	11	7	47	90
TOTALS...	25	43	1,598	160	279	54	288	299	178	621	384	135	830	2,447

C.—NON-NATIVE CENSUS: ASIATICS

DISTRICT.	NATIONALITY.					OCCUPATION (EXCLUDING ARABS).						Total.
	British Indians.	Goans and Portuguese Indians.	Baluchis.	Arabs.	Others.	Agricultural.	Commercial.	Official.	Professional.	Other.	None.	
Arusha	135	28	—	1	1	4	54	6	1	29	70	164
Bagamoyo	397	5	234	397	10	70	89	7	3	51	426	646
Bukoba	284	10	—	83	8	1	109	9	1	40	142	302
Dar es Salaam	2,798	365	9	597	239	28	677	347	8	399	1,952	3,411
Dodoma	352	15	2	226	9	5	100	50	1	37	185	378
Iringa	102	1	24	1	—	1	33	3	—	—	90	127
Kilwa	275	7	6	167	9	4	89	8	2	14	180	297
Kondoa-Irangi	70	2	1	108	1	7	17	4	—	13	33	74
Lindi	480	22	4	15	10	5	199	12	1	66	233	516
Mahenge	29	—	2	1	—	—	12	1	1	4	13	31
Morogoro	361	18	—	45	14	12	116	25	3	48	189	393
Moshi	247	30	—	—	8	1	73	34	—	40	137	285
Mwanza	783	22	7	188	19	15	297	13	4	86	415	830
Pangani	272	10	18	506	11	11	94	6	5	22	173	311
Rufiji	169	—	—	196	1	—	75	5	—	7	83	170
Rungwe	11	1	5	10	1	—	13	3	—	—	2	18
Songea	14	—	—	24	—	—	7	2	—	1	4	14
Tabora	757	40	22	372	4	9	268	85	—	133	328	823
Tanga	1,300	192	7	910	38	12	333	148	13	293	738	1,537
Ufipa	5	—	—	17	2	—	4	3	—	—	—	7
Usambara	308	7	—	14	2	2	127	12	—	54	122	317
Kigoma	262	23	11	163	2	1	82	21	1	47	146	298
Unclassified	1	—	—	—	—	—	1	—	—	—	—	1
TOTALS	9,411	708	352	4,041	308	188	2,869	804	44	1,384	5,661	10,950

APPENDIX III

ROADS

PUBLIC WORKS DEPARTMENT CLASSIFICATION

Roads.	Class.	Length open for traffic.		Roads.	Class.	Length open for traffic.
Tanga to Jasin	B	Miles. 45	*	Morogoro to Mikese	B	22
Tanga to Muheza	B	32	*	Morogoro to Mlali	B	16
Tanga to Pangani	B	30	*	Morogoro to Turiani	C	80
Tanga Township	A	4	*	Kisaki to Mahenge	C	141
Muheza to Amani	B	24		Kilosa to Mahenge	B	150
Korogwe to Vugeri	B	12	*	Mahenge to Songea	C	170
Korogwe to Kilosa	B	190	*	Kilosa to Iringa	B	154
Mombo to Lushoto	A	21	*	Iringa to Tukuyu	B	220
Moshi to Taveta	B	24	*	Gulwe to Mpwapwa	B	11
Moshi to Arusha	B	52	*	Tabora to Mwanza <i>via</i> Kahama and Shinyanga	B	246
Pangani to Handeni	C	120		Tabora to Ndala	B	35
Handeni to Kondoa Irangi	B	185	*	Tabora to Urambo	B	62
Dar es Salaam to Bagamoyo	C	40	*	Tabora to Sikonge	B	45
Dar es Salaam to Utete	C	110	*	Tabora Township	A	5
Dar es Salaam Township	A	19	*	do. do.	B	11
do. do.	B	8	*	Kigoma Township	A	3
Bagamoyo to Pangani <i>via</i> Sadani	C	80		Kigoma to Ujiji	A	5
Mikese to Kisaki	B	54	*			

* Passable for motor cars... 2,455 miles.

Class A—Metalled ... 57 "

" B—Earth Roads ... 3,236 "

" C—Native Tracks... 2,683 "

APPENDIX III.—*continued*

Roads.	Class.	Length open for traffic.		Roads.	Class.	Length open for traffic.	
		Miles.	*			Miles.	*
Mwanza Township	B	5	*	Newala to Mtama	B	55	*
Mwanza to Ikoma	C	150	*	Dodoma to Iringa	C	158	*
Mwanza to Musoma	C	126	*	Dodoma to Kondoa-Irangi	B	100	*
Musoma to Ikoma	C	100	*	Kondoa-Irangi to Singida	B	81	*
Bukoba to Biharamulo	B	89	*	Kondoa Irangi to Arusha	B	167	*
Biharamulo to Nyamirabo Bay	B	32	*	Singida to Mkalama	B	55	*
Biharamulo to Kibondo	C	65	*	Itigi to Singida	B	72	*
Kasanga to Kiranda	C	170	*	Mkalama to Sekenke	B	40	*
Kasanga to Namanyere	C	76	*	Saranda to Kilimatinde	B	12	*
Kasanga to Tukuyu	C	240	*	Saranda to Kondoa-Irangi	B	86	*
Tukuyu to Mwaya	B	33	*	Singida to Sekenke	B	60	*
Tukuyu to Masoko	B	8	*	Tunduru to Undis (Rovuma R.)	B	50	*
Masoko to Tandala	C	38	*	Mikindani to Ndumbwe	B	20	*
Tukuyu to Fife	C	75	*	Masasi to Ngomano (Rovuma R.)	B	80	*
Kilwa to Songea via Liwali	C	310	*	Songea to Manda Bay	C	88	*
Lindi to Songea and Tunduru	B	350	*	Songea to Milo	C	106	*
Masasi to Newala	B	58	*	Songea to Tukuyu	C	240	*
Newala to Mikindani	B	95	*				

* Passable for motor cars... 2,455 miles.

Class A—Metalled ... 57 "

.. B—Earth Roads ... 3,236 "

.. C—Native Tracks... 2,683 "

APPENDIX IV

ADMINISTRATIVE DISTRICTS AND SUB-DISTRICTS

DISTRICT.	SUB-DISTRICTS.
Arusha	Mbulu
Bagamoyo	—
Bukoba	Biharamulo
Dar es Salaam	Mafia Island
Dodoma	Manyoni
	Singida
Iringa	Malangali
Kigoma	Ujiji
	Kasulo
Kilwa	Kibata
	Liwale
Kondoa-Irangi	Mkalama
Lindi	Mikindani
	Masasi
	Newala
	Tunduru
Mahenge	Mkasu
Morogoro	Kilosa
Moshi	—
Mwanza	Musoma
Pangani	Handeni
Rufiji (Utete)	—
Rungwe (Tukuyu)	Igali
Songea	Lipumba
Tabora	Shinyanga
	Kahama
Tanga	—
Ufipa (Namanyere)	Kasanga
Usambara (Lushoto)	—

APPENDIX V

DISPOSAL OF EX-ENEMY PROPERTY

SUMMARY

OF

LAND SALES UP TO AND INCLUDING 20TH NOVEMBER, 1923

Nationality of Purchasers.	No. of Lots Bought.	Ha.	Ar.	Qm.	Per cent. of Total.	Price paid. £
British, Europeans ...	266	187,774	63	43	58·4	483,579½
„ Indians ...	199	67,829	27	95	21·0	374,738½
Greeks	93	31,903	28	80	9·8	73,872
Goans	29	13,571	22	36	4·3	12,855
Italians	17	1,824	34	73	0·5	6,420
Syrians	10	2,013	70	84	0·6	12,475
Arabs	7	2,347	82	89	0·7	6,990
Danes	7	3,852	12	28	1·3	4,260
French	8	4,724	42	57	1·4	2,675
Roumanians	5	2,085	—	—	0·6	8,590
Americans	3	1,655	20	—	0·5	1,705
Esthonians	9	1,845	—	—	0·5	345
Belgians	1	78	84	—	0·02	550
Russians	1	266	—	—	0·08	25
Poles	3	985	—	—	0·3	80
TOTAL	658	322,755	89	85	—	989,160

NOTE.—The above figures do not include mines and mining claims sold. Under British Europeans are included the purchases of the Amboni Sisal Estates, which are concerned with both British and Foreign capital.

APPENDIX VI
MEAN RAINFALL IN INCHES
SEA COAST

—	Tanga.	Pangani.	Sadani.	Bagamoyo.	Dar es Salaam.	Salala.	Chole (Mafia).	Kilwa Kiv.	Lindi.	Mikindani.
No. of years' observations.	17	10·7	8·2	13·8	18·5	6·0	7·2	12·7	12·5	8·3
150 January	1·51	2·33	3·03	3·07	3·14	4·05	5·20	5·04	4·42	4·92
February	2·02	1·32	1·81	1·42	1·89	3·58	4·35	6·11	4·69	5·16
March	3·96	4·21	4·33	4·35	5·15	5·04	7·31	8·02	6·27	6·26
April	11·63	10·60	7·44	9·70	11·19	13·66	13·86	8·02	5·30	6·10
May	13·39	10·43	5·27	7·36	7·48	5·00	7·33	3·87	1·56	1·65
June	3·37	2·25	1·93	1·40	1·22	1·93	2·71	0·49	0·14	0·47
July	4·42	3·11	0·98	1·34	1·65	1·14	1·45	0·64	0·15	0·35
August	3·08	1·40	1·57	1·26	1·12	0·35	0·81	0·60	0·40	0·32
September	3·19	1·42	0·67	0·86	1·19	0·55	0·39	0·61	0·40	0·59
October	3·88	2·47	1·97	1·41	1·16	1·06	0·95	0·49	0·84	0·39
November	8·33	4·69	4·76	3·53	2·80	2·32	2·09	1·50	2·52	1·14
December	2·30	2·96	4·14	3·92	3·67	4·05	3·78	4·83	5·04	7·71
Year	61·08	47·19	37·92	39·62	41·66	42·76	50·23	40·22	31·73	35·08
Largest	83·59	69·41	54·02	68·75	56·85	—	—	—	—	69·02
Smallest	23·39	31·37	22·05	23·51	19·41	—	—	—	—	22·17

COAST HINTERLAND : NGURU AND ULUGURU

	Lewa.	Kwam- doe (Hand.)	Man- dera.	Mhonda.	Moro- rogo.	Kisaki.	Kiser- awe.	Mohoro.	Liwale.	Masasi.
Number of years' observations ...	15·3	4·6	6·0	6·0	7·5	6·7	8·6	12·1	7·0	4·0
January ...	1·61	3·19	2·20	8·77	4·10	4·76	4·49	5·70	9·72	4·68
February ...	2·16	1·30	2·40	6·18	3·30	2·91	3·31	4·41	7·09	5·50
March ...	4·29	4·53	5·20	10·90	8·43	6·06	5·62	6·69	6·26	9·56
April ...	10·74	7·01	7·87	15·32	10·19	9·91	11·37	10·15	4·01	4·51
May ...	11·21	3·74	3·78	5·12	3·38	7·51	6·06	3·62	0·59	0·58
June ...	2·20	0·59	1·53	2·52	1·88	0·98	1·10	1·02	0·04	0·18
July ...	3·42	0·94	1·14	2·60	1·14	1·02	1·30	0·47	0·16	—
August ...	2·79	0·67	0·71	2·60	0·37	0·35	0·67	1·02	0·04	0·05
September ...	2·64	1·30	1·14	1·30	0·71	0·55	1·22	0·75	0·27	—
October ...	3·98	0·94	1·34	3·03	0·95	0·75	2·64	1·22	0·39	0·34
November ...	7·51	2·56	3·46	3·78	1·25	1·53	3·90	3·42	0·90	0·80
December ...	4·01	3·74	3·38	8·50	5·76	2·36	5·00	5·12	5·70	3·96
Year ...	56·61	30·56	34·17	70·63	41·46	38·74	46·70	43·62	35·20	—
Largest ...	72·71	36·07	—	90·04	62·68	48·90	69·53	53·27	48·58	38·11
Smallest ...	38·82	17·96	—	68·42	25·35	26·25	32·63	29·73	31·02	23·86

APPENDIX VI.—continued

USAMBARA, PARE, KILIMANJARO, MERU

—	Msala- bani Magila.	Amani.	Lutindi.	Balan- gai.	Kwai.	Mlalo.	Mtai.	Mamba.	Moshi.	Arusha.
Number of years' observations ...	12·6	9·5	7·5	8·3	12·4	6·3	8·2	5·0	11·1	7·7
January ...	2·48	3·78	5·36	3·27	3·46	5·78	2·05	3·66	1·43	2·99
February ...	2·56	2·29	3·11	4·21	3·46	3·94	1·92	3·62	1·45	2·95
March ...	4·61	6·20	7·41	7·55	4·18	5·08	2·32	6·34	4·16	8·94
April ...	10·20	14·78	24·37	17·88	5·55	21·88	5·04	10·20	13·46	13·35
May ...	11·61	13·30	22·12	21·73	4·61	2·95	4·88	8·70	10·98	6·61
June ...	1·97	4·50	3·50	4·29	1·14	0·75	0·62	2·68	2·30	1·38
July ...	3·62	4·40	4·17	7·01	1·34	0·35	0·70	4·53	1·97	0·71
August ...	2·01	3·27	2·64	3·15	0·27	0·35	0·60	2·68	0·94	0·35
September ...	2·24	4·31	3·66	2·95	0·51	0·27	0·60	2·60	0·91	0·59
October ...	4·41	6·60	7·32	5·91	1·53	2·52	1·14	2·95	1·01	1·89
November ...	5·59	8·30	6·42	7·13	3·94	10·87	3·85	7·05	3·02	5·43
December ...	4·92	6·61	5·51	5·83	4·37	11·22	5·16	5·47	2·57	3·70
Year ...	56·22	78·34	95·59	90·91	34·36	65·96	28·88	60·48	44·20	48·89
Largest ...	68·03	93·82	124·89	142·68	43·74	64·29	42·56	—	—	68·31
Smallest ...	28·47	53·82	59·49	49·37	19·41	34·77	24·53	—	—	40·95

INLAND TABLELAND, USAGARA, UHEHE, UPOGORO, UNGONI, UNYIKA

	Ikoma.	Kondoa- Irangi.	Kilosa.	Mpwap- wa.	Kilima- tinde.	Tabora.	Tozama- ganga, near Iringa.	Ma- henge.	Songea.	Itaka, Unyika.
Number of years' observations ...	12·6	9·5	7·5	8·3	12·4	7·3	8·2	6·0	10·1	7·7
January ...	2·05	3·75	5·44	5·20	4·21	5·18	5·32	12·65	9·67	8·10
February ...	3·06	4·01	5·23	4·60	3·62	4·68	4·76	8·65	10·55	6·14
March ...	2·91	4·26	4·76	3·94	4·68	6·07	4·53	14·08	11·33	6·34
April ...	6·93	3·17	5·58	2·87	4·05	5·43	2·32	11·92	5·86	4·84
May ...	1·85	0·55	2·32	0·47	0·55	0·71	0·27	4·06	0·71	2·68
June ...	0·51	0·03	0·35	0·04	0·08	0·17	0·04	4·16	—	0·08
July ...	0·55	—	0·75	0·04	—	—	—	0·99	0·04	0·08
August ...	1·97	—	0·59	—	—	0·05	—	0·81	0·16	—
September ...	1·50	—	0·71	—	—	0·17	0·04	0·84	0·16	0·08
October ...	1·73	0·07	0·83	0·04	0·04	0·59	0·08	3·07	1·69	0·16
November ...	1·73	0·64	1·93	0·94	0·75	3·02	0·94	2·03	1·38	0·98
December ...	2·87	4·95	2·83	4·57	4·41	5·05	2·32	8·78	6·62	7·94
Year ...	28·26	21·43	31·34	22·71	22·40	31·02	20·63	72·04	48·19	37·60
Largest ...	32·63	—	38·15	30·36	25·83	47·28	24·33	79·88	60·75	49·52
Smallest ...	27·29	—	29·78	13·66	18·58	15·59	15·79	62·05	40·16	30·27

APPENDIX VI. — *continued*

LAKE DISTRICT

	Shirati.	Neuwied on Ukerewe.	Mwanza.	Bukoba.	Ujiji.	Kasanga.	Tukuyu.	Mwaya.
Number of years' observations ...	7·6	5·2	10·4	8·0	8·6	5·0	7·6	6·7
January	1·76	5·47	2·61	3·70	4·38	5·94	9·96	5·04
February	2·36	2·72	3·28	5·20	4·90	6·50	8·50	5·75
March	2·36	5·67	5·32	8·31	5·18	4·68	15·00	15·16
April	5·55	11·77	10·35	15·47	6·06	2·71	15·83	30·55
May	5·83	4·33	3·33	12·44	1·84	0·47	13·31	18·27
June	1·22	1·22	1·31	1·61	0·17	0·08	2·09	6·46
July	0·59	0·20	0·08	1·77	—	—	2·13	2·69
August	0·35	3·86	0·95	2·36	—	—	1·81	1·65
September	0·87	0·79	1·92	3·50	0·57	—	1·53	0·16
October	1·42	4·53	3·05	4·84	1·51	0·20	3·62	1·34
November	2·05	5·75	4·66	8·62	3·70	2·24	3·27	3·35
December	2·72	6·89	4·84	6·89	4·58	5·63	6·46	6·81
Year	27·08	53·19	41·70	74·72	32·89	28·47	83·51	97·20
Largest	38·39	61·46	48·23	—	—	—	100·04	94·92
Smallest	22·99	48·74	36·42	—	—	—	73·11	72·05

APPENDIX VII

SCHEDULES FOR GAME LICENCES

THE FIRST SCHEDULE

(Visitor's or Resident's Full or Temporary Licence)

Animals of which, in all, including their sub-species, not more than the numbers herein stated may be killed under the authority of a Visitor's or Resident's Full or Temporary Licence.

Provided that, except when one only of a species may be killed, each female killed shall for the purposes of both Full and Temporary Licences count as two animals.

		Number which may be killed under a Temporary Licence	Number which may be killed under a Full Licence
1. Black Rhinoceros	<i>Rhinoceros bicornis</i>	1	2
2. Hippopotamus	<i>Hippopotamus amphibius</i>	2	4
3. Roan Antelope	<i>Hippotragus equinus</i>	1	3
(In Tabora or Ufipa districts holders of a Resident's Full Licence may shoot an additional three Roan Antelopes, and holders of a Resident's Temporary Licence may shoot an additional two Roan Antelopes.)			
4. Sable Antelope	<i>Hippotragus niger</i>	2	4
5. Fringe-eared Oryx	<i>Oryx callotis</i>	1	3
6. Topi	<i>Damaliscus horrigum</i>		
	<i>jimela</i>	3	5
7. Wildebeest	<i>Gorgon species</i>	3	
8. Coke's Hartebeest	<i>Bubalis cokei</i>	3	20
9. Lichtenstein's Hartebeest	<i>B. lichtensteini</i>	3	
10. Lelwel Hartebeest, including Jackson's	<i>Bubalis lelwel</i>	2	4
11. Buffalo	<i>Bos cafer</i>	3	6
12. Bushbuck	<i>Tragelaphus scriptus</i>	4	15
13. Situtunga	<i>Tragelaphus spekei</i>	1	2
14. Lesser Kudu (males only)	<i>Strepsiceros imberbis</i>	1	3
15. Greater Kudu (males only)	<i>Strepsiceros strepsiceros</i>	1	2
16. Eland	<i>Taurotragus oryx</i>	2	4
17. Reedbuck	<i>R. redunca and arundinum</i>		
18. Mountain Reedbuck, including Chanler's	<i>Oreodorcas fulvorusfula</i>	4	12
19. Defassa Waterbuck	<i>Kobus defassa</i>	2	4
20. Common Waterbuck	<i>Kobus ellipsiprymnus</i>	3	6
21. Puku	<i>Kobus vardoni</i>	3	6
22. Kob of remaining species	<i>Kobus kob thomasi, &c.</i>	1	2
23. Red Forest Duiker, including Harvey's	<i>Cephalophus natalensis,</i> sub-species	4	10
24. Abbott's Duiker	<i>Cephalophus spadix</i>	—	1
25. Blue Duiker	<i>Cephalophus monticoal</i>	6	15
26. Common Duiker	<i>Sylvicapra grimmii</i>	4	15

APPENDIX VII—continued.

		Temporary Licence	Full Licence
27. Pigmy Antelope or Suni	<i>Neotragus moschatus</i>	6	15
28. Oribi, all species, combd.	<i>Ourebia species</i>	2	6
29. Steinbuck, both species combined	<i>Raphicerus species</i>	3	10
30. Klipspringer	<i>Oreotragus oreotragus</i>	2	4
31. Grant's Gazelle	<i>Gazella granti</i>	4	8
32. Thomson's Gazelle	<i>Gazella thomsoni</i>	4	14
33. Gerenuk (males only)	<i>Lithocranius Walleri</i>	1	2
34. Impalla	<i>Aepyceros melampus</i>	4	10
35. Dikdik, all species, combined	<i>Rhynchotragus species</i>	6	20
36. Common or Quagga Zebra	<i>Equus quagga</i>	3	15
37. Colobus, all kinds combined	<i>Colopus species</i>	2	4
38. " Kima " or " Sykes " Monkey	<i>Cercopithecus alboqularis</i>	5	10
39. Ostrich	<i>Struthio species</i>	1	2

THE SECOND SCHEDULE

(Resident's Full Licence)

Animals of which, in addition to those specified in the First Schedule, an unlimited number may be shot under the authority of a Resident's Full Licence:—

- (1) Bushbuck, males.
- (2) Common Duiker, both sexes.
- (3) Buffalo and Hippopotamus in areas that may from time to time be defined by the Governor.

THE THIRD SCHEDULE

(Elephant and Giraffe Licence)

Animals of which not more than the number herein stated may be killed under the authority of an Elephant and Giraffe Licence.

Two elephants, or, if allowed by regulation, three.

One Bull Giraffe.

No elephant shall be knowingly hunted under the authority of an Elephant and Giraffe Licence unless it has at least one tusk weighing 30 lb. or more, or such other weight as may be prescribed by regulation, and any tusk which is found to be less than the weight aforesaid shall be the property of the Government.

Unless otherwise prescribed, an Elephant and Giraffe Licence may be granted only to the holder of a Visitor's or Resident's Full Licence, and unless otherwise prescribed, no person shall, during the period of his Visitor's or Resident's Full Licence, be licensed to kill more than one giraffe and the number of elephants specified above.

The holder of a Game Licence may, notwithstanding anything to the contrary contained in any regulations issued under the Game Preservation Ordinance, 1921, on payment of the fees prescribed in the Schedule hereto, be granted an Elephant and Giraffe Licence to hunt elephants not exceeding the number specified in the said Schedule.

An Elephant and Giraffe Licence shall expire on the same date as the Game Licence in respect of which it was granted.

APPENDIX VII—*continued.*

		Schedule					
Visitor's Full Licence :							
1st elephant	Shs. 200.
2nd elephant	Shs. 300.
3rd elephant	Shs. 300.
Resident's Full Licence :							
1st elephant	Shs. 100.
2nd elephant	Shs. 150.
3rd elephant	Shs. 200.
Visitor's Temporary Licence :							
1 elephant	Shs. 200.
Resident's Temporary Licence :							
1 elephant	Shs. 100.
Resident's Minor Licence :							
1 elephant	Shs. 100.

THE FOURTH SCHEDULE

(Resident's Minor Licence)

Animals of which, in all, including their sub-species, not more than the numbers herein stated may be killed under the authority of a Resident's Minor Licence.

Provided that, except when one only of a species may be killed, each female shall count as two animals.

Hartebeest of all species, and Wildebeest combined	...	15
Topi	...	5
Roan Antelope in Tabora and Ufipa districts only	...	4
Bushbuck	...	15
Reedbuck, all species combined	...	8
Waterbuck, both species combined	...	4
Puku in Mahenge and Rungwe districts	...	5
Blue Duiker, Common Duiker and Suni, of each	...	15
Oribi, all species combined	...	4
Steinbuck and Thomson's Gazelle, of each	...	8
Impalla	...	6
Dikdik	...	20
Zebra	...	12
Eland	...	1
Buffalo	...	1

THE FIFTH SCHEDULE

(Governor's Licence)

Animals which may only be hunted under the authority of a Governor's Licence:—

- (1) All Antelopes not specified in the 1st, 2nd or 4th Schedules hereto.
- (2) All females of Giraffe, Greater and Lesser Kudu, Gerenuk and Situtunga.
- (3) Fish-Eagle, Wahlberg's Eagle, Buzzard-Eagle (Asturinula), Secretary Bird, Ground Hornbill, and any kind of Vulture, Stork (including Marabout), Kestrel, Owl and Egret.
- (4) Gorilla and Chimpanzee.

APPENDIX VIII

NATIVE WOODS: THEIR DISTRIBUTION AND EXPLOITATION

	Acres.	Sq. miles.
Area.—Government Forest Reserves ...	2,419,500	3,780
Area of Forests not yet proclaimed Reserves (estimated) ...	100,000	156
Area of Privately-owned Forests (approx.) ...	35,000	55
	2,554,500	3,991

PRINCIPAL TIMBER TREES OF THE MAIN FOREST TYPES

(a) In the Tropical and Sub-Tropical forests:—

Mkulu (*Ocotea usambarensis*), Mkomohoyo (*Pygeum africanum*), Mkuka (*Royena* sp.), Mynassa (*Piptadenia* sp.), Mula (*Parinarium Holstii*), Mrie (*Louoa* sp.), Mshai (*Albizzia fastigiata*), Lolyondo (*Linociera* sp.), Msambu (*Allanblackia Stuhlmannii*).

(b) In the Cedar Forest:—

Cedar (*Juniperus procera*), Ndele (*Warburgia Stuhlmannii*) Senefu (*Olea chrysophylla*), Ngwe (*Olea Hochstetteri*), Mse (*Podocarpus usambarensis* and *P. milanjanus*).

(c) Near Coast and Lower Hills:—

Msandarusi (*Trachylebium verrucosum*), Mkongo (*Azelia cuanzensis*), Mahogany (*Khaya senegalensis*), Mvule (*Chlorophora excelsa*), Mula (*Parinarium Holstii*), Mshai (*Albizzia fastigiata*), "Ebony" (*Dalbergia melanoxylon*), Mkwaju (*Tamarindus indica*), Msindi (*Diospyros mespiliformis*), Mroma (*Maerua* sp.), Msaur (*Louoa* sp.), Mkoñ (*Piptadenia Schweinfurthii*), Mkunguni (*Trichilia* sp.), (*Brachyleana Hutchinsii*).

(d) In the Savannah:—

Mninga (*Pterocarpus Bussei* and *P. chrysothryx*), *Brachystegia appendiculata*.

(e) Mangroves:—

Rhizophora mucronata, *Avicennia officinalis*, *Bruguiera gymnorhiza*, *Carapa moluccensis*, *Ceriops candolleana*, *Sonneratia caseolaris* and *Heritiera littoralis*.

FOREST PRODUCE EXPLOITED IN 1921 AND 1922

	Timber, cubic feet.	Poles, almost entirely mangroves, No.	Fuel, stacked, cubic feet.	Bamboos, No.	Withes (Reeds), No.	Fibre (Umondo), tons. (Approx.)
1921	34,816	497,520	3,301,328	1,620	148,790	0.38
1922	74,874	287,575	3,844,661	6,326	374,885	4.1

APPENDIX IX

BOOKS HAVING REFERENCE TO THE TERRITORY

- Across Africa. Commander V. Lovett Cameron, London, 1878.
 A History of the Colonisation of Africa. Sir H. H. Johnstone.
 3rd Edition, Cambridge, 1913.
 Am Tendaguru. Dr. Edward Hennig. 1912.
 Ancient Civilisations of Eastern Africa. H. E. O'Neill. (Scottish
 Geographical Magazine, 1886.)
 Anleitung zum Felddienst in Deutsch-Ostafrika. German Official.
 Annual Medical Report, Tanganyika Territory, 1921.
 Anthropologie der Nord-Nyasa Länder. Dr. F. Fulleborn. 1902.
 A Survey of the Ethnography of Africa. (Journal of the Royal
 Anthropological Institute, Vol. XLIII., London, 1913.)
 Bergwesen Verordnung in D.O.A. von Roy. Dar es Salaam.
 Besiedlungsfähigkeit Deutsch Ostafrikas. A. Leuc. Leipzig, 1904.
 British East Africa. Brade

Any book mentioned in this Bibliography is obtainable from Messrs. Williams & Norgate, 14, Henrietta Street, Covent Garden, London, W.C.2, Publishers and Importers of Foreign Books, who have been appointed Official Agents to the Tanganyika Section of The British Empire Exhibition.

- Der Pflanzenw. v. Ost- u. Westafrika. Dr. F. Fulleborn.
 es Salaam.
 Deutschlands Kolonien. K. Hassart. 2nd Edition. German East
 Africa, pp. 235-318. Leipzig, 1910.
 Deutschlands Kolonien. Rochus Schmidt. 2 vols. Berlin, 1895-6.
 Deutsch-Ostafrika. H. Fenck. Berlin, 1909.
 *Deutsch-Ostafrika. Pubd. Dietrich Reimer. Berlin. (Bd. V. Th. A, B
 and C Die Pflanzenwelt Ost-Afrikas und der Nachbargebiete.
 Engler. Bd. X. Beiträge zur Kulturgeschichte von Ostafrika.
 Stuhlmann.)
 Deutsch Ostafrika. Hans Zache. Sonderabdruck als Deutschland
 als Kolonial-Macht.
 Deutsch Ostafrika als Siedlungsgebiet für Europaer, Bericht.
 Dr. von Linderquist Kommission, 1908. München and Leipzig,
 1912.
 Deutsch Ostafrika im Aufstand 1905-1906. Graf von Götzen, 1909.

APPENDIX IX—*continued.*

- Die Besiedlung Deutsch Ostafrikas. Paul Samassa. Leipzig, 1909.
 Die Deutsche Kolonialzeitung.
 Die Deutschen Schutzgebiete in Afrika und der Sudsee (Jahresberichte). German Official.
 Die Eisenbahnen im Tropischen Afrika. Leipzig, 1902.
 Die Insel Mafia. Oscar Baumann. 1896.
 Die Jagdbare Vögel Deutsch Ostafrikas. Professor Dr. Ant. Reichenow, Berlin, 1909.
 Die Massai. M. Merker. 1904.
 Die Ostafrikanische-Bruchstufe. Professor Dr. Karl Uhlig. (Mitteilungen aus den Deutschen Schutzgebieten, Ergänzungsheft Nr. 2. Berlin, 1909.)
 Die Portugiesenzeit von Deutsch- und Englisch-Ostafrika. Justus Strandes. Berlin, 1899.
 Die Schlangen Deutsch Ostafrikas. Dr. Sternfeld. Berlin, 1910.
 Die Vegetationsverhältnisse der Zentral Afrikanischen Seenzone! 1909.
 Die Wahehe. E. Nigmann. Berlin, 1908.
 Die Wahehe (Mitteilungen aus den Deutschen Schutzgebieten Band X., 1897, Heft I.). Dr. W. Arning. Berlin, 1897.
 Documents sur l'Histoire, la Géographie et le Commerce de l'Afrique Orientale. Charles Gullian. 3 vols. Paris, 1856.
 Durch Afrika von Ost nach West. von Götzen. Berlin, 1895.
 Durch Massailand zur Nilquelle. Dr. Oscar Baumann. Berlin, 1894.
 East Africa. General J. C. Smuts. (Geographical Journal, March 1918.)
 *Economic Resources of the German Colonies. (Bulletin of the Imperial Institute, Vol. XII., 580; Vol. XIII., 110.)
 Eine Akademische-Studienfahrt nach Ostafrika. Dr. Herbert Winkler und Professor Dr. Carl Zimmer. 1912.
 Flora von Usambara Gebirgsland. Professor Dr. A. Engler. Leipzig, 1893.
 Forschungen in Südlichen Teil D. O. Afrika. Dr. Walter Busse. Berlin, 1902.
 Forstwirtschaft in Deutsch Ostafrika. Th. Siebenlist. Berlin, 1914.
 Frontiers of German East Africa. F. R. Cana. (Geographical Journal, April 1916.)
 Führer durch die Evangelische-Mission in D. O. A. Wuge-Usambara. 1914.
 General Smuts's Campaign in East Africa. Brigadier-General J. H. V. Crowe, C.B. London, 1918.
 German Colonial Policy. Professor M. Bonn. (United Empire, Vol. V., pp. 126-134, 1914.)
 German East Africa. A. F. Calvert. London, 1917.
 Geschichte der Deutschen Kolonialpolitik. Alf. Zimmermann. (East Africa, pp. 113-131, 174-183, 194-205, 247-256.) Berlin, 1914.
 Guide to South and East Africa. Brown, A. Samler & Brown. G. Gordon. London, 1915.
 *Handbook of German East Africa. (Admiralty, I.D. 1055.) H.M. Stationery Office.
 History of the Imama and Seyyids of Oman, 661-1856. Salil bin Razik. Translated by G. P. Badger. (Hakluyt Society). London, 1871.

- How I Found Livingstone. H. M. Stanley.
 Jagd und Wildschutz in den Kolonien. Reichs-Kolonialamt, 1913.
 Journal of the Discovery of the Source of the Nile. Captain J. II. Speke. Edinburgh, 1863.
 Kilimanjaro and its People. Hon. C. Dundas. Witherby, London.
 Kiziba Land und Leute. Rhese. Stuttgart, 1910.
 Koloniale Monatsblätter.
 L'Africa orientale tedesca. G. Bourbon dal Monte Santa Maria. 3 vols. Citta di Castello, 1915.
 Landgrabbing (Mafia). M. L. A. G., Blackwood's Magazine, April 1916.
 *Le Mouvement Geographique. Organ of Belgian Interests in the Congo.
 Liegenschaftsrecht in Deutschen-Kolonien. Pink & Hirschberg.
 Local Statutes of German East Africa. Official. 2nd Edition. 2 vols. Tanga, 1911.
 Mafia. Norman King. (Geographical Journal, August 1917.)
 Militärisches Orientierungsheft für Deutsch-Ostafrika, 1911. German Official.
 Mission von Zanguebar. Horner. Regensburg, 1877.
 Missions Pädagogische Blätter, Heft 2. Missions-Superintend. Stern, 1913.
 Mitteilungen aus den deutschen Schutzgebieten (1895-1913). Supplement to the Kolonialblatt.
 Mitteilungen über die geographischen politischen und wirtschaftlichen Verhältnisse in Grenzzone zwischen Victoria Nyanza und Kilimanjaro, 1906. Hauptmann Schlobach.
 Negerleben in Ostafrika. Dr. Weule, 1908.
 Notes from East Africa (Uluguru Mountains). Lieutenant E. W. Bark. Geographical Journal, October 1917.
 Ostafrikanische Dinosaurier. Professor Dr. E. Fraas. 1908.
 Rechte der Eingeborenen in den Kolonien. Official.
 Rechtsverhältnisse der Deutschen Schutzgebieten. von Stengel.
 Reise in das Massailand. Dr. G. A. Fischer.
 *Report on Tanganyika Territory; 1920, Cmd. 1428; 1921, Cmd. 1732; 1922.
 *Reports of the Department of Agriculture, Tanganyika Territory.
 Reports of the Veterinary Department, Tanganyika Territory.
 Tabellarische Uebersicht der Geschichte Ostafrikas. Otto Karsten. Leipzig und Heidelberg, 1879.
 Tangaland. H. Kaerger. Berlin, 1892.
 *Tanganyika. (Foreign Office Historical Handbook, No. 113.) H.M. Stationery Office, 1920.
 *Tanganyika Territory Gazette, Vols. I. to IV., 1920-23.
 The Africa Pilot. Part III., 1915. Admiralty.
 The Ancient Civilisation, Trade and Commerce of East Africa. Scottish Geographical Magazine, Vol. II., No. 2, February, 1866. J. W. MacGrindle.
 The Commerce and Navigation of the Erythrean Sea. Vincent. London, 1879.
 The Lake Regions of Central Africa. Burton. 1860.
 The Last Journals of Dr. David Livingstone in Central Africa. Horace Waller. 1880.

APPENDIX IX.—*continued*

- The Germans and Africa. Lewin. Evans, London.
 The History of Kilwa. A. Strong. (Translated from the Arabic.)
 Journal of the Royal Asiatic Society. London, 1895.
 The Kivu Country. Sir A. Sharpe. (Geographical Journal, January
 1916.)
 The Land of Zinj. Captain C. H. Stigand. London, 1913.
 *The Masai. Hollis. London, 1905.
 The Nile Quest. London, 1903.
 The North Section of the Tanganyika-Nile Rift Valley. (Geographical
 Journal, August 1917.)
 The Rediscovered Country. S. E. White. (North-East of German
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 *The Rift Valleys and Geology of East Africa. Gregory. London,
 1921.
 The Rise of Our East African Empire. Sir F. D. Lugard. 2 vols.
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 The Victoria Nyanza. P. Kollman. (English edition.) London,
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 Thierbeobachtungen, &c., in Ostafrika. Bronsart von Scellendorf.
 Through Masailand. Thomson. London, 1885.
 To the Central African Lakes. Thomson. Vols. I. and II.
 To the Mountains of the Moon. F. E. S. Moore. 1901.
 Travels during Residence in East Africa. J. L. Krapf. (English
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 Usambara und seine Nachbargebiete. Dr. Oscar Baumann. Berlin,
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 Wie Deutsch-Ostafrika entstand. Leipzig, 1912.
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 London, 1872.
 Zanzibar in Contemporary Times. R. N. Lyne. London, 1905.
 Zur Buerteilung des Islams in D. O. A. Sonderdruck aus Kolonial-
 Rundschau, 1913. Dr. F. O. Karstedt.

Among the books in the above list, compiled with the assistance of the Keeper of German Records, the publications whose titles have been marked with an asterisk are the chief among those used in the compilation of the Handbook.

The sections of the Handbook relating to various activities of Government have been usually supplied by the Departments concerned. That on mountaineering was kindly provided by Mr. C. Gillman, of the Railways Department, one of the few who have climbed Kilimanjaro.

The maps at the end of the Handbook were prepared in the office of the Director of Surveys.

APPENDIX X
PUBLICATIONS IN THE TERRITORY

A.—BY GOVERNMENT

Publications.	Subscription Rates.	Whence obtainable.
Annual Report on Tanganyika Territory, 1922 ...	1s. 3d.	Government Printer, Dar es Salaam
"Tanganyika Territory Gazette," published every Friday (circulation, 750 weekly)	Shs. 0.50 per copy ... 24s. per annum ... 13s. per half year (including British Empire Postage)	As last
Vol. I., 1919-20	30s.	
Vol. II., 1921	30s.	
Vol. III., 1922	30s.	
Vol. IV., 1923	30s.	
Ordinances, Proclamations, &c. :—		Government Printer, Dar es Salaam or Crown Agents for the Colonies, 4, Millbank, Westminster, London
Vol. I., 1919-20	10s. 6d.	
Vol. II., 1921	12s. 6d.	
Vol. III., 1922	12s. 6d.	
Vol. IV., 1923	To be published early 1924	
Agricultural Report, 1922	2s. 6d.	As last
Trade Report :—		
1921	4s. 6d.	As last
1922	4s. 6d.	As last
1923	To be published during 1924	As last
Non-Native Census Report, 1921	2s. 6d.	As last
Native Census Report, 1921	2s. 6d.	As last
Blue Book	15s.	As last
"Mambo Leo" (Native periodical printed in Swahili), published monthly, (circulation 10,000 monthly)	10 cents. Annual subscription, 2s. 6d., including postage	As last

B.—OTHER PUBLICATIONS

"Dar es Salaam Times" published every Saturday	Shs. 0.50 per copy ... 25s. per annum, including postage	Dar es Salaam Printing and Publishing Works, Dar es Salaam The African and Colonial Press Agency, 9 Quality Court, Chancery Lane, London, W.C. 2
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APPENDIX XI

WEIGHTS AND MEASURES OF THE TERRITORY

A Weights and Measures Ordinance, 1924, has been enacted for future promulgation (see "Tanganyika Territory Gazette," V., 1924, 3). This lays it down that the primary weight, measure of capacity, measure of length and measure of surface shall be respectively the pound avoirdupois, the gallon, the yard and the square yard, as defined in the Imperial Weights and Measures Act, 1878. The parts or multiples of these units, prescribed to be employed, are those in common legal use in the United Kingdom.

The provisions of the Ordinance as to weights and measures will apply to weighing and measuring instruments.

On the procuring of standards of weight and measure for use under the Ordinance, publication of the fact in the Government Gazette will make those standards Territory Standards, of which verified copies, to be tested from time to time, may be obtained for use as secondary standards. Within twelve months from the commencement of the Ordinance (not yet effective) all weights and measures whose size permits will have to bear their denominations stamped legibly.

Local or customary measures used at present by natives may continue to be employed in trade as at present until such use is prohibited, restricted or regulated by regulation under the Ordinance.

The usual provision is made for the inspection, verification and stamping of weights and measures, and for the punishment of offences against the Ordinance and its Regulations.

APPENDIX XII

LISTS OF EXHIBITORS AND EXHIBITS

A.—PLANTING AND COMMERCIAL EXHIBITS

591

No.	Exhibitor.	Exhibit.	Remarks.	Weight. lbs. etc.
—	Arusha Coffee Planters' Association, Arusha	Coffee (4 bags)	—	—
—	H. Blunt, Shume, Usambara	1 suite of furniture	Made at Shume	—
—	Ceylon Jewellery Mart, Dar es Salaam	Carved ebony elephant, 35 ins. by 37 ins.	(For sale)	—
—	Do. do.	Carved ivory elephant, 8 ins. by 5 ins.	—	—
—	Do. do.	Carved elephant tusk, mounted on carved ebony photo frame, 35 ins. by 15 ins.	—	—
—	Do. do.	Carved ivory lobster, 10 ins. by 4 ins.	—	—
—	Karimjee, Jivanjee & Co., Tanga	Mvule timber	For making panelling and stands in the Court	50 pieces.
—	Chalmers, Guthrie & Co., Ltd., London	Beeswax, gum animi and cotton lint	Cotton from Bagamoyo	—
—	Kilimanjaro Saw Mills, Ltd., Moshi	Msaar timber, Kilimanjaro mahogany Msoo timber, "Satinwood"	Used by Shoolbred & Co. for making a table, gramophone cabinet, office arm-chair, and chair for the Tanganyika Court	—
—	Do. do.	Mooma... ..	For panelling in the Court	—

APPENDIX XII—continued.

No.	Exhibitor.	Exhibit.	Remarks.	Weight. lbs., etc.
—	Mathradas, Nanji & Co., Lindi	Sisal	—	1 bale.
—	Max de Souza, Lindi ...	Sisal	—	—
—	Do. do. ...	Cotton... ..	—	—
—	Do. do. ...	Native products	—	—
—	Kilimanjaro Planters' As- sociation, Moshi	Parchment coffee	For sale in the Court...	30 cwt.
—	Do. do.	Cotton... ..	—	10 lb. each.
—	Meru Agricultural Society, Arusha	Wheat	3 varieties	132 lb.
—	Do. do.	Beans	2 varieties	120 lb.
—	Do. do.	Maize	—	125 lb.
—	Do. do.	Tobacco	—	5 lb.
—	Mkoe Plantation, Lindi	Sisal	—	—
—	Ranti de Silva & Bros. Dar es Salaam	Ornamental Cabinet Top in carved ebony, with a carved elephant tusk resting horizontally on a carved ebony pine grove, and fitted with two ebony elephants on each side	(For sale)	—
—	Do. do.	Dinner Gong: basement of ebony, with two carved elephant tusks supporting a silver gong attached to the tusks by a silver chain	—	—
—	Do. do.	Carved Ebony Photo Frame with an ivory tag one each side, and on the top carved hippo teeth showing pictures of ostriches	—	—
—	Do. do.	Carved Ivory Lobster	—	—

—	Do.	do.	Carved Ivory Elephant with gold nails on toes and jewelled eyes	—	—
—	Do.	do.	Carved Ivory Elephant Head, mounted on an ebony plate and with jewelled eyes	—	—
—	Do.	do.	Carved Ebony Elephant with ivory tusks	—	—
—	Do.	do.	Ebony Walking Sticks (knobbed handles)	—	100.
—	Do.	do.	Ebony Walking Sticks (carved handles)	—	8.
—	Reel & Wilson, Tanga ...		Local fur articles, trophies, photos, etc.	—	—
—	Rosehaugh & Co., Ltd. :—		Seed-cotton	1st grade hand-sorted	18½.
—	Ngerengere Estate, Morogoro		Prime Sisal	—	1 bale.
—	Do.	do.	Tow	—	Do.
—	Do.	do.	Cotton Lint	1st grade, Saw-ginned	Do.
—	Do.	do.	Do.	1st grade, Roller-ginned	Do.
—	Tanganyika Forests and Lumber Co., Ltd.		Mshwizo timber	Chair made by Shoolbred	—
—	Do.	do.	Camphor timber	For making stands in the Court	—
—	Do.	do.	Impregnated Podocarpus Sleeper (after lying in the open for 10 years).	—	—
—	Do.	do.	Turned table legs	—	4.
—	Do.	do.	Do. podocarpus	—	4.
—	Do.	do.	Wardrobe Feet	—	4.
—	Do.	do.	Do. Mziligembe	—	4.
—	Do.	do.	1 box Cedar Pencil Slate	Standard size ...	—
—	Do.	do.	Do. do.	Assorted sizes ...	—
—	Do.	do.	1 Certificate, framed... ..	Frame, M'quwe wood	—

APPENDIX XII—continued.

891

No.	Exhibitor.	Exhibit.	Remarks.	Weight. lbs., etc.
—	Tanganyika Forests and Lumber Co., Ltd.	1 piece Camphor Wood	Mkulu, with view of Mills affixed	—
—	Do. do.	1 piece, M'quwe Wood	—	—
—	Do. do.	1 piece, Mshambo Wood	With two views affixed	—
—	Do. do.	Cedar Wood	With views of aerial line affixed	5 pieces.
—	Tanganyika Sisal and Produce Co., Ltd., Mombo, Tanga	Ceara Raw Rubber Flats	From Mombo Estate	10 lb.
—	Do. do.	Do. do.	From Muheza Estate	Do.
—	Do. do.	Arabian Coffee, bold	From Bulwa Estate...	Do.
—	Do. do.	Do. medium } cleaned	Do. do.	Do.
—	Do. do.	Do. small } and	Do. do.	Do.
—	Do. do.	Do. triage } graded	Do. do.	Do.
—	Do. do.	Do. peaberry	Do. do.	Do.
—	Do. do.	Robusta Coffee (parchment)	—	Do.
—	Do. do.	Do. (ungraded and shelled)	—	Do.
—	Bombuera Estates, Tanga (von Lekow & Paulsen)	2 Sisal plants	—	—
—	Do. do.	Sisal	—	—
—	Do. do.	Sisal Ropes	—	—
—	Do. do.	Show box made of Mvule timber ...	—	—
—	J. Zavellas, Morogoro ...	1st quality Seed Cotton (grown under irrigation).	Average sample ...	2 lb.
—	Rufiji Delta Trading Co., Dar es Salaam	2 Boritis, length 27 ft. 7 ins. and 26 ft. 9 ins. by 5 ins. diameter ...	Mangrove timber ...	—
—	Do. do.	1 Boritis, length 16 ft. 6 ins. by 3 ins. diameter	Do.	—

—	Do.	do.	1 Boritis, length 16 ft. 5 ins. by 3 ins. diameter	Do.	—
—	Do.	do.	1 Boritis, length 16 ft. 7 ins. by 3 ins. diameter	Do.	—
—	Do.	do.	1 log of Nkwaju, length 6 ft. 3 ins. 5½ ins. diameter	Do.	—
—	Do.	do.	1 log of Mshinzi length 8 ft. 7 ins. by 16 ins. diameter	Do.	—
—	Do.	do.	1 sleeper of Mehu, length 8 ft. 6 ins. by 10 ins. by 5½ ins.	Do.	—
—	Do.	do.	1 Sleeper of Mkemavi, length 8 ft. 6 ins. by 10 ins. by 5½ ins. ...	Do.	—
—	Do.	do.	2 bags Mangrove Bark	—	—
—	Korogwe Sisal Estate, Usambara.		Sisal	Prime quality	...
—	Do.	do.	Do.	1st quality	... ..
—	Do.	do.	Sisal Tow	—	—
—	Do.	do.	Sisal Ropes	—	—
—	Do.	do.	Sisal leaves conveyer	—	—
—	Sakarre Coffee Estate, Usambara.		Coffee... ..	—	—
—	(Cairns Bros.)				
—	Balangai Coffee Estate. (G. A. Tait.)		Do.	—	—
—	Conja Estate (F. E. Bradstock)		Sample of unginned Cotton... ..	—	—
—	Do. do.		Chillies	—	—
—	Mazinde Estate (G. Jetha)		Sample of unginned Cotton... ..	—	—
—	Do. do.		Sample of Ceara Rubber	—	—
T/8	Kibiranga Estate, Tanga		Seed Cotton	—	1 bag.
T/68	Do. do.		Sisal Fibre	—	—
T/10	Do. do.		Cotton Lint	—	1 bundle.
T/26	Do. do.		Castor Oil Seed	—	1 bag.
T/11	Ngombezial Estate, Tanga		Cotton Lint	—	1 parcel.

APPENDIX XII—continued.

	Exhibitor.	Exhibit.	Remarks.	Weight. lbs., etc.
	T/33 Ngombezial Estate, Tanga	Sisal Ropes	—	1 box.
	T/34 Do. do.	Sisal and Tow	—	Do.
	T/12 Kwahemshi Estate, Tanga	Kapok	Clean	1 bag.
	T/14 Do. do.	Kapok Seed	—	1 bag.
	T/23 Do. do.	Ceara Rubber	—	1 parcel.
	T/25 Do. do.	Castor Oil Seed	—	1 bag.
	T/13 Sigi Segoma Estate, Tanga	Kapok... ..	Clean	1 box.
	T/31 Do. do.	Black Pepper	—	Do.
	T/32 Do. do.	Cocoa Beans	—	Do.
	T/65 Mkumbara Estate, Tanga	Sisal Fibre	—	1 bundle.
	T/66 Buhuri Estate, Tanga...	Do.	—	Do.
	T/67 Ngomeni Estate, Tanga	Do.	—	Do.
	T/69 Gomba Estate, Tanga ...	Do.	—	Do.
	T/35 Kerslake, Thomas & Co., Moa	Sisal Tow	—	1 box.
	T/36 Do. do.	Copra, Coconuts, Coir	—	1 bundle.
	T/63/64 Do. do.	Sisal Fibre	—	2 bundles.
	— Kikwetu Estates, Lindi	Sisal	—	—
	— Giga Gaurax, Usambara District	1 suite of Office Furniture	Made from several local woods by native artisans	9 cases.
	— P. Lamping, Mazumbai Estate, Usambara Dis- trict	Clean Coffee	Coffee in parchment artificially dried	1 parcel.
	— Do. do.	Coffee	Peaberry	Do.
	— Do. do.	Do.	Sun-dried berries	Do.
	— Do. do.	Do.	In parchment... ..	Do.

—	D. Marcondonatos, Kilimanjaro	Do.	—	529 kgs.
—	M. & Ph. Filios, Kilimanjaro	Do.	—	859 kgs.
—	E. Meimaridis, Kilimanjaro	Do.	—	525 kgs.
—	Monnas Bros., Kilimanjaro.	Do.	—	512 kgs.
—	X. Tsiknos, Kilimanjaro	Do.	—	512 kgs.
—	K. Mailambetsos, Kilimanjaro	Do.	—	216 kgs.
—	Kilima Trading Co., Ltd., Kilimanjaro.	Do.	—	206 kgs.
—	Emmanuel & Christofis, Kilimanjaro	Do.	—	211 kgs.
—	Gerrard Bros., Kilimanjaro	Do.	—	51 kgs.
404	R. Mutopoulos, Ruvo Estate.	Sisal Fibre	—	30 lb.
405	Do. do.	Sisal Leaves	—	—
—	Amboni Estates, Tanga.	Sisal	—	—

APPENDIX XII—continued.

B.—EXHIBITS IN THE INDIAN DUKA

No.	Article.	Quantity.	Price Paid by Retail Shopkeepers in Dar es Salaam.	Country of Origin.
138	Chadder, 535	1 piece ...	15s. 6d. per score of 5 pieces, size 7 yds. by 35 ins. ($7\frac{1}{2}$ lb. score)	India.
139	Kaniki (mka)	Do. ...	26s. od. score, size 46 ins. by 66 ins. ...	England.
140	Bhura (gulabi)	Do. ...	54s. od. score, size 46 ins. by 66 ins. ...	Do.
141	Americani	Do. ...	21s. 9d. piece of 10 lb., 30 yds. by 36 ins.	Japan.
142	Chadder, 435	Do. ...	16s od. score of 10 pieces, size $3\frac{1}{2}$ yds. by 32 ins. ($6\frac{1}{2}$ lb. score)	India.
143	Shirting (Basto)	Do. ...	19s. od. piece, 40 yds. by 36 ins. ...	England.
144	Chadder, 4500	Do. ...	27s. 3d. score of 10 pieces, 4 yds. by 44 ins. ($12\frac{1}{2}$ lb. score)	India.
145	Chadder, 225	Do. ...	21s. od. score of 10 pieces, 4 yds. by 40 ins. (10 lb. score)	Do.
146	Chadder, 2500	Do. ...	28s. 6d. score of 10 pieces, $4\frac{1}{2}$ yds. by 44 ins. ($12\frac{1}{2}$ lb. score)	Do.
147	Chadder, 3002	Do. ...	32s. od. score of 10 pieces ($1\frac{1}{2}$ lb. piece)	Do.
148	Khangas	Do. ...	32s. od. to 50s. od. according to kinds, 46 ins. by 66 ins.	England.
149	Kaniki (Sufi)	Do. ...	56s. od. to 64s. od. per score, 46 ins. by 66 ins.	Do.
150	Dhabvani	Do. ...	38s. od. per score, 46 ins. by 66 ins. ...	Do
151	Blanket	Do. ...	44s. od. to 100s. od. score, 40 ins. by 78 ins. and 60 ins. by 96 ins.	Holland.
152	Kettle	Do. ...	54s. od. per dozen	Germany.
153	Baskets	3 pieces ...	6d. each	Local make.
154 (a)	Coloured Papers (used for making ear ornaments).	1 bundle ...	6s. od. ream of 480 sheets	Germany.
154 (b)	Pocket Note-books	1 piece ...	2s. od. dozen	Do.

155 (a)	Kettle	Do. ...	40s. od. dozen	Japan.
155 (b)	Knives	Do. ...	2s. od. dozen	Germany.
155 (c)	Shell Buttons	1 card ...	2s. od. to 8s. od. gross	Japan.
156	Funnels	1	1s. od. each	Local make
157	Grocer's shovel	1	1s. od. each	Do.
158	Matches	1 packet ...	160s. od. case of 50 gross	Norway.
159	Do.	Do. ...	300s. od. do. do.	Sweden.
160	Do.	Do. ...	280s. od. do. do.	Do.
161	Cigarette Papers	1 box ...	600s. od. case of 300 boxes	Austria.
162	Cigarettes	Do. ...	800s. od. case of 50 boxes of 500 cigarettes	England.
163	Do.	Do. ...	800s. od. case of 25,000 cigarettes ...	Germany
164	Do.	Do. ...	1,230s. od. case of 50 boxes of 500 cigarettes	England.
165	Do.	Do. ...	800s. od. case of 25,000 cigarettes ...	America.
166	Matches	1 packet ...	272s. od. case of 50 gross boxes... ..	Austria
167	Tobacco	Do. ...	900s. od. case of 480 packets	England.
168	Do.	Do. ...	600s. od. case of 550 packets	Holland.
169	Do.	Do. ...	500s. od. do. do.	Do.
170	Mouth Organs	Do. ...	7s. 6d. dozen	Germany.
171	Bath Soaps	Do. ...	3s. od. dozen	Do.
172	Playing Cards	Do. ...	16s. od. dozen	America.
173	Copper Foil	Do. ...	5s. od. packet of 100 sheets	Germany.
174	Beads	1 string ...	Prices vary according to size and quality	Italy.
175	Needles	1 packet ...	2s. od. packet of 1,000	Germany.
176	Beads	6 lots ...	Prices vary according to size and quality	France.
177	Sewing thread on Reels	1 reel ...	9s. od. gross	Japan
178	Cash Box	1	6s. 6d. dozen	England.
179	Sandals	2 pairs ...	3s. od. per pair	Lamu, Afria
180	Sewing Thread	1 reel ...	9s. od. gross	Japan.
181	Enamelled Rice Plate ... ..	... ..	6s. od. dozen	Do.
182	China Cup and Saucer	1 each ...	6s. od. to 18s. od. dozen, according to quality	Holland.
183	China Bowl (small)	1	14s. od. for 100	Do.
184	Enamelled Mug	1	12s. od. dozen	Japan.

APPENDIX XII—continued.

No.	Article.	Quantity.	Price Paid by Retail Shopkeepers in Dar es Salaam.	Country of Origin.
185	Enamelled Mug	1	9s. od. dozen	Japan.
186	Enamelled Bowl	1	11s. od. do.	Do.
187	Do.	1	9s. od. do.	Do.
188	China Bowl	1	13s. od. do.	Holland.
189	Axe	1	24s. od. to 60s. od. dozen, according to quality	England.
190	Bucket	1	64s. od. dozen	Germany.
191	Shirting, 3940	1 piece ...	19s. od. per piece of 40 yds.	India.
192	Khaki Stock-pot	Do.	2s. od. yard	England.
193	Bhura-Shiri	Do.	56s. od. score, size 46 ins. by 66 ins. ...	Do.
194	Chadder, 4680	Do.	21s. 3d. score of 5 pieces, 8 yds. by 40 ins. (weight, 10 lb. score—4 chadders in a piece)	India.
195	Chadder (coloured)	Do.	45s. od. score, size 5 yds. by 48 ins. ...	India.
196	Kikoi	Do.	52s. 6d. score, size 36 ins. by 70 ins. ...	Holland.
197	Blanket, 151	Do.	92s. od. score, size 48 ins. by 96 ins. ...	Do.
198	Fans	5	6d. each	Local make.
199	Pocket Mirror	1	2s. od. dozen	Japan.
200	Combs	3	3d. each	Local make.
201	Fish Hooks	1	2s. od. to 40s. od. thousand, according to sizes	England.
202	Cooking Spoons	2	3d. each	Local make.
203	Key Chain with Hook	1	12s. od. gross	Germany.
204	Leather Belt	1	4s. od. to 18s. od. dozen, according to quality	India.
205	Pen-holders	1	1s. od. dozen	Germany.
206	Spoons	1	2s. od. dozen	Do.
207	Perfumery	1 bottle ...	4s. od. to 18s. od. dozen bottles ...	Do.
208	Tin Buttons	1 card ...	1s. od. gross	Japan.

209	Brass Rings	...	...	...	1 ...	...	2s. od. dozen	...	...	Germany.
210	Oil Measures	...	...	...	1 ...	...	6d. each	...	...	Local make.
211	Cigarette Cases	...	...	...	1 ...	...	1s. od. dozen	...	...	Germany.
212	Writing Paper	...	...	...	1 packet	...	8s. od. ream	...	...	Austria.
213	Hanging Lamp	...	...	...	1 ...	...	60s. od. dozen	...	...	Germany.
214	Black Lead Pencils	...	...	...	1 dozen	...	1s. 6d. dozen	...	...	Do.
215	Lock and Key	...	...	...	1 ...	...	4s. od. dozen	...	...	Do.
216	Safety Pins	...	...	...	1 packet	...	1s. od. gross	...	...	Do.
217	Mirrors	...	...	...	1 ...	...	6s. od. dozen	...	...	Belgium.
218	Assorted Beads	...	...	...	Bundle of strings	...	3d. string	...	...	Germany.
219	Glass Beads	...	...	...	Do.	...	3d. string	...	...	Japan.
220	Oil Lamp	...	...	...	1 ...	...	6d. each	...	...	Local make.
221	Knife	...	...	...	1 ...	...	14s. od. dozen	...	...	England.
222	Chopper (Panga)	...	...	...	1 ...	...	12s. od. to 48s. od. dozen, according to size and quality	...	...	Germany.
223	Slate Pencils	...	...	...	1 ...	...	1s. 6d. for 100	...	...	Do.
224	Envelopes	...	...	...	1 packet	...	4s. od. to 10s. od. for 1,000	...	...	Do.
225	Glass Buttons	...	...	...	1 card	...	2s. od. gross	...	...	Do.
226	Hoe (Jembe)	...	...	...	1 ...	...	41s. od. for 100 (350 grammes weight)	...	...	Do.
227	Do.	...	...	...	1 ...	...	70s. od. for 100 (1,000 grammes weight) (1 case contains 50 pieces)	...	...	Do.
228	Scissors	...	...	...	1 pair	...	9s. od. dozen	...	...	Do.
229	Slate	...	...	...	1 ...	...	6s. od. dozen	...	...	Do.
230	Colours (all shades)	...	...	...	1 packet	...	5s. od. lb.	...	...	Do.
231	Enamelled Soup Plate	...	...	...	1 ...	...	7s. od. dozen	...	...	Japan.
232	China Plates	...	...	...	1 ...	...	10s. od. dozen	...	...	Holland.
233	Enamelled Basin	...	...	...	1 ...	...	20s. od. dozen	...	...	Japan.
268	Pencil	...	...	...	1 ...	...	2d. each	...	...	Do.
269	Cigar Case	...	...	...	1 ...	...	6d. each	...	...	Do.
270	Folding Mirror	...	...	...	1 ...	...	1s. 6d. each	...	...	Germany.
271	Cigarette Case	...	...	...	1 ...	...	6d. each	...	...	Japan.
272	Cigar-holders	...	...	...	2 ...	...	1d. each	...	...	Germany.
273	Razors	...	...	...	2 ...	...	3d. each	...	...	Do.
274	Rings	...	...	...	2 ...	...	6d. each	...	...	England.

APPENDIX XII—continued.

No.	Article.	Quantity.	Prices Paid by Retail Shopkeepers in Dar es Salaam.	Country of Origin.
275	Dummy Wrist Watch	1	6d. each	England.
276	Waistcoat Buttons	1 set	6d. set	Japan.
277	Pocket Mirror	1	3d. each	Germany.
278	Small Lamp	1	1s. od. each	Do.
279	Kanga	1	4s. od. each	England.
280	Knickers, Bodice and Hat	1 each	Sold at 1s. od. each	Local make.
281	Knickers and Shirt	Do.	Do. do.	Do.
282	Hat for Natives	1	Sold at 6d. each	Do.
283	Fly	1	Sold at 2s. od. each	England.
284	Mats	2	4s. od.	Local make.
285	Dish Cover	1	1s. od.	Do.
286	Wooden Clogs	1 pair	1s. od. pair	Do.
287	Stool and Coconut Grater	1	2s.	Do.
288	Drinking Scoops	2	6d. each	Do.
289	Spoon	1	3d. each	Do.
290	Small Brushes	2	3d. each	Do.
291	Coloured Wicker Boxes	2	3s. od. each	Aden.
292	Baskets	2	3d. each	Local make.
293	Fans (coloured)	4	6d. each	Do.

All the exhibits in the Indian *duka* are presented by the Indian Association, Dar es Salaam.

C.—GOVERNMENT EXHIBITS
A.—NATIVE AGRICULTURAL DISTRICT EXHIBITS

No.	District.	Locality or Tribe.	Exhibit.		Remarks.	Weight. lb.
			English Name.	Local Name.		
				<i>Swahili.</i>	<i>Masai name.</i>	
371	Arusha	Arusha	Beans I ...	Maharagwe	Ilmaraki	
372	"	"	" II ...	"	"	
373	"	"	" III ...	"	"	
374	"	"	Pigeon Pea ...	Mbazi ...	Ujukuu ...	
375	"	"	Beans ...	Kunde ...	Sigorio... ..	
376	"	"	Eleusine ...	Wimbi ...	Eudava ...	
377	"	"	Bonavist beans ...	Fiwi ...	Uguara ...	
378	"	"	Kidney beans ...	Maharagwe meusi	Ilmejemeje ...	
379	"	Mbulu	Sorghum (red) ...	Mtama ...	Mangwere ...	
380	"	"	Sorghum (white) ...	"	Awaka... ..	
381	"	"	Rice ...	Mchele... ..	Basoro... ..	
382	"	"	Eleusine ...	Wimbi ...	Bambari ...	
60	Bagamoyo	"	Beans ...	Mbazi ...	Local selling price 1d. lb.	7
61	"	"	" ...	Kunde ..	Do. 1d. lb.	8
62	"	"	" ...	Var. Sokoka ...	Do. 2d. lb.	8
63	"	"	" ...	" Rufoa ...	Do. 2½d. lb.	7½
64	"	"	" ...	" Gamti ...	Do. 2½d. lb.	7½
65	"	"	Maize ...	Karachi ...	Do. ½d. lb.	7
66	"	"	Cotton lint ...	Pamba ...	Native grown...	3
103	"	"	Gum copal ...	Sandarusi ...	—	14½
205	"	"	Cotton lint ...	Pamba ...	Native grown	2½
383	Bukoba	"	Coffee Robusta ...	Buni ...	Cleaned ...	
384	"	"	" Guatemala ...	" ...	" ...	

APPENDIX XII—continued.

No.	District.	Locality or Tribe.	Exhibit.		Remarks.	Weight. lbs.	
			English Name.	Local Name.			
385	Bukoba	...	Coffee in cherry	...	Dried (buni) ...		
386	"	...	Chillies	...	Pilipili		
387	"	...	Seed-cotton	...	Pamba		
388	"	...	Groundnuts	...	Njugu mawe		
389	"	...	"	...	" nyasa		
390	"	...	Beans	...	Kunde		
391	"	...	Maize	...	Mahindi		
392	"	...	Millet (red and white)	...	Mtama		
393	"	...	Tobacco and cigars	...	Tumbako		
394	"	...	Ginger	...	Tangawezi		
395	"	...	Eleusine (coracan)	...	Wimbi		
396	"	...	Cassava	...	Muhogo		
397	"	...	Gum arabic	...	Gundi		
398	"	...	Beeswax	...	Nta		
399	"	...	Coffee huller	...	Kinu	Native made ...	
105	Dar es Salaam	Kisangire	Groundnuts	...	Njugu mawe	Unshelled ...	
108	"	"	"	...	" nyasa	" ...	
115	"	"	Rice	...	Mpunga	9	
116	"	"	Seed-cotton	...	Pamba	Native grown	
330	"	Mafia Is.	Cashew nuts	...	Korosho	25½	
57	Dodoma	Grown by the Wagogo and Wanyaturu	Groundnuts	...	Njugu mawe	Local price 10 lb. for 6d.	10
58	"	"	Maize	...	Mahinde	" 4d.	10½
59	"	"	Sorghum	...	Mtama	" 3d.	10
67	"	"	Millet	...	Uwele	" 3d.	10
68	"	"	Sorghum	...	Mtama	" 3d.	10

69	"	...	"	Cassava	Muhogo	per lb. ...	7 $\frac{1}{2}$
70	"	...	"	Tobacco	Tumbako	2s. per 4 $\frac{1}{2}$ lb. ...	4 $\frac{1}{2}$
71	"	...	"	Groundnuts	Karanga	1 $\frac{1}{2}$ d. per lb. ...	9 $\frac{1}{2}$
90	Iringa	...	...	Hemp rope	Kamba ya Bangi		17 $\frac{1}{2}$
	"	...	...	Nests of the communal silkworm <i>Diapalpus congregarius</i>			
204	"	...	...	Silkworm cocoons ...			18
119	Kigoma	...	Ujiji...	Salt	Kihija ya chumvi		346
109	"	...	" ...	Groundnuts	Njugu nyasa	Presented by Hilali b. Ali.	2 $\frac{1}{2}$
110	"	...	" ...	Palm kernels	Chikichiki ...		27
111	"	...	" ...	Pods of Kapok	Sufi		1 $\frac{1}{2}$
112	"	...	" ...	Rice	Mpunga	Presented by Suleman Premji	10
91	"	...	...	Groundnuts No. 2 ...	Karanga ...		6 $\frac{1}{2}$
95	"	...	...	Groundnuts No. 1 ...	"		6 $\frac{1}{2}$
43	Kilwa	...	...	Cotton lint	Pamba ...		5 $\frac{1}{2}$
44	"	...	...	" seed	Mbegu ya pamba		10 $\frac{1}{2}$
100	"	...	Kibata ...	Rice	Mchele... ..		9
237	Kondoa Irangi	...	Mkalama ...	Groundnuts (unshelled)	Njugu nyasa ...	$\frac{1}{2}$ d. per lb. ...	1
248	Lindi	...	Mikindani ...	Seed-cotton	Pamba ...	1st grade, native grown. Sold at 3d. lb.	6
240	"	...	" ...	" lint	"		4
250	"	...	" ...	Cotton lint	"	1st grade, native grown. Sold at 10 $\frac{1}{2}$ d. lb.	2 $\frac{1}{2}$
251	"	...	" ...	"	"		2 $\frac{1}{2}$
252	"	...	" (Rovuma).	Seed-cotton	"	1st grade, native grown. Sold at 3d. lb. Local price	6 $\frac{1}{2}$

APPENDIX XII—continued.

No.	District.	Locality or Tribe.	Exhibit.		Remarks.	Weight, lbs.
			English Name.	Local Name.		
311	Lindi ...	...	Tobacco ...	Tumbako ...	5 lb. for 6d. ...	7
312	"	...	Millet ...	Mtama ...	4s. for 100 lb....	14
313	"	...	Beeswax ...	Mta ...	22s. for 35 lb....	6
314	"	...	Groundnuts ...	Njugu mawe ...	8s. for 100 lb....	15
315	"	...	Simsim ...	Ufuta ...	18s. for 100 lb.	
316	"	...	Gum copal, underground (uncleaned)	Sandarusi ...	26s. for 35 lb....	8
317	"	...	Gum copal, surface (uncleaned)	" ...	13s. for 35 lb....	5
318	"	...	Maize ...	Mahindi ...	3s. for 100 lb....	11
319	"	...	Bullrush millet ...	Mawele ...	4s. " ...	15
320	"	...	Jerusalem pea ...	" ...	9s. " ...	15
321	"	...	Rice (hulled) ...	Mchele (Bungala var.)	11s. " ...	14
322	"	...	Bonavist bean ...	Fiwi ...	9s. " ...	14½
323	"	...	Pigeon pea ...	Mbazi ...	6s. " ...	15
324	"	...	Groundnuts ...	Njugu nyasa ...	18s. " ...	15
325	"	...	" ...	Njugu mawe ...	8s. " ...	14
326	"	...	Rice (hulled) ...	Mchele (shindano var.)	11s. " ...	15½
327	"	...	" (unhulled) ...	Mpunga ...	5s. " ...	12
253	"	...	Seed-cotton ...	Pamba ...	1st grade, 3d. lb	4
254	"	...	Cotton lint ...	" ...	1st grade, 10½d. lb.	4
255	"	Mikindani	Seed-cotton ...	" ...	" 3d. lb.	5½
256	"	...	Cotton lint ...	" ...	" 10d. lb	2
257	"	...	Seed-cotton ...	" ...	" 3d. lb.	5
258	"	...	Cotton lint ...	" ...	10½d. lb	3

259	"	...	...	Seed-cotton	...	...	"	...	grade 3d. lb.	6
260	"	...	...	"	...	...	"	...	3d. lb.	5
261	"	...	...	Cotton lint	...	...	"	...	10½ d. lb.	3
234	Morogoro	...	All tribes	Rice	...	...	Mchele...	...	1d. to 1d. lb.	10½
235	"	...	Kilu tribe	Cowpea	...	...	Kunde	...	½ d. lb.	11
238	"	...	...	Beans	...	...	Maharagwe	...	1d. per 2½ lb.	10
239	"	...	...	Rice	...	...	Mpunga	...	1d. lb.	10
240	"	...	...	Oil seeds (simsim)	...	...	Ufuta	...	3½ d. per 2½ lb.	10
241	"	...	Uluguru tribe	Chillies	...	...	Mpilipili	...	...	2
242	"	...	...	Millet	...	...	Mtama	...	3 lb. for 1d.	9½
246	"	...	...	Tobacco (black)	...	...	Tumbako	...	...	3½
245	"	...	...	Pepper	...	...	Pilipili manga...	...	2½ lb. for 4/6	...
236	"	...	...	Tobacco (roll)	...	...	...	...	...	5
125	"	...	Kilosa	Cotton lint	...	...	Pamba	...	1st grade, average sample	4
126	"	...	Turiani	"	...	...	"	...	"	6
127	"	...	"	Seed-cotton	...	...	"	...	"	10½
137	"	...	Morogoro	Peas	...	...	Chiroko	...	zd. per lb.	10½
123	Moshi	...	...	Cotton seed	...	...	Mbegu ya Pamba	...	...	10
124	"	...	...	Cotton lint	...	...	Pamba	...	...	8
Y/1	"	...	Wachagga	Maize	...	...	Mahinde	...	...	...
Y/2	"	...	...	Canadian Wonder Beans	...	...	Maharagwe	...	...	...
Y/3	"	...	...	White Madagascar Beans	...	...	"	...	...	...
Y/4	"	...	...	Dun Peas	...	...	"	...	...	...
Y/5	"	...	...	Marrowfat Peas...	...	...	"	...	...	...
Y/6	"	...	...	Speckled Beans	...	...	"	...	...	...
Y/7	"	...	...	"	...	...	"	...	Small	...
Y/8	"	...	...	White Medium Haricots	...	...	"	...	...	...
Y/9	"	...	...	Dhall	...	...	Choroko	...	...	...
Y/10	"	...	...	Tree Beans	...	...	Mbazi	...	...	...
Y/11	"	...	...	Kweme Nuts	...	...	...	...	...	...
Y/12	"	...	...	Rye	...	...	...	...	...	...
Y/13	"	...	...	Native Beans	...	...	Kunde	...	...	...
Y/14	"	...	...	Chillies	...	...	Pilipili	...	Small type	...
Y/15	"	...	...	Rice Paddy	...	...	Mpunga	...	...	...

APPENDIX XII—continued.

No.	District.	Locality or Tribe.	Exhibit.		Remarks.	Weight. lbs.
			English Name.	Local Name.		
Y/16	Moshi ...	Wachagga ...	Millet Seed ...	Mtama...	Syrian type	...
Y/17	" ...	" ...	" ...	" ...	Indian type	...
Y/18	" ...	" ...	Negro Beans ...	Kunde...	...	...
...	Mwanza ...	" ...	Simsim (white) ...	Ufuta ...	...	...
...	" ...	" ...	Chiroko (green & black)	...	...	...
...	" ...	" ...	Beeswax ...	Mta ...	...	...
...	" ...	" ...	Cotton ...	Pamba...	...	...
...	" ...	" ...	Gum ...	Gundi	...	...
...	" ...	" ...	Groundnuts ...	Karanga	...	...
...	" ...	Ukerewe Is.	Paddy and rice ...	Mpunga and Mchele	...	...
...	" ...	Ukara Is. ...	" ...	"	...	...
...	" ...	Usukuma ...	" ...	"	...	...
297	" ...	Nyambiti ...	Cotton seed ...	Mbegu ya Pamba	...	8
299	" ...	" ...	" lint ...	Pamba ...	...	5
48	Pangani ...	" ...	Mkweme nuts ...	...	...	6½
102	Pangani Rice, s	specimens of 12	vars., as follows:—			
	(1) Nelli meriko	ra.	(5) Mruji.	(9) Singalanj	ubu.	
	(2) Ambarmaki.		(6) Kinamona.	(10) Kiguruw	a.	24½
	(3) Karafur bibi	ja kuguja.	(7) Koroway.	(11) Bwana m	yury.	
	(4) Kijunari.		(8) Pangani.	(12) Kibungul	a.	
247	Pangani ...	Arabs ...	Areca nut ...	Mpopoo ...	...	7
51	Rufiji... ...	Tawi ...	Simsim ...	Ufuta ...	Tribe Wamatumbi, 1½d. per lb.	12
52	" ...	Rondonbo, Mohoro	Cucumber seed ...	Mbegu ya mtango	Tribe Wamatumbi, ½d. per lb.	11½

53	"	Nyaringwe, Utete	Rice, unhusked	Mpunga halimaya	per lb.	11½
54	"	Mkunga, Utete	Cowpeas	Kunde	¾d. per lb.	11½
55	"	Kikale ...	Bonavist beans	Fiwi	1¼d. per lb.	12
56	"	Kiwili, Utete	Tobacco	Tumbako	3 lb. for 1s.	7
72	"	Kiwinja ...	Beeswax	Nta	36 lb. for 20s.	5½
73	"	Mohoro ...	Jaggery	Sukari guru	35 lb. for 4s.	27
74	"	Nyaringwe, Utete	Rice (unhusked)	Mpunga Jagermali	¾d. per lb.	11
75	"	Mohoro ...	Cashew nuts	Koroshu	2¼ lb. for 1s.	7½
76	"	Rondondo ...	Ginger	Tangawezi	1s. 3d. per lb.	9
77	"	Kiegere ...	Chillie peppers	Pilipili	2d. per lb.	2½
78	"	Matumbi, Tawi	Surface gum copal	Sandarusi ya guni	8d. per lb.	11
79	"	Rondondo, Mohoro	Green beans	Chiroko	1¼d. per lb.	11½
80	"	Mohoro ...	Rice	Mchele...	1¼d. per lb.	11½
81	"	Kitembo, Magongo	Cassava flour	Unga ya Muhogo	1¼d. per lb.	11½
82	"	Kitunda, Tawi	Bullrush millet	Uwimbe	¾d. per lb.	11½
83	"	Kingongo, Mohoro	"	"	¾d. "	11
84	"	Kihimbwa, Utete	Maize	Marombe (var. Monde)	1¼d. "	9½
85	"	Mbwera, Mohoro	Powdered starch	Uwanga	1¼d. " (Grows wild, and is used for food and laundry work)	7
86	"	Usimbe, Mohoro	Rice (unhusked)	Mpunga Sindano	¾d. per lb.	11½
87	"	Kumbi, Tawi	"	Mpunga- borakupata	¾d. "	11

APPENDIX XII—continued.

No.	District.	Locality or Tribe.	Exhibit.			Remarks.	Weight. lbs.
			English Name.				
88	Rufiji...	Rondondo, Mohoro	Millet	Mtama ...	½d. " ... (Used for food and beer- making.)	10	
331	" ...	Kilimani ...	Cotton lint	Pamba ...	...	5
304	Rungwe ...	Kikinga ...	Peas	Sibolo ...	1s. for 56 lb. ...	12	
303/6	" ...	Kinyakyusa	Beans	Udima...	1s. " ...	20	
307	" ...	"	Maize	Firombe ...	1s. " ...	17	
305	" ...	"	Millet	Malesi ...	2s. " ... (For food and beer.)	18	
328	" ...	Kikinya ...	Wheat	Ngano ...	2s. for 56 lb. ...	57	
301	" ...	Kinyakyusa	Chillies	Pilipili ...	2½d. for 5 lb. ...	1	
302	" ...	"	Castor-oil beans...	Nyemba ...	2s. for 56 lb. ...	5	
310	" ...	"	Flax	Masapa ...	3s. " ...	3	
308	" ...	"	Linseed	Mbegu ya masapa	5s. for 50 lb. ...	12	
300	" ...	"	Rice	Mpunga ...	2s. for 56 lb. ...	6	
1	Songea ...	"	Beans	Maharagwe ...	...	7
2	" ...	"	Hill rice	Kiambena ...	...	5½
333/3	" ...	"	Peas (P'geon)	Mbazi ...	...	13½
4	" ...	Lipumba ...	Wheat	Ngano ...	From native seed	5½	
5	" ...	"	Cowpeas	Kunde...	...	8½	
6	" ...	"	Sesame	Simsim ...	...	6½
7	" ...	"	Groundnuts	Njugu mawe ...	...	6
8	" ...	"	"	Njugu nyasa ...	...	6
332	" ...	"	"	Njugu nyasa ...	...	10
9	" ...	"	Eleusine (coracan)	Malezi ...	... called ... crop of the District.	6

10	"	...	...	Hill Rice...	...	Kikweta	...	5
11	"	...	...	"	...	Nyumba	...	5½
12	"	...	...	Beans	...	Mangutungu	Have strong as- tringent properties	7
13	"	...	...	Wheat	...	Ngano	From Nyasa- land seed	6
14	"	...	...	Hill Rice...	...	Rufiji	...	4
15	"	...	...	"	...	Safari	...	4½
16	"	...	...	Beans	...	Maharagwe	...	7
17	"	...	...	"	...	Mandondo	...	7
18	"	...	...	Hill Rice	...	Kingomo	...	4
19	"	...	...	Swamp Rice	...	Sena	...	3½
20	"	...	...	Hill Rice...	...	Shindano	...	2½
21	"	...	...	"	...	"	...	7½
22	"	...	...	Swamp Rice	...	Kuanza	...	3½
23	"	...	...	Hill Rice...	...	Fara	...	2
89	"	...	...	Roll of Tobacco...	...	Tumbako	...	2
93	"	...	...	4 cakes of Beeswax	...	Nta	...	5½
94	"	...	...	Lump Tobacco	...	Nguli ya tum- bako	...	5
24	Tabora	...	Wanyamwezi	5 cakes of Beeswax	...	Nta	1s. od. per lb...	13
25	"	...	"	Maize (red)	...	Mahinde	½d. a cob	3
26	"	...	"	Maize (Hickory King)	...	"	"	4½
97	"	...	"	Ironstone	...	Utindo	...	...
27	"	...	"	Cigarettes and Tobacco...	...	Sigreti and Tumbako	Cigarettes, 50 for 1s. 3d. Tobacco, 100 grms. for 1s. od.	12 lb. tin.
28	"	...	"	Beans	...	Maharagwe	3s. od. for 35 lb.	10½
29	"	...	"	Groundnuts (West African variety)	...	Karanga	4s. od. "	8
30	"	...	"	Groundnuts	...	"	4s. od. "	10
31	"	...	"	Gum	...	Gundi	6s. od. to 8s. od. for 35 lbs.	11

APPENDIX XII—continued.

No.	District.	Locality or Tribe.	Exhibit.		Remarks.	Weight. lbs.
			English Name.	Local Name.		
32	Tabora ...	Wanyamwezi	Rice	Mpunga ...	6s. od. for 35 lb.	12
33	" ...	"	Beans (white)	Maharagwe ...	3s. od. "	10½
34	" ...	"	Sesame	Ufuta ...	6s. od. "	9½
35	" ...	"	Castor Oil Bean... ..	Mbarika ...	Used medicin- ally	4
36	" ...	"	"	" ...	"	9½
37	" ...	"	"	" ...	"	10½
38	" ...	"	Guinea Corn	Mtama... ..	2s. od. for 35 lb.	11
39	" ...	"	Castor Oil Bean... ..	Mbarika ...	Used medicin- ally	1
40	" ...	"	"	" ...	"	3½
41	" ...	"	"	" ...	"	1
42	" ...	"	Pig-iron	Maji ya Chuma	Used for spear- making	3
45	" ...	"	Iron-stone	Mawe ya Chuma	"	5
47	" ...	"	Starch	Wanga... ..	3d. for 1½ lb.	15½ lb. box.
104	" ...	"	Chillies	Pilipili... ..	7s. od. to 9s. od.	16
49/329	" ...	"	"	" ...	for 35 lb.	21½
50	" ...	"	Starch Powder	Wanga... ..	6d. for 1½ lb.	4½
92	" ...	"	Pig iron	Maji ya Chuma	"	6
...	" ...	Shinyanga ...	Chillies (small)	Pilipili... ..	"	6½
...	" ...	"	" (large)	" ...	"	5
298	" ...	"	Cotton Lint	Pamba ...	"	108
296	" ...	"	Cotton Seed	Mbegu ya Pamba	"	8
T/1	Tanga ...	Mnyusi ...	Seed-cotton	Pamba	"	1prcl.

T/50-51	"	...	...	Beans ...	...	Kunde	...	2 bags.
T/2	"	...	Muheza	Seed-cotton	...	Pamba	...	1 bag.
T/27	"	...	"	Castor Oil Seed	...	Nyemba	...	"
T/54	"	...	"	Beans	...	Kunde	...	"
T/3	"	...	Gombero	Seed-cotton	...	Pamba	...	"
T/37	"	...	"	Coconuts...	...	Minasi	...	1 bdle.
T/39	"	...	"	Rice	...	Mpunga	Unhusked	1 box.
T/4	"	...	Tongoni	Seed-cotton	...	Pamba	...	1 bag.
T/5	"	...	Moa	"	...	Pamba	...	"
T/38	"	...	"	Rice	...	Mpunga	Unhusked	1 box.
T/52	"	...	"	Beans	...	Kunde...	...	1 bag.
T/58	"	...	"	"	...	Maweze	...	"
T/59	"	...	"	"	...	Kimanga	...	"
T/6	"	...	Buiti	Seed-cotton	...	Pamba	...	"
T/43	"	...	"	Rice	...	Mpunga	Unhusked	1 box.
T/46	"	...	"	"	...	Mchele...	Cleaned	"
T/56	"	...	"	Maize	...	Mahindi	...	1 bag.
T/7	"	...	Mahengo	Seed-cotton	...	Pamba	...	"
T/28	"	...	Mrimba	Mkweme Nuts	...	"	...	"
T/44	"	...	"	Rice	...	Mpunga	Unhusked	1 box.
T/48	"	...	"	Beans	...	Kunde...	...	1 bag.
T/29	"	...	Tangata	Tobacco Leaf	...	Tumbako	...	1 pkt.
T/49	"	...	"	Beans	...	Kunde	...	1 bag.
T/40	"	...	Pongwe	Rice	...	Mpunga	Unhusked	1 box.
T/9	"	...	"	Clean Cotton	...	Pamba	...	1 bag.
T/41	"	...	Tanga	Rice	...	Mpunga	Unhusked	1 box.
T/45	"	...	"	"	...	Mchele...	Cleaned	"
T/57	"	...	"	Simsim	...	Ufuta	...	1 bag.
T/42	"	...	Amani	Rice	...	Mpunga	Unhusked	1 box.
T/47-	"	...	"	Beans	...	Kunde	...	3 bags.
53-55	"	...	"	"	...	"	...	"
T/30	"	...	Kizara Mission	Tobacco Cake	...	Tumbako	...	1 pkt.
129	Ufipa...	...	...	Soapberries	...	Arita	Used for washing purposes	7

APPENDIX XII—continued.

No.	District.	Locality or Tribe.	Exhibit.		Remarks.	Weight. lbs.
			English Name.	Local Name.		
130	Ufipa	...	Groundnuts (unshelled)	Njugu mawe ...	...	5½
131	"	...	Beans	Kunde... ..	...	4½
132	"	...	Curry powder and Root	Manjano ... ..	...	1
133	"	...	Eleusine (coracan) ...	Malezi ... ..	...	6
134	"	...	Sesame	Ufuta ... ..	...	6
135	"	...	Beans	Maharagwe ... ..	...	11
136	"	...	Rice (unhusked)	Mpunga ... ..	...	11
100	Usambara	Gonja Dist....	Beans (grey)	Kunde	1d per lb. ...	12½
243	"	Mlola "	"	Fiwi	1d. " ...	5
244	"	Gonja "	" (brown)	Kunde	1d. " ...	12½
262	"	Mlola "	" (mixed)	Fiwi	1d. " ...	4
263	"	" "	"	Mbazi	¾d. " ...	10
264	"	" "	"	"	¾d. " ...	9
265	"	Korogwe ...	Groundnuts	Njugu mawe ...	1d. " ...	4
266	"	Mlola ...	Beans	Maharagwe ...	1½d. " ...	12
267	"	Kikurio ...	Salt	Chumvi	¾d. " ...	9
107	Mbulu School, Arusha	...	Barley ... ..	...	...	10
113	Utengule School, Songea	...	Soya Beans ... ..	...	...	5
114	Songea School	...	Wheat (Nyasa seed) ...	Ngano	Grown by pupils in the School Gardens	8
117	Mbulu School, Arusha	...	Madagascar Butter Beans	...		9½
118	Utengule School, Songea	...	Green Peas	Chiriko		6

APPENDIX XII—continued.

B.—EXHIBITS FROM THE AGRICULTURAL INSTITUTE, ANONI.

No.	Exhibit.	Remarks.	Weight.
1	<i>Coffea robusta</i>	Specimen in spirit	
2	" "	In parchment	lbs.
3	" "	Without parchment	
4	" <i>Quillou</i>	Specimen in spirit	
5	" "	In parchment	lbs.
6	" "	Without parchment	
7	" <i>Bukobensis</i>	Specimen in spirit	
8	" "	In parchment	lbs.
9	" "	Without parchment	
10	" <i>excelsa</i>	Specimen in spirit	
11	" <i>liberica</i>	Specimen in spirit	
12	<i>Erythoxylon Coca</i> (Cocaine)	" "	
13	<i>E. Coca</i> , var. <i>novagranatense</i>	" "	
14	<i>E. Coca</i>	Showing the dried crushed leaves	
15	<i>Telfairia pedata</i> , Mkweme	Picture showing fruit	
16	" " "	Showing seeds from which the oil is extracted	
17	" " "	Showing oil extracted from the seeds	
18	<i>Allanblackia Stuhlmannii</i>	Picture showing fruit	
19	" " "	Showing fat obtained from seeds	
20	<i>Bixa Orellana</i>	Showing the seeds from which the dye "Annatto" is obtained.	
21	" " "	Showing the prepared powder ready for use... ..	
22	<i>Elaeis guineensis</i> , Oil Palm	Showing the fruit from which the oil is extracted.	
23	" " "	Showing oil obtained from the fruits... ..	
24	<i>Phoenix reclinata</i> , Mkindu	Showing the dried fronds as obtained from the palm.	
25	" " "	Showing the dyed platings made from the leaves.	

APPENDIX XII—continued.

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No.	Exhibit.	Remarks.	Weight.
26	<i>Carludovica incisa</i>	Showing dried specimen of leaves from which Panama hats are made.	...
27	<i>Agave rigida</i>	Showing sisal obtained	...
28	" " var. <i>elongata</i>	" " " " " " " "	...
29	" " <i>sisalana</i>	" " " " " " " "	...
30	<i>Cinnamomum Zeylanicum</i> , Cinnamon	Showing the bark as taken from the tree	...
31	" " " " " " " "	Showing prepared bark	...
32	<i>Cinnamomum Camphora</i> , Camphor	Showing specimens of dried leaves	...
33	" " " " " " " "	Showing Camphor crystals	...
34	" " " " " " " "	Showing crude Camphor Oil	...
35	" " " " " " " "	Showing refined Camphor Oil	...
36	<i>Artemisia afra</i>	Showing dried specimen of flower heads; a probable source of Santonin.	...
37	<i>Erythrophleum guineense</i> , Sassy Bark	Showing the dried bark	...
38	<i>Cinchona robusta</i>	Showing dried specimens of leaves and flowers	...
39	" " " " " " " "	Showing the dried bark from which quinine is extracted.	...
40	" <i>Ledgeriana</i>	Showing dried specimens of leaves and flowers	...
41	" " " " " " " "	Showing the dried bark	...
42	" <i>succirubra</i>	Showing dried specimens of leaves and flowers	...
43	" " " " " " " "	Showing the dried bark	...
44	<i>Cinchona Ledgeriana</i> and <i>C. succirubra</i> (<i>Cinchona</i> hybrid).	Showing dried specimen of leaves and flowers	...
45	<i>C. Ledgeriana</i> and <i>C. succirubra</i> (<i>Cinchona</i> hybrid).	Showing the dried bark	...
46	<i>Camellia theifera</i> , Tea	Prepared tea	5 kilos.
47	<i>Eugenia caryophyllata</i>	Cloves	5 lb.
48	<i>Areca Catechu</i> , Areca Nut	Showing dried nut as collected from the tree	...
49	" " " " " " " "	Showing nut with husks removed	...

APPENDIX XII—continued.

C.—EXHIBITS FROM THE PUBLIC WORKS DEPARTMENT

No.	Exhibit.	Remarks.	Weight.
...	Msaar Timber (Kilimanjaro mahogany) ...	For making stands and panelling in the Court	...
...	Mkangazi Timber ...	...	...
...	2 Tables ...	...	...
...	2 Stands ...	...	...

D.—EXHIBITS FROM THE RAILWAY DEPARTMENT

| Mninga Timber ... | For making stands and panelling in the Court | ...

E.—EXHIBITS FROM THE FORESTRY DEPARTMENT

No.	Native name.	Size of plank.
01	Mwandama ...	5½ ft. × 12 ins. × 1½ ins.
05	Kilabe ...	5½ ft. × 12 ins. × 1½ ins.
09	Kimba ...	5½ ft. × 10 ins. × 1½ ins.
010	Ngwe ...	5½ ft. × 14 ins. × 1½ ins.
011	Muhungati ...	5½ ft. × 9 ins. × 1½ ins.
012	Mwewe ...	5½ ft. × 10 ins. × 1½ ins.
013	Mhombo ...	5½ ft. × 11 ins. × 1½ ins.
014	Msingtangusuwe ...	5½ ft. × 11 ins. × 1½ ins.
019	Mse ...	5½ ft. × 12 ins. × 1½ ins.
028	Mshongoranyika ...	5½ ft. × 9 ins. × 1 in.
033	Mbuzungu ...	5½ ft. × 10 ins. × 1½ ins.
008	Chafandwa ...	5½ ft. × 8 ins. × 1½ ins.

D.—EXHIBITS OF NATIVE ARTS AND CRAFTS

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
1	Arusha	Masai	Copper and Horn (Buffalo) Bracelet	Erav	Worn on left upper arm by warriors only. (Local price, 4s. od.)
2	"	"	Thigh Belt, with Bell ...	Olduala	Worn by warriors. (Local price, 8s. od.)
3	"	"	Bead Necklet	Osiririm	Worn round waist by warriors and young girls only. (Local price, 2s. od.)
4	"	"	Leather and Bead Head- band.	Engisarbo	Worn round forehead by young girls and young married women. (Local price, 4s. od.)
6	"	"	Waist Belt	Enniyana	Worn by young girls. (Local price, 6s. od.)
7	"	"	Bead Necklaces	Mboro	Worn by married women. (Local price, 12s. od.)
8	"	"	Brass Wire Armlet	Osuyai	Worn on left upper arm. (Local price, 12s. od.)
9	"	"	Iron Wire Necklets	Esenga	Worn by young girls. (Local price, 6s. od.)
10	"	"	Leather and Bead Armlet	Olgilisho	Worn on right upper arm by warriors and young girls. (Local price, 4s. od.)
11	"	"	Ear Chains	Ilyisia	Worn by young girls and young married women.

12	"	...	...	Masai	...	Head Ornament with brass appendages.	Surutia	Worn by married women.
13	"	...	...	"	...	Short Sword ...	Olalem ...	Used by warriors.
14	"	...	...	"	...	Colobus Headdress ...	Olvidivid...	Worn by warriors. (Local price, 20s. od.)
15	"	...	...	"	...	Buffalo-hide Shield ...	Elono ...	Used by warriors. (Local price, 30s. od.)
16	"	...	...	"	...	Spear ...	Embere ...	Used by warriors. (Local price, 24s. od.)
17	"	...	...	"	...	Ostrich Feather Tuft for Spear.	Esusul ...	(Local price, 8s. od.)
18	"	...	...	"	...	Feather Necklet (Vulture)	Olmairutie or Olmotonyi	Worn by warriors. (Local price, 20s. od.)
19	"	...	...	"	...	Skin Underskirt...	Olokosena	Worn by married women. (Local price, 3s. od.)
20	"	...	...	"	...	Necklet ...	Esegenge...	Worn by married women. (Local price, 6s. od.)
...		...	...	...	...	Armlet ...	Olvirangas	Worn on upper arm by married women. (Local price, 6s. od.)
21	"	...	...	"	...	Worn round legs by women.	Mindiri ...	Two. (Local price, 2s. od.)
22	"	...	...	"	...	Armlet ...	Esengengei or Endakule	Worn round forearm by women. (Local price, 2s. od.)
23	"	...	...	"	...	Ear-rings with Chains ...	Ngiraagani	Worn by women. (Local price, 1s. od.)
24	"	...	...	"	...	Lion Headdress ...	Olugatang	Worn by warriors. (Local price, 20s. od.)
2	Arusha (Mbulu)...			Wambulu	...	Dress of young girls ...	...	(Local price, 12s. od.)
...	"	...	...	"	...	Cloak of married women	...	(Local price, 15s. od.)
3	"	"	"	"	...	Dress of women during confinement.	...	(Local price, 8s. od.)
4	"	"	"	"	...	Dress of young married women.	...	(Local price, 16s. od.)

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
5	Arusha (Mbulu) ...	Wambulu ...	Dress of young girls ...	...	(Local price, 12s. od.)
6	" " ...	" " ...	Marriage Bracelet ...	...	Given by bridegroom. (Local price, 21s. od.)
7	" " ...	" " ...	Necklace ...	...	Given to bridegroom by a sister. (Local price, 1s. od.)
8	" " ...	" " ...	Ornamental Bracelet ...	...	Worn by the old men and women. (Local price, 5s. od.)
9	" " ...	" " ...	Local Fire-sticks ...	...	In general use. (Local price, 1s. od.)
10	" " ...	" " ...	Local hoe ...	Jembe ...	In general use. (Local price, 2s. od.)
11	" " ...	" " ...	Spear ...	...	(Local price, 3s. od.)
12	" " ...	" " ...	Shields ...	...	(Local price, 4s. od.)
13	" " ...	" " ...	Grass Baskets ...	...	(Local price, 1s. 3d.)
14	" " ...	" " ...	Cattle Bells ...	...	(Local price, 4s. od.)
15	" " ...	" " ...	Pliers ...	...	(Local price, 20s. od.)
D/D/1	Dar es Salaam ...	Wazaramu ...	Carved Walking sticks...	Fimbo ...	Used for dressing the hair in the narrow plaits peculiar to Swahili wo- men and tribes of the Coast belt.
D/B/1	" " ...	" " ...	Comb ...	Shanuo ...	
D/D/2	" " ...	" " ...	Ebony Walking Sticks...	Fimbo ...	Worn by women as an ornament at native dances.
T/C/1	" " ...	Swahili ...	Grass Mats ...	Mikeka ...	
D/A/4	Mafia Island ... Dar es Salaam ...	" " ...	Bead Headdress ...	Ushanga	

D/B/2	"	"	...	Combs	Shanuo ...	...
D/A/3	"	"	"	Musical instrument ...	Kidunguhi	...
D/A/2	"	"	"	" "	Kayamba	The reeds are filled with grains of millet, and shaken to keep time with the steps in native dances.
D/A/1	"	Wazaramu	...	Small Ceremonial Axes	Shoka	... Carried by the women at Wazaramu dances.
V/B/10	Dodoma	...	Wagogo	Lopping Axe ... ..	...	...
V/A/4	"	"	"	Armlet ... ..	...	Worn by men.
V/A/3	"	"	"	Belt ... ..	...	Worn by men at dances.
V/B/6	"	Wakaguru	...	Wooden Spoons	Vijiko	...
V/B/5	"	"	"	Marketing Baskets	Vikapo	...
V/B/1	"	"	"	Envelope Basket ... ..	...	...
V/A/1	"	"	"	Leg Ornaments ... ..	...	Worn by men.
V/B/9	"	Wagogo	...	Native Broom	Ufagio	...
V/C/2	"	Wakaguru	...	Model Native Bedstead	Kitanda	...
V/B/7	"	"	"	Flour Baskets ... ..	...	...
V/B/4	"	"	"	Grain Baskets ... ..	...	...
V/B/2	"	"	...	Milk or Beer Cups ... ..	...	...
V/B/3	"	"	"	Basin for Milk ... ..	...	...
V/C/3	"	"	"	Model Fish Trap ... ..	...	...
V/B/11	"	Wanguu	...	Knife with Horn Handle	Kisu	...
V/A/7	"	Wayao	...	Copper Waistbelts ...	...	Made from German telegraph wires.
V/C/1	"	Wakaguru	...	Models of Native Huts (framework only).	...	...
V/A/2	"	Wagogo	...	Club Stick ... ..	...	Used in fighting.
V/A/6	"	"	"	Neck Ornament ... ..	...	...
V/A/5	"	"	"	Ear Ornament ... ..	...	...
V/A/8	"	"	"	Copy of Masai Shield ...	Ngao	...
V/B/13	"	Wanyamwezi	...	Bark Boxes ... ..	...	Used for storing grain.
I/A/4	Iringa	...	Wahehe	War Spears	Mkuki	...

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
I/A/5	Iringa	Wahehe ...	Copper Waist Belt ...	Utunda ...	Worn by women as an ornament.
I/B/3	"	Wasanga ...	Beer Cup	Kikota ...	...
I/B/1	"	Wahehe ...	Grass Kilt ... ..	...	...
I/A/1	"	"	Native Drum	Ngoma ...	Covered with snake skin.
I/B/2	"	Wangonongona.	Wooden Milking Cup ...	Kinu ...	...
I/D/1	"	Wahehe ...	Native Stool	Kiti ...	Made from one piece of wood.
I/D/2	"	"	Ivory and Ebony Candlestick	Mpingo ...	Made by a native workman
I/D/3	"	"	Ebony and Ivory Salad Spoons and Forks.	Vijiko na Nyuma (Uma).	Made by a native workman
I/A/2	"	"	Musical Instrument ...	Igombo ...	...
I/A/3	"	"	Shield	Ngao ...	...
P/A/19	Kigoma, Kasulu ...	Waha ...	Spears	Mikuki ; Schumu	...
P/A/8	Kigoma, Ujiji ...	Watongwe ...	Hunting Spears	Mikuki ...	...
P/A/12	"	"	Spear	Mkuki ...	...
P/A/17	Kigoma, Kasulu	Waha ...	Copper Wristlet	Mulinga ; Wizuru	...
P/B/20	" " ...	" ...	Axe	Shoka ; Ikibezi ...	Used for domestic purposes.
P/C/5	Kigoma, Ujiji ...	Watongwe ...	Axes	Shoka ...	...
P/A/1	"	"	Knives	Kisu ...	Used in self-defence.
P/A/12	Kigoma, Kasulu ...	Waha ...	Sword	Panga ; Umurehe	...

P/A/13	" " ...	" ...	Sheath Knife ...	Kisu ; Mbugita	Slapped to back of upper left arm so that it can be easily drawn in event of sudden attack from behind.
P/A/6	Kigoma, Ujiji ...	Watongwe ...	Brass Bangle ...	Mulinga ...	...
P/A/18	Kigoma, Kasulu...	Waha ...	Brass Wristlet ...	Mulinga Mfuguiu	...
P/A/11	Kigoma, Ujiji ...	Watongwe ...	War and Hunting Spears	Mikuki ...	...
P/B/27	Kigoma, Kasulu...	Waha ...	Purse ...	Mfuko ; Ibuku	...
P/B/26	" " ...	" ...	Copper Bangles ...	Vikuku ; Nyelele	Made by the local women from copper wire, which they wind round goats' hair.
P/B/25	" " ...	" ...	Brass Armlets ...	Vikuku ; Midogi	...
P/A/11	Kigoma, Kasulu...	Waha ...	Zither ...	Inanga ...	...
P/B/24	" " ...	" ...	Anklelets ...	Nyelele or Sambo	...
P/B/2	Kigoma, Ujiji ...	Watongwe ...	Wooden Ladles ...	Kijiko ; Kilavio	...
P/B/22	Kigoma, Kasulu...	Waha ...	Bag ...	Mfuko ; Ndaha	Made from the Mishigura shrub.
P/B/9	Kigoma, Ujiji ...	Watongwe ...	Food Basket ...	Fundikwa	...
P/B/1	" " ...	" ...	Food Baskets ...	Mkoko ...	...
P/C/4	" " ...	" ...	Grass Mats ...	Mikeka ...	...
P/C/6	Kigoma, Kasulu...	Waha ...	Grass Trays ...	Ntimiri ...	...
P/B/6	Kigoma, Ujiji ...	Watongwe ...	Butter Pot ...	Mlindo ...	...
P/B/15	" " ...	Wakaranga...	Basket for carrying food	Kibango ...	...
P/B/13	" " ...	Watongwe ...	Food Safes ...	Kakubulu	...
P/B/8	" " ...	" ...	Food Container or Plate	Mabango...	...
P/B/4	" " ...	" ...	Types of Winnowing Basket.	Lukoko ...	...
P/B/28	Kigoma, Kasulu...	Waha ...	Bark Cloth Dress worn by men.	Mpuzu ...	...

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.	
			English Name.	Local Name.		
P/B/3	Kigoma, Ujiji ...	Watongwe ...	Milk Pot ...	...	Chansi ...	Made from a block of wood
P/B/21	Kigoma, Kasulu...	Waha ...	Native Hoe ...	...	Jembe; Nsuka	Smelted by native work- men from local ore.
P/B/11	"	"	Bark Cloth Suits ...	...	...	...
P/B/14	Kigoma, Ujiji ...	Watongwe ...	Food Safes ...	...	Umtiri ...	...
(3)	"	"	"	"	"	"
P/A/15	Kigoma, Kasulu	Waha ...	Whistles ...	...	Masoro ...	Made from hippo ivory. Worn round the neck and used when out hunting for calling dogs and other hunters.
P/A/16	"	"	Waist Belt ...	...	Iumbi ...	Worn by women; the bead part at the back.
P/D/2	Kigoma, Ujiji ...	Watongwe ...	Axe ...	...	Shoka ...	Used for wood carving.
P/B/12	"	"	Native Stools ...	...	Viti; Ntebe	Made out of one piece of wood.
P/A/4	"	"	Head Ornament ...	...	Kishingo	...
P/B/17	Kigoma, Kasulu	Waha ...	Cowskin Dress ...	...	Urusatu ...	...
P/A/7	Kigoma, Ujiji ...	Wakaranga...	Small Drum ...	...	Ngoma ...	...
P/A/10	"	Waha ...	Native Drum ...	...	"	...
P/B/5	"	Watongwe ...	Milk Pot ...	...	Kibuyu ...	Used to make butter by rolling.
P/A/9	"	Waha ...	Bow and Arrows ...	...	Upinde na mishale	...
P/A/14	Kigoma, Kasulu	"	"	"	Humuweto; Umwambi	...
P/C/7	"	"	Native Bellows ...	...	Umuvuba	...

P/C/1	Kigoma, Ujiji ...	Watongwe ...	Fire Holder ...	Kitatu ...	Used for night fishing on Lake Tanganyika.
B/C/6	Kilwa ...	Wangindo ...	Native Dugout Canoe ...	Ngarawa	Used for fishing.
B/A/1	"	Wamatumbi	Native Drums ...	Ngoma ...	Used at dances.
B/C/5	"	"	Models of Dhows ...	"	"
B/C/7	"	Swahili ...	Fish Traps ...	Uzio ...	"
B/C/4	"	"	Model Fishing Nets ...	Sone ...	"
B/C/2	"	"	Fish Trap ...	Dema ...	The traps are moored at a depth from 2 to 6 fathoms, and baited with a special kind of seaweed.
B/C/3	"	"	Model Fishing Net ...	Sima ...	"
B/C/1	"	"	Trawling Net ...	"	"
B/B/1	"	Wangindo ...	Food Baskets ...	Jemanda	"
B/B/2	"	"	Beer Cup ...	Kidoto ; Kirumba	"
B/A/2	"	Wamatumbi	Castanets ...	Viwangara	Used at native dances.
B/A/3	"	Wangindo, Wamatumbi	Bows and Arrows ...	Pinde na mishale	The tips of the arrows are poisoned by dipping them into a liquid, made by boiling down the pounded inner bark of a tree. Death from this poison occurs within 2 and 3 minutes.
K/A/12	Kondoa Irangi ...	Warangi ...	Spear ...	Mkuki ; Ichimo	"
K/A/18	"	Waburungi	"	Mkuki ; Klama	"
K/A/19	"	Wasandawi	"	Mkuki ; Bokwe	"
K/A/3	"	"	Guitar ...	Toto ...	"
K/B/8	"	Warangi	Swizzle Stick ...	Lufidi ...	Used for stirring gruel.
K/B/13	"	Wasandawi...	Snuff Box ...	Kibuiga ...	"

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
K/A/13	Kondoa-Irangi ...	Wasandawi... Warangi, Waburungi	Bows	Uta Kanii Ga'aya	...
K/B/15	" ...	Warangi ...	Horn Handles; Sheath- knife with Snuff Box	Fimbo; Suse	...
K/B/11	" ...	Warangi	Wooden Spoon	Mtiko ...	...
K/A/20	" ...	Warangi ...	Poisoned Arrows ...	Mishale; Misa	...
K/A/4	" ...	Waburungi	"	Mishale; Tabum	...
K/A/5	" ...	Wasandawi...	War Arrows	Mishale; Khunde; Msabn	...
K/B/10	" ...	Warangi ...	Arrows	Mishale; Magaa	...
K/B/34	" ...	Wasandawi Waburungi.	Arrows for Hunting ...	Mishale; Kasama na Pando	...
K/B/9	" ...	Wasandawi...	Arrow Knife	Mishale; Dzohei	Used for piercing the blood vessels of oxen for food in time of famine.
K/B/35	" ...	" ...	Arrow	Mishale; Isole	Specially designed to stun birds.
K/A/6	" ...	Warangi ...	Swearing Iron	Papahasimo	This iron is used in trial by ordeal and when administering an oath. The iron is heated in the fire, and then the blade

K/B/24	"	...	"	...	Woman's Dress, complete	Mkinda na ya nyuma.	...	aid on the tongue of the person to be tried. The blade is reserved for the use of men, and the other for women.
K/B/27	"	...	"	...	Firesticks	Lofezo	...	
K/A/10	"	...	Wasandawi...	...	War Headdress	Sangu	...	
K/B/1	"	...	Warangi	...	Types of Axe	Chadya	...	
			Wasandawi	...		Kongora		
			Waburungi	...		Kirara		
K/A/1	"	...	Warangi	...	Axe	Chadya	...	Used only in native dances.
K/B/6	"	...	"	...	Hoe	Isiri	...	
K/B/4	"	...	Wabarungi	...	Types of Billhooks	Senko	...	
			Wasandawi	...		Sanka		
			Warangi	...		Sengo		
K/B/31	"	...	"	...	Wooden Milking Pail	Kiramo	...	
K/A/2	"	...	"	...	Horn Bugle	Paranda	...	Used at native dances.
K/A/16	"	...	Waburungi...	...	Wooden Drum	Hosmo	...	Played by women.
K/B/36	"	...	Wasandawi...	...	Little Girls' Dress of Cord	Sambala	...	
K/B/12	"	...	Waburungi...	...	String Anklets and Hide Wristlets.	Kubu ; Rawi	...	
K/B/30	"	...	Warangi	...	Flour Tray	Kihadi	...	
K/B/25	"	...	"	...	Rich Woman's Dress	Kilamba	...	
K/A/14	"	...	"	...	Wedding Drum	Tangesa	...	
K/B/32	"	...	"	...	Beer Vessel	Lukulu	...	
K/B/28	"	...	"	...	Water Vessel	Kisuele	...	
K/A/17	"	...	Wasandawi...	...	Types of Flour Vessels	Dafaa	...	Used at wedding.
K/B/29	"	...	Warangi	...	Milk Basin	Kisenge	...	
K/B/30	"	...	"	...	Flour Tray	Kihadi	...	
K/A/7	"	...	Wasandawi...	...	Shield	Gonaa	...	
K/B/21	"	...	Warangi	...	Leggings	Masarata...	...	Worn by the old men of the wealthier classes.

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.			Remarks.	
			English Name.	Local Name.			
K/A/11	Kondoa-Irangi ...	Wasandawi .. Warangi Waburungi	Singlestick	...	...	Lonka Ngao Kome ; Gula ; Hada Karaso ...	...
K/B/26	" ...	Wasandawi...	Farm Rake	...	...	Ninga ...	..
K/A/15	" ...	Warangi ...	Drum	...	...	Mifuko ya	...
A/C/1	Lindi ...	Wamaraba ...	Tobacco Pouches of woven grass.			miaa ; Mikoba	...
A/B/1	" ...	" ...	Types of Wooden Spoons			Mkoba ...	...
A/A/2	" ...	Wayao, Wamakonde, Wamarabe	Drum	...	...	Ngoma ; Mvumi	Used at dances
A/A/1	" ...	Wamauko ...	Tribal Masks	...	...	Sanamu ; Ndimu	...
G/D/5	Morogoro	Waluguru ...	Carved Walking Sticks...			Fimbo ...	...
G/D/6	"	"	Carved Stick Handles	...	...	...	...
G/B/8	"	Wakhutu ...	Native Hoes with Wooden Handles.			Jembe ; Bode	This type of hoe was used before iron smelting was known.
G/B/14	"	Waluguru ...	Sling	...	...	Kumbewe Bewe	Used by children to scare birds.
G/C/3	"	"	Beer Cup	...	...	Kikota ; Kikona	...
G/C/5	"	Wahungo	Wicker Plate for Food			Kitunga ; Kiruyi	...
G/C/4	"	Wakhutu ...	Beer Pots...	...	...	Kitunga ; Chikona	...

G/D/4	"		Wahungu	Small Basket	Kikapo	...
G/C/7	"		Waluguru ...	Common type of Basket	Nange ...	Used for carrying farm produce.
G/B/1	"		"	Various types of kilt	Kisambo ;	...
G/C/1	"		Wahungu		Bwaya	...
G/C/2	"		Wakhutu ...	General Market Basket	Ungo ;	...
G/B/4	"		"	Type of Food Plate ...	Kikhatu	...
G/C/6	"		Wahungu	Goat Skin Cloth ...	Kitunga	...
G/B/12	"		Wanguru ...	Nest of Bags	Ngozi ;	The dye is obtained from the Mkattako tree.
G/B/11	"		Waluguru ...	Eating Plate	Bwende	...
G/D/1	"		"	Cooking Pot	Vikapo	...
G/B/7	"		Wahungu ...	Tobacco and Snuff Boxes	Kungu or	...
G/A/2	"		Wakhutu ...	Types of Spoons ...	Mkungu	...
G/B/10	"		"	Club or Knobkerrie ...	Chungu ;	...
G/A/3	"		Wahungu ...	Native Pipe	Kalongo	...
G/B/9	"		Waluguru ...	Axe	Tabakero	...
G/A/1	"		Wakhutu ...	"	Vijiko ;	Used in cooking.
S/B/1	Moshi	...	"	Old Knife	Miko	...
M/56	"	...	Wachagga ...	Food Stand	Rungu ...	Carried for personal protection.
M/57	"	...	"	Horn	Kiko ;	...
M/58	"	...	"	Sugar Mill	Ndoyo	...
	"	...	"	Necklace	Shoka ...	Formerly used in tribal warfare ; now carried as a mark of distinction by the old men as heads of families.
	"	...	Wakhutu ...	"	Shoka ;	For domestic purposes.
	"	...	"	Old Knife	Choka	...
	"	...	Wachagga ...	Food Stand	Panga ...	...
	"	...	"	Horn	Visahani ...	...
	"	...	"	Sugar Mill	Kilumo ...	Cupping-horn.
	"	...	"	Necklace	Kinu cha	...
	"	...	"	"	miwa	...
	"	...	"	"	Iwina ...	...

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
M/59-64	Moshi	Wachagga	Wooden Plates	Shitila ... ..	...
M/65-70	"	"	Stools	Lorika ... ..	...
M/71	"	"	Club	Rungu ... ..	...
M/72	"	"	Loin Ornament	Ndore ... ..	...
M/76-99	"	"	Gourds	Shirau	Beer tumblers
M/73	"	"	Shield	Ngao ... ..	...
M/74	"	"	Bee-hive	Modu ... ..	...
M/75	"	"	Hive-borer	Msasafu ... ..	...
M/100	"	"	Ornament	Kichenje... ..	Made of hair.
M/1-12	"	"	Sticks	Njuboi	Ebony wood.
M/13	"	"	Facial Ornament	Namuka	For warriors.
M/14	"	"	Ornament	Ngirono	For the back of warriors.
M/15	"	"	Hoof Rings	Rachi ... ..	...
M/16	"	"	Ornaments	Munge	For the feet of warriors.
M/18	"	"	Bow and Arrows	Ura na Mfi	For warriors.
M/45	"	"	Bow and Arrows	"	For elephant hunters.
M/20	"	"	Long Sticks	Oro	A game.
M/21	"	"	Wooden Rat Trap	Kisara cha mbewa ... ..	...
M/22	"	"	Spear	Fum ... ..	...
M/23	"	"	Feather Ornament	Mariti	For warrior's shoulder.
M/24-27	"	"	Wooden Basins connected with Stands.	Mbuta ... ..	...
M/28	"	"	Sword	Oshu	Warriors'
M/29	"	"	Meat Knife	Kishu kya ngau. ... ..	...
M/30	"	"	Honey Knife	Ukombo ... ..	...
M/31-36	"	"	Wooden Blood Pots	Shimoleko ... ..	...

M/37	"	...	...	"	...	Honey Vessel ...	Soro ...	...
M/38-43	"	...	...	"	...	Dishes ...	Mapango...	Made of wood.
M/44	"	...	...	"	...	Bag ...	Kikunja ...	...
M/19	"	...	...	"	...	Bow and Arrows	...	Used for incising cattle to get blood.
M/46	"	...	...	"	...	Drum ...	Ngoma ya wasuko	Used by lunatics.
M/47	"	...	...	"	...	Ring ...	Rachi ...	For the neck.
M/49	"	...	...	"	...	Ear Ornament ...	Ngoshole...	For the male.
M/48	"	...	...	"	...	" "	Ishara	For the female.
M/50	"	...	...	"	...	" "	Mauro ...	" "
M/51	"	...	...	"	...	Snuff Box ...	Ombe ...	...
M/52	"	...	...	"	...	Bangle ...	Ombo ...	...
M/53	"	...	...	"	...	Bead Belt ...	Funga	...
M/54	"	...	...	"	...	Bead Shoulder Ornament	Moyo Kishede ...	...
M/55	"	...	...	"	...	Circumcising Razor ...	Mkikito ...	Used for women.
1	Mwanza	...	...	...	...	Model of Victoria Nyanza dhow	...	Built by Swahili builders.
2	"	...	...	...	...	Model of Uncapsizable Uzinza Canoe; Spear and Float used for hunting Hippopotamus	...	The spear is thrown into the animal at night time on lake shore: the shaft comes away and leaves the poisoned head in the beast, which swims away. At dawn the float is searched for and the animal pulled alongside the canoe.
3	"	...	...	...	...	Model of Uzinza Canoe...	...	...
4	"	...	...	...	...	" "	...	With specimen of stone from which colouring is made, and broken calabash for baling water.

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibits.		Remarks.
			English Name.	Local Name.	
5	Mwanza ... ..	...	Spear ... ..	...	Made and carried by Wasukuma for self-defence.
6	" ... ..	...	"	...	" ... "
7	" ... ..	...	Model of Uzinza Drawing Jar	...	" ... "
8	" ... ..	...	Snuff Boxes ... ..	...	Made and used by Wazinza.
9	" ... ..	...	"	...	"
10	" ... ..	...	Uzinza Calabash ... ..	...	For drinking water.
11	" ... ..	...	"	...	" — "
12	" ... ..	...	Model of Uzinza canoe...	...	—
13	" ... ..	...	Models showing evolution of Uzinza Arrow before iron smelting was discovered by natives.	...	—
14	" ... ..	...	Native hand-woven cloth	...	Natural dyes produced by tapping trees.
15	" ... ..	...	Model of shield ... ..	...	Made and used by Wazinza.
16	" ... ..	...	"	...	"
17	" ... ..	...	Basket ... ..	...	Made and used by Wazinza as receptacle for food.
18	" ... ..	...	"	...	"
19	" ... ..	...	Uzinza Pipe with Tong	...	To put ashes on tobacco.
20	" ... ..	...	"	...	"
21	" ... ..	...	Basket ... ..	...	Made and used by Wazinza as plates.

22	"	...	...	"	...	...	Made and used by Wazinza as plates.
23	"	...	...	Axe	...	...	Old emblem of office of Sultans of Uzinza.
24	"	...	...	Model of Uzinza Cooking Pot and Spoon.	...	...	—
25	"	...	...	Model of Uzinza Cooking Pot.	...	...	—
26	"	...	...	Uzinza Calabash (for ladling water).	...	...	—
27	"	...	...	Model of Ukerewe Fishing Basket Trap.	...	...	—
28	"	...	...	"	...	...	"
29	"	...	...	Dancing "Ornaments"	...	...	Made and worn by Wasukuma.
30	Mwanza (Musoma)		...	Earrings	...	...	Worn by Wasimbiti women.
31	"	"	...	"	...	...	"
32	"	"	...	Ugaya Pipe with Tongs	...	...	To put ashes on tobacco.
33	"	"	...	"Mburete," hand embroidered and dressed goat skin.	...	...	Worn by the women of Ungruimi.
34	"	"	...	Model $\frac{1}{2}$ actual size of fish trap.	...	...	Used on Victoria Nyanza by Wajita.
35	"	"	...	"	...	...	"
E/D/3	Pangani	...	Waziguha	Walking Sticks	...	Fimbo	"
E/D/7	"	...	"	Walking Sticks, carved	...	Fimbo; Kihangay-sho	"
E/D/6	"	...	Wabondei	Tables	...	Meza	Made from one piece of wood.
E/D/1	"	...	"	Stools	...	Viti	"
E/C/1	"	...	"	Swahili Baskets	...	...	"
E/C/1	"	...	"		...	...	"
(6)							

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
E/C/2	Pangani ...	Wanawake ...	Mat for wall decoration...	Kihangasho	...
E/D/4	" ...	Wabondei ...	Carved Native Dish ...	Sahani ...	...
E/D/2	" ...	" ...	Specimens of carved Household Utensils.	...	...
E/D/5	" ...	" ...	Native Bowls ...	Bakuli ...	Made from one piece of wood.
C/C/3	Rufiji ...	Wanyagatwa	Canoe Paddles ...	Kafi ...	Used on the Rufiji river;
C/A/2	" ...	Wadengereko	Heavy Lion Spear ...	Mkuki ...	...
C/A/3	" ...	Matumbi ...	Light Lion Spear ...	" ...	...
C/C/1	" ...	Wanyagatwa	Model of dug-out Canoe	Matumbwi	Used on the Rufiji river; hollowed out of a tree trunk (Mvule).
C/B/6	" ...	Wadengereko	Grass Hat ...	Kofia ...	...
C/B/1	" ...	Wapogoro ...	Food Basket ...	Jamanda...	...
C/B/2	" ...	Wanyagatwa	Matting Sleeping Bag ...	Fumba ...	...
C/B/3	" ...	Wadengereko	Pruning Hook ...	Mundu ...	...
C/B/5	" ...	Wamatumbi	Model of Pestle and mortar.	Kinu ...	Used chiefly for making flour.
C/B/4	" ...	"	Coconut Graters ...	Mbuzi ...	...
C/A/1	" ...	"	Sword ...	Panga ; Sime	Now practically obsolete.
C/A/4	" ...	"	Bow and Arrows ...	Mishale na upinde	...
R/C/2	Rungwe ...	...	Woven Blankets and Cloths.	Bulanketi ; Ntandala.	...
R/B/8	" ...	Wanyamwanga.	Porridge Bowl ...	Entende ...	...
R/B/5	" ...	Wakinga ...	Axes ...	Nyengo ; Sengo	...

R/B/9	"	...	...	Snuff Boxes ...	Intekewe...	...
R/C/1	"	...	Wanyankusu	Native Baskets ...	Kibo ...	...
R/B/3	"	...	"	Copper Waist-belt ...	Linyeta ...	...
R/B/2	"	...	Wakinga ...	Grass Kilt ...	Mikindu ...	Worn chiefly at dances.
R/A/1	"	...	"	String Kilt ...	Kivikisa ...	...
R/B/1	"	...	Wanyankusu	Cow Bells ...	Mawangala ...	...
R/B/4	"	...	"	Drinking Cup ...	Kitana ...	...
H/B/1	Songea	...	Wayao ...	Bark Cloth Suit and Cap with grass lacing.	...	...
H/B/2	"	...	Wamatengo, Wapangwa	Hoes ...	Jembe ...	Both smelting and forging done by native workmen
H/D/1	"	...	Yao ...	Ivory Necklaces ...	Mkufu ...	Made by Yaos in the Songea district.
H/C/1	"	...	"	Sheath Knives with orna- mental handles.	Kisu ...	Native workmanship.
O/A/2	Tabora	...	Wanyamwezi	Necklaces ...	Senga ...	Worn by men.
O/A/3	"	...	"	Brass Bracelets ...	Komanzi...	"
O/B/12	"	...	"	Native Tooth Brushes ...	Miswaki or Misuaki.	...
O/C/5	"	...	Watusi ...	Straw Hats ...	Kofia ...	...
O/B/2	"	...	"	Drinking Cups ...	Masongo ...	...
(17)						
O/B/8	"	...	"	Bark Cloth ...	Mesani ...	...
O/C/4	"	...	Wanyamwezi	Specimens of native weaving.	Kakongo...	...
O/B/4	"	...	Wanyamwezi and Watusi	Clay Pipes ...	Kiko ...	...
O/B/13	"	...	"	Milk Pots ...	Chanzi ...	Shaped and hollowed from a block of wood.
O/A/1	"	...	Wanyamwezi	Head-dresses ...	Tenyangi	Worn by women at native dances.
O/B/6	"	...	"	Grass Brushes ...	Cheyo ...	...
O/B/1	"	...	"	Native Boxes ...	Kilindo ...	Used for storing grain.
O/C/2	"	...	Watusi ...	Grass Trays ...	Temeli ...	...
O/B/14	"	...	Wahehe ...	Beer Cups ...	Fizunzi ...	...

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
O/B/16	Tabora ...	Wanyamwezi	Beer Cups ...	Vikota ...	...
O/I/11	" ...	"	Hoes ...	Jembe;	...
O/B/17	" ...	"	Axes ...	Igembi Shoka;	Forged by native black-smiths.
O/B/5	" ...	"	Types of Wooden Spoons	Mbasa Pawa ...	...
O/B/3	" ...	"	Native Stools ...	Rubehe; Umgule; Masumbe	Made from one piece of wood.
O/B/9	" ...	"	Types of Calabash ...	Lukuru ...	...
O/B/10	" ...	"	Types of Water Vessels	Lukuru; Mtendi	...
O/D/2	" ...	"	Ebony Candlestick ...	Mpingo ...	...
O/C/6	" ...	Wasukuma...	Specimens of Hand-spun Yarn	...	...
O/C/3	" ...	Wanyamwezi	Ebony Bowls ...	...	...
O/B/18	" ...	"	Wooden Milking Bowls...	...	...
W/C/3	Tanga ...	Swahili ...	Fish Trap ...	Dema ...	...
W/B/2	" ...	" ...	Wooden Spoon ...	Kijiko ...	...
W/B/3	" ...	" ...	Wooden Stool ...	Kiti ...	...
W/C/2	" ...	Wabondei ...	Black and White Moa Mats.	Mikeka ...	...
W/C/1	" ...	" ...	Coloured Mats ...	" ...	...
W/A/1	" ...	Wadigo ...	Bow and Quiver of Arrows.	Upinde na ziaka ya mishale	...
W/B/1	" ...	" ...	Native Tobacco Pipe ...	Kiko ...	...
W/C/4	" ...	" ...	Model dug-out Canoe ...	.	...

W/A/2	"	...	...	Wabondei	...	Drum	...	...	Ngoma	...	...
Q/B/1	Ufipa	...	...	Wabende	...	Native Basket	...	...	Kapanda	...	...
Q/B/2	"	...	...	"	...	Native Food Basket	...	...	Kisele	...	...
Q/C/1	"	...	...	"	...	Model Loom	...	...	...	...	Showing:—
											(1) The weaver's shuttle (Mpeleko) for weaving double cloth; (2) the thread on the loom (Kutantika); and (3) the portion of finished cloth.
Q/C/6	"	...	...	Wafipa	...	Box of Raw Cotton	...	...	...	...	Showing:—
											(1) Raw seed cotton from Zimba; (2) cotton lint.
Q/C/4	"	...	...	"	...	Spinning Instrument and Thread	...	...	Nkoselo;	...	...
									Uloze	...	...
Q/C/3	"	...	...	"	...	Thread for weaving	...	...	Masansa	...	...
Q/C/7	"	...	...	"	...	To tighten Cotton on loom	...	...	Mapampa	...	...
Q/C/2	"	...	...	Wapimbe, Wazimba	...	Types of Native Woven Cloth	...	...	Seketa	...	...
Q/C/5	"	...	...	Wapimbe	...	Native Comb	...	...	Kisaku	...	...
Q/C/8	"	...	...	Wafipa	...	Native Dyes	...	...	Msala;	...	Used for native weaving.
									Zanu;	...	<i>Exhibit "N."</i>
									Zanu	...	Yellow dye (Zanu), used by natives at Zimba.
										...	<i>Exhibit "M."</i>
										...	Black dye (Sombo). This consists of black earth taken from the Wuma river, Ufipa, and mixed with seeds which bind the earth.
										...	<i>Exhibit "O."</i>
										...	Brown dye (Msala). Taken from the bark of a tree grown at Zimba.

APPENDIX XII—continued.

No.	District.	Tribe.	Exhibit.		Remarks.	
			English Name.	Local Name.		
F/D/1	Usambara	...	Wasambaa	Walking-stick ...	Fimbo; ... Kome	Used in the Usambara hills.
F/D/2	"	"	"	Hill-climbing Sticks ...	"	Rare types used in the Usambara hills.
F/A/1	"	"	"	War Spear ...	Mkuki ...	...
F/D/16	"	...	Wakilindi	Iron-shod Hill Sticks ...	Koma; Fimbo	...
F/B/7	"	...	"	Wooden Drinking Cups	Bilauri ...	...
F/B/9	"	...	Wabugu	Basket Milking Pail ...	"	...
F/B/5	"	...	Wasambaa	Baskets ...	Diti; Hanka	These baskets are used as measures of capacity, mostly for sale of flour.
F/B/2	"	...	Wazigua	Market Baskets made of palm	Vikapo ...	...
F/B/1	"	...	Wasambaa	Food Dishes ...	Bakuli ...	...
F/B/10	"	...	"	Native Stool ...	Kiti ...	Made from one piece of wood.
F/A/3	"	...	"	Musical Instruments ...	Tanzi ...	...
F/B/12	"	...	Wazigua	Marketing Baskets ...	Dunga ...	...
F/B/15	"	...	"	Pokers for fires ...	Ngoda ...	...
F/B/16	"	...	Wasambaa	Earthen Native Pipe ...	Kiko ...	...
F/A/11	"	...	"	Shield ...	Ngao ...	Made of rhino hide.
F/B/19	"	...	Wazigua	Beer Sieve ...	Nkome ...	...
F/A/8	"	...	Wasambaa Wamanyema.	Musical Instruments ...	Kayamba; Kisonge	These are played by swaying to the right and left and thumping alternately with the right and left thumb.

F/A/10	"	...	Wasambaa ...	Musical Instrument ...	Zumari ...	...
F/B/20	"	...	Wazigua ...	Rat Traps ...	Luta ...	Once a rat is in, it is unable to get back owing to the pressure.
F/B/13	"	...	" ...	Hand Bags ...	Kodinga ...	...
F/B/17	"	...	Wasambaa ...	Types of Wooden Spoons	Vijiko; Luko	...
F/A/7	"	...	Wamanyema	Bead Ornaments ...	Kisonge ...	Worn round the forehead at native dances.
F/B/14	"	...	Wasambaa ...	Bags ...	Kidunga ...	For carrying papers, money, etc., and tobacco pouches.
F/A/5	"	...	Wamanyema	Bead Ornament ...	Kisonge ...	Worn round the breast at native dances.
F/A/6	"	...	"	"	"	Worn round the neck at native dances.
F/A/4	"	...	"	"	"	Worn at native dances.
F/B/11	"	...	Wazigua ...	Baskets ...	Tundu ...	For carrying fowls on a journey.
F/B/18	"	...	Wanyamwezi	Water Ladle ...	Kota ...	...
F/B/22	"	...	Wazigua ...	Types of Flour Baskets	Ungo ...	...
F/A/9	"	...	Wasambaa ...	Musical Instrument ...	Zeze ...	...
F/B/21	"	...	"	Food Tray ...	Kihungu ...	...
F/D/3	"	...	"	Clay Models ...	"	...
F/B/3	"	...	"	Native Hats ...	Kofia ...	Made of palm grass.
F/A/2	"	...	"	Old Knife ...	Panga ; Kimangale	Used by the Wasambaa in the wars against the Wakilindi.
...	...	...	...	Occasional Inlaid Table	...	Made from local timber by the lunatics at the Lutinde Asylum.
T.T.1	Tanganyika (general)	...	...	Bellows ...	Mifuo ...	Used by iron workers all over the Territory.
T.T.2	...	...	...	Clay Nozzles ...	Kelwa ...	The two tubes from the bellows fit into these.
T.T.3	...	...	...	Fastening ...	Komeo ...	For the inside of a door.

APPENDIX XII—*continued.*

No.	District.	Tribe.	Exhibit.		Remarks.
			English Name.	Local Name.	
T.T.4	Hasp	Tumbuu ...	For the outside of the door of the house.
T.T.5	Bill-hook	Mundu ...	Used for clearing the bush.
T.T.6	Knife	Kisu cha Ukindu	Used by the women when splitting the palm leaves used for making native mats.

APPENDIX XII—*continued.*

E.—TROPHIES, ETC.

No.	Exhibitor.	Exhibit.	Remarks.
46	E. E. Hulley, Morogoro	Skeleton of python	From the Uluguru Hills.
120	D. Prain, Rufiji	Heads of Kudu and Sable Antelope ...	
122	Col. Maxwell, Dar es Salaam ...	Horns of Greater Kudu and Grant's Gazelle.	
121	C. Pook, Dar es Salaam	Horns of Eland and Grant's Gazelle ...	...
99	Dr. Davey, Dar es Salaam	Arab Chest
334	L. E. B. Anthony, Dodoma	Rug made of Colobus Monkey Skins

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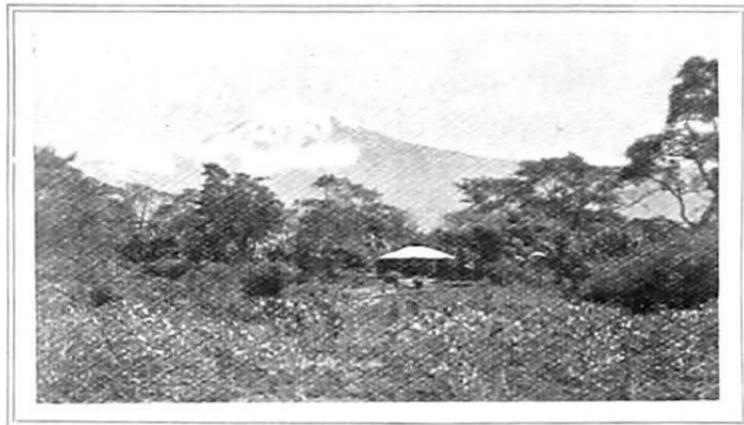
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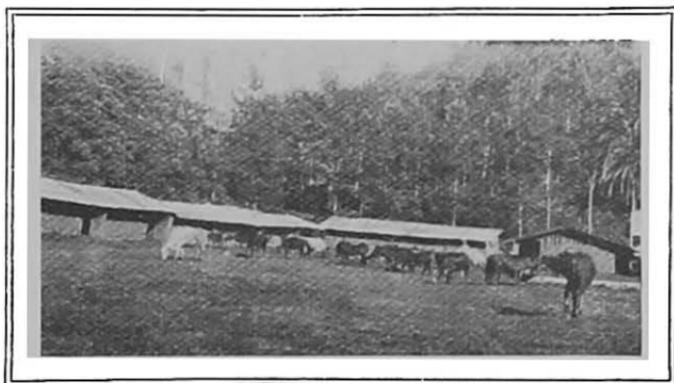
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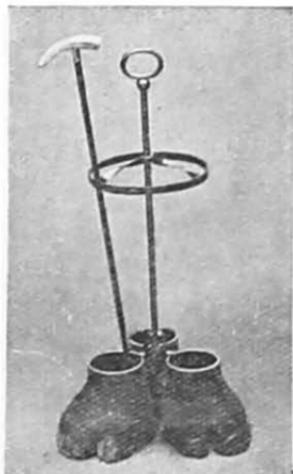


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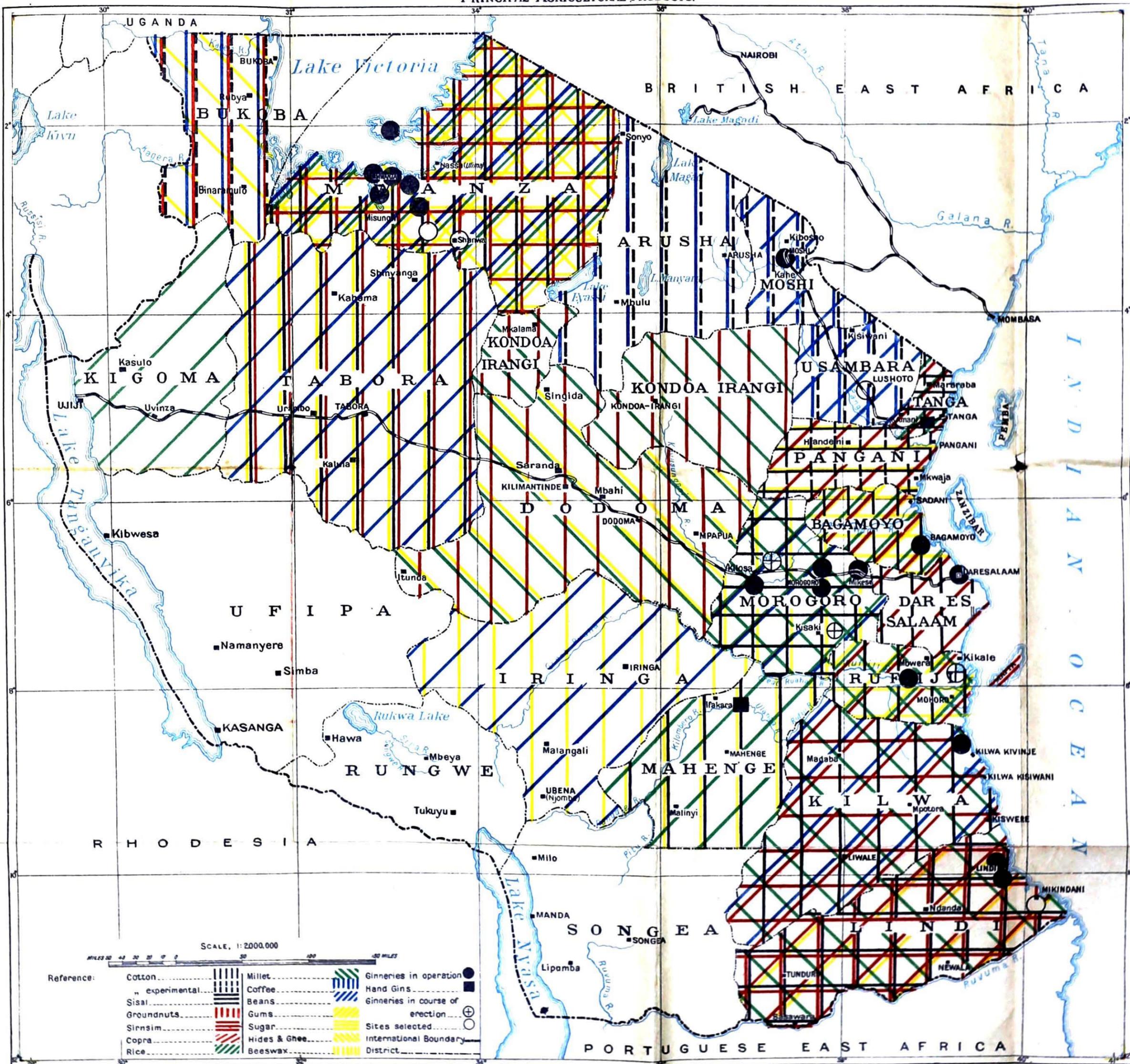


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REGISTERED OFFICE :

4 Buckingham Gate, London, S.W.

AND AT

11 Queen Street, Colombo, Ceylon

5 Rumsford Place . . . . . Liverpool

