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TROPICAL MEDICINE AND HYGIENE IN TANGANYIKA TERRITORY

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with a foreword by J S Logan

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Frontispiece: Map of Tankanyika Territory during Dr Calwell's tour of duty, 1930 – 1948.

FOREWORD

German East Africa was the largest and richest of the old German colonies, all lost to Germany after the Great War of 1914 – 18. German subjects had begun to enter and occupy the country in the 1880s, and Germany formally made it a protectorate in 1891. Germany continued in possession and government until the colony was conquered by the British Empire Forces, South African, Indian, United Kingdom and many others, in the years 1914 – 18. Vivid accounts of the campaign can be found in Francis Brett Young's book, *Marching on Tanga*,¹ in Denys Reitz's book *Trekking On*,² and in the biography of Field Marshal Smuts.³ More technical and statistical accounts can be found in the Official History of the War, *Operations in East Africa*.^{4,5} Such were the soldierly qualities of the German Commander, the difficulties of the terrain and climate, and the wastage of men and animals by disease, that General Von Lettow-Vorbeck was still in arms, though hardly effective and with only a few troops left, when the Armistice came in November 1918. The United Kingdom thereafter occupied and governed the country, re-named the Tanganyika Territory, under a mandate from the League of Nations. The Colonial Medical Service became responsible for its governmental medical administration and care. It became independent as Tanzania in 1961.

Malaria and diarrhoeal diseases, as so often, were the main causes of sickness and disability in the British Forces. The Medical History of the Campaign^{4,5} has many lessons for both civil and military medical officers. But trypanosomiasis, East African "sleeping sickness", which later occupied so much of Doctor Calwell's time and thought, and of course was from time to time a major cause of death in the territory, was not even a minor problem in the war years. Lieutenant-Colonel Newham,⁶ the RAMC Consultant in tropical diseases with the East African Expeditionary Force, at the end of the war could only record eighteen human cases, five in Europeans and thirteen in Africans. That was not the case with the horses. Reitz² says that thirty thousand horses died after being bitten by the tsetse fly, the vector of trypanosomiasis. Reitz records that when he was given command of the 4th South African Horse, both men and horses were freely bitten by the fly, and within a few weeks he had only ten horses left. The rest were dead, and the regiment was on foot. Presumably the fly was carrying trypanosomes pathogenic to animals (eg *T vivax* and *T congolense*) and not the trypanosome pathogenic to man in East Africa, *T brucei rhodesiense*.

The credit for the discovery of the trypanosome of East African human trypanosomiasis has been disputed, but it is certain that it was Aldo Castellani^{7,8} who first observed trypanosomes in the cerebrospinal fluid of a patient with "sleeping sickness". Castellani records that on the 12th November 1902 in Uganda, probably in Entebbe, "while examining the cerebrospinal fluid of a boy affected by the sickness, my eye had been attracted by a little fish-like parasite darting about. It was a trypanosome". The simplicity and conclusiveness of this piece of clinical microscopy deserve to be remembered. Those who seek, find.

Human trypanosomiasis in civil life in East Africa, if not constantly so important numerically as other infections, did sometimes occur in disastrous epidemics. Unless treated early and adequately with anti-trypanosomal drugs, such cases are fatal. Its prevention became a special duty of the medical service in Tanganyika.

There has been a welcome amount of success in the drug treatment of early human cases. This diminishes the human reservoir of trypanosomes but the reservoir in animals remains. The real problem is control of the tsetse fly. The measures used, or considered, have included moving local inhabitants to fly-free areas, destroying the habitat of the fly by selective bush clearing, or paradoxically by increasing human occupation and agriculture, sprays toxic to the fly, and control of the animal reservoir of the trypanosomes in the herds of game. The latter means wholesale slaughter, and from this governments have flinched. Some considerable, if incomplete, success can be obtained.

Mrs Calwell accompanied and supported her husband in all the hardships and privations of life in those days in Tanganyika. She herself had had a brilliant undergraduate career in English at Queen's. Their son John was born in Kibondo and their daughter Margaret in Tabora. Doctor Calwell had remarkable linguistic abilities, and he and Mrs Calwell spoke fluent Swahili. Whatever the nature of the "colitis" which interrupted his career in East Africa, it in the end underwent spontaneous cure. His later service at home in Northern Ireland was in tuberculosis, in clinical immunology, and, after he retired, as Archivist of the Royal Victoria Hospital. Hugh Gault Calwell was the son of Doctor William Calwell, of York Street, and his wife Amelia Taylor. He died in 1986, aged 85. Mrs Calwell survived him only a few months. His children, Doctor John Calwell and Mrs Margaret Burch have kindly agreed to the publication of their father's account of the family life and work in Tanganyika. Sadly Doctor William Calwell, his third child, died not very long after his father.

J S LOGAN

H G Calwell

Colonial Medical Service, 1930 – 1949. Tanganyika

When I qualified in medicine in Belfast in 1929 I had already formed the intention of pursuing my career overseas. I came of a medical family of which five members (my father, his three brothers and a sister) were all in general practice in Belfast so that I had an opportunity, if I wished, of joining an established practice. I had, however, lived through years of civil commotion in my student years, and I was determined to escape from such a violent city as Belfast.

In 1928 the late Sir John Megaw, a Belfast graduate, and then Director-General of the Indian Medical Service, visited the medical school and gave a talk about his service. I was so impressed by this that during my post-qualification year as a resident medical officer in the Royal Victoria Hospital, Belfast, I obtained the form of application for entry to the service and the necessary testimonials to accompany it. A chance meeting in the hospital caused me to change my plan.

One day I met the late Dr P A Clearkin who was on leave from Tanganyika and was attending the hospital for treatment. He asked me what I intended doing in the future, and when I told him of my intention to join the Indian Medical Service, he talked very persuasively of the attractions of the Colonial Medical Service, or rather the East African Medical Service as it was before unification. He was at that time one of the deputy directors in Tanganyika, being in charge of laboratory services. There were two other deputies, one of medical and the other of sanitary services. This chance meeting caused me to abandon the plan of going to India and instead to apply for the East African Service. Within a year I would be working in Clearkin's laboratory in Dar es Salaam.

In the summer of 1930 I was summoned to the Colonial Office for interview. I remember nothing of the proceedings except the remark of one of the interviewers that, with my first class degree in ancient classics, I would be able to write good reports! In due course I received a letter of appointment to Tanganyika, and was instructed to enrol in the London School of Hygiene and Tropical Medicine for the course leading to the Diploma in Tropical Medicine and Hygiene commencing at the beginning of October. My study allowance was to be twenty five pounds per month, the fees being paid by the Colonial Office.

I knew nobody in London, but a friend in Belfast gave me the address of a boarding house in Bloomsbury where I might get accommodation, and with this introduction I was installed in an attic in a large house in Endsleigh Street at two pounds, seventeen shillings and sixpence per week. It was close to the School of Tropical Medicine which was a great advantage. I found the work enjoyable and interesting, especially in the department of parasitology where Professor J G Thomson and his assistant Dr Robertson were superb teachers, whether in the laboratory or the lecture room. In March 1931 the examinations were held, one for the school certificate and the other for the diploma of the Royal College. Having obtained both, I began to assemble my tropical kit, returned to Belfast, got married on 8th April and sailed with my wife for Dar es Salaam on 10th April. In those days officers beginning their first tour had to receive the permission of the Governor to be accompanied by their wives. This was granted me.

The journey out in the SS Manela of the British India Steam Navigation Co was uneventful. It gave the opportunity of getting to know some other doctors who were bound for East Africa territories, some like myself on first appointment and others of long service. It was also helpful to meet other officers from, for example, the administration or the agricultural or public works departments.

On arrival in Dar es Salaam a month later (having spent about four days in Mombasa) we were met by Dr Clearkin and taken to his house on the shore at the entrance to the harbour, where we stayed some days until given a house. The first duty was to "leave cards" at Government House (Sir Donald Cameron was on leave and Mr Jardine was acting Governor), and the second was to report at the medical headquarters which was then housed in the old German Government House. The Director, Dr Shircore, was absent on leave (pending retirement, I think) and Dr A H Owen (formerly of Uganda) was acting for him. The deputy director of medical services was Dr R Bury, and Dr R A Scott was acting director of sanitary services. Owen died within a few years. Bury went to Nyasaland and died early, and Scott later became Director of Medical Services in Tanganyika. The whole of his service was in that territory; he finally retired to Nairobi and died there sometime in the late 1970s at an advanced age.

I found my reception most friendly, and, as was customary, my first posting was in Dar es Salaam. It was that of assistant Medical Officer of Health. The duties covered the port, the infectious diseases hospital, the leper colony at Nungwe some miles up the creek from the harbour, and the inspection of corpses in the town. The object of the last was to exclude such diseases as smallpox or plague as causes of death. It was forbidden to bury the body until a permit to do so was obtained. An informant would come to the Health Office in Acacia Avenue and report that a named individual had died. There were usually only four conditions mentioned, viz "kichwa" (headache), "homa" (fever), "tumbo" (any abdominal condition) and "kifua" (chest). I then went to the house, inspected the body and issued the burial permit. I never had occasion to withhold one. On one occasion the informant reported that a man had died at sea in a dhow and that they had been afraid to cast the body overboard lest there should be an accusation of foul play. I asked where the dhow was (thinking that it was somewhere in the harbour) and was told that it was anchored some miles down the coast. I went to the place in the port medical launch, boarded the dhow and found a very bloated corpse strung up below the deck. After inspecting it I gave the burial permit upon which the crew took the body ashore and buried it where they landed.

The most enjoyable part of my duties was the port work. Dar es Salaam was a very busy harbour. Ships came in through the narrow entrance which was partially obstructed by a sunken (floating) dock which the Germans had used to block the passage against a British attack in the 1914 – 18 war. Among regular callers were ships of the British India, Union Castle, Dutch, French, German and Italian lines — all with passengers. At that time the intermediate Union Castle ships circum-navigated Africa, outwards from London by the Mediterranean and the Red Sea and east coast or in the reverse direction. There were also tramp and other cargo steamers, coastal tankers and the weekly passenger ship from Zanzibar, which always arrived packed at lunch time on Fridays. To this list must be added dhows, both coastal and from Oman. I would sometimes board one of these at the harbour mouth for the pleasure of a sail to the anchorage.

The passenger ships always came in at daybreak. A signal (a cone or a black ball) was exhibited at the pilot station at the harbour entrance to indicate that a ship was in sight or was about to come in. We were now living in the port medical officer's house in Garden Avenue (a spacious well-built German house) not far from the harbour, and it was the duty of one of my "boat boys" to come to the house and announce "kibuyu tayari" (the black ball is up) which warned me that it was time for me to be up also and come to the harbour.

These early morning jaunts were delightful; my wife usually accompanied me and also the young son of our surgical specialist, the late W K Connell. This same W K Connell, whose hospitality was afforded us very soon after our arrival, warned me solemnly that I would last no time in the Tropics if I didn't use ardent spirits!



The Port Medical Officer's launch, "Afya", at Dar es Salaam.

The port medical officer's launch was called "Afya" (meaning health) and had been so named by Dr R R Scott. The crew numbered four, of whom two were on duty at a time. We flew the yellow flag to indicate our business, as did incoming ships to indicate that they required health clearance. As soon as the ship was anchored down, I went on board, inspected the bill of health from the last port, inquired about sickness on board from the doctor or purser, and if satisfied gave clearance, on which the yellow flag was hauled down and the customs men, the agent or any others were free to come on board. An unusual incident occurred one day. The ship was deeply laden with coal. I boarded her at the harbour entrance and gave clearance before she was at anchor. One of the crew began to

haul down the yellow flag, when the pilot came running along shouting "Leave that flag up. We're aground". He didn't want the waiting boat-loads of people to come aboard just then. The ship was soon afloat again, and the flag came down.

At that time these inspections were made at every port, for example at Mombasa, Tanga, Zanzibar and Dar es Salaam. Later, clearance at one East African port covered the others. It was at this time that I learnt that the printed word on any imposing document is not to be taken literally. A man came into the Infectious Diseases Hospital with smallpox. That same day a shipping agent came seeking a bill of health for a passenger vessel about to leave Dar es Salaam. Now the wording on the document required me to state that the port and neighbourhood were free of certain diseases, including smallpox. I completed the certificate according to the facts, and shortly afterwards Dr R R Scott came to the health office in considerable haste to find out what was going on. I took him to the hospital, he confirmed the diagnosis, and at once asked me to vaccinate him. He then established that the patient was not a resident of Dar es Salaam but had come from a distance, which fact led me to the conclusion that the port and neighbourhood of Dar es Salaam were in fact free from smallpox! The bill of health was then furnished by "higher authority" and the ship sailed.

My other main duty was charge of the infectious diseases hospital which provided adequate isolation and treatment of patients. There was a full-time nursing sister on the staff, as well as African dressers and orderlies (including ayahs). Measles and chickenpox were seen frequently as were leprosy and pulmonary tuberculosis. At that time there was no curative treatment for the last.

After some months in this post I was sent to join Dr Clearkin as assistant pathologist in the medical laboratory, the late Dr Burke-Gaffney having gone on leave. I was much impressed to see a brass plate on the wall of the main laboratory recording that Robert Koch had once worked there. During my time with Dr Clearkin I gained valuable experience in parasitology and serology.

Before leaving my early days in Dar es Salaam I must mention the domestic and social scene. Our household staff comprised a cook (wages fifty shillings per month), a houseboy (forty shillings per month) and a garden boy. The first two were recruited through the Women's Services League, which kept an employment register, examined references, and put employers in touch with servants seeking work. They also ran a lending library and sent books up-country on loan. The cook and houseboy we engaged thus were excellent servants, and the latter remained with us for many years. As it was likely that my next posting would be up country, I asked the applicants about their experiences of safari. Rashid, the houseboy, assured us that he had lots of experience of travelling. It emerged later that he had been in the service of Sir Joseph Sheridan, Chief Justice of Tanganyika, and had accompanied him in his special train to various towns where sessions of the High Court were held. Service with me would be different.

The cost of living in Dar es Salaam was not excessive. There were two provision stores, Stewart's and Kassum's, both in Acacia Avenue, and each had its share of patronage. There was a home bakery with cakes of many kinds baked by the proprietor, an Austrian called Treuheit and his sister. Meat, fish and vegetables were purchased by the cook in the market. Messrs Haji provided made to measure suits, shorts and bush shirts very cheaply. There were two banks, Barclay's and

Standard of South Africa. The Empire Cinema (was it in Ingles Street?) provided entertainment of a kind, and on one well remembered occasion the band of the 6th King's African Rifles appeared there, and played a selection from Schubert's Unfinished Symphony. Dr Scott was at that time acting bandmaster during the absence on leave of the regular bandmaster. He was a most enthusiastic musician (the 'cello being his instrument), and he composed the regimental march of the battalion, which was entitled "Ngoma" meaning "drum".

There were two European clubs in Dar es Salaam; one was social and residential and, we heard, highly exclusive (no second class officers); the other, the Gymkhana, was social and sporting and had a wider membership.

The German Lutheran Church at the harbour opposite the New Africa Hotel was still in the possession of the Church of England. It would be some years before its return to the community which built it. On the harbour front was the Roman Catholic Cathedral (St Joseph's) where the Capuchins ministered, Archbishop Maranta being their head, and near it was a house of the White Fathers.

On leaving the port job for the laboratory we had to give up the fine German house in Garden Avenue which went with the former, and move to Oyster Bay, a new colony of government houses recently established. The houses were small, with thin, heat-penetrable walls instead of the thick coral walls of German times. There were no trees or shrubs or plants in the bare garden plots. The only advantage of Oyster Bay was its closeness to the sea shore. However, our stay there was short, for towards the end of the year (1931) came a posting to sleeping sickness duty in the western province. This opened a new and long chapter in my career.

The mention of sleeping sickness duty presents the opportunity of mentioning money. The terms of service of medical officers in East Africa at this time included the following salary scale — £600 per annum with four yearly increments of £30 to £720, followed by four increments of £30 yearly to £840, followed by two increments of £40 yearly to the maximum of the grade at £920. The reason why sleeping sickness duty entered into the financial context is that in 1931 there was an extra allowance for such duty. Some called it a "risk allowance", and others regarded it as compensation for the hardships of bush life and frequent foot safaris. There was one man who refused it; he was the late Dr J F Corson, who maintained that his salary was adequate reward for any risks he undertook.

The information about our new station was that it was in the bush, had neither milk nor meat, and was cut off in the rainy season. It therefore behoved us to stock up with tinned milk and meat as well as flour, before leaving the coast. This we did, filling the car, (a model A Ford, cost £180) with boxes of tins before loading it into a closed wagon for the rail journey. We left by one of the bi-weekly mail trains on a Tuesday afternoon and got to Isaka on the Tabora-Mwanza line in the early hours of Thursday morning, where we were met by Dr A R Lester (whom we had met on SS Manela). He was engaged in maternity and child welfare work in Kahama, the western part of which district had lately suffered from a widespread epidemic of sleeping sickness. The late Dr George Maclean, who was then Sleeping Sickness Officer, and the late Dr Harold Fairbairn, who was also engaged in sleeping sickness work, came to Kahama to discuss my duties. We met in the rest camp, and I learned that we were to go to Ushirombo (some



Rondavel at a sleeping sickness settlement.

fifty-six miles away to the west) and settle in there for the rainy season, supervising the progress and treatment of patients with sleeping sickness, of whom there were many. Because of the rains it would not be possible to visit sleeping sickness settlements. Maclean and Fairbairn became our firm friends with whom we kept up correspondence until their deaths. Both will enter my story later. At this first interview I asked Maclean if there was any aspect of sleeping sickness I might study in detail, and he suggested that the pathology of the brain would be a suitable subject. I followed this advice.

The short rains had slackened off and we were able to drive to Ushirombo through miles of depopulated, tsetse-infected bush. One of the sleeping sickness lorries carried our goods. These Albion lorries deserve mention. There were three of them, numbered I think GT 157, 158 and 159. The numbers show how early they appeared among the government vehicles of the country. I have never seen their like since. They were started on petrol, and when the engine was warm, the petrol was turned off and the kerosene was turned on. This made for economical running. Another useful fitting was a pump for inflating the tyres, which was driven by the engine.

Ushirombo was the site of a large Roman Catholic mission staffed by White Fathers and White Sisters. It dated from early in the century, and some of the missionaries had arrived there on foot from Mwanza, having come from the coast by rail from Mombasa by the Kenya-Uganda Railway. The Vicar Apostolic, Bishop Jerboine, had lived there and was buried in the large church. There had been a seminary for training African priests, which had long since been transferred to Kipalapala near Tabora. The fathers and sisters were our only neighbours except for E H Allinson, an agricultural surveyor (later called settlement officer) who was

a member of the sleeping sickness team and was concerned with the agricultural development of sleeping sickness settlements.

The medical officer's house had been built by the White Fathers. It was built of burnt bricks and had a high pitched, grass thatched roof. The roof timbers were roughly trimmed tree branches fastened together with strips of bark. The ceilings were Americani cloth, the floors earthen, and the windows unglazed, but with wooden bars and outside shutters. White ants were very busy. On one occasion a handkerchief, which had been dropped in the bedroom, was almost completely devoured during the night. There was a sparse issue of government furniture. For a book case we had petrol boxes. There was a pit latrine at the back, and water was brought from a swamp by the water carrier in four gallon petrol tins. It was poured into a forty gallon cement drum near the kitchen and cleared of its very muddy content by adding alum or cement.

The house had three rooms; the middle one was the living room, and the others were bedrooms. One of the bedrooms opened into a small bathroom with a zinc bath. There was a clearing round the house in which there were some trees, and rose bushes had been planted near the verandah by some former occupant. A few months after our arrival Mr Allinson had the floors cemented to our great satisfaction.

The old seminary, which was about a hundred yards away, had been converted into a hospital. Its buildings, too, were of burnt brick. There was a courtyard with a stout gate opening on to the road at one end, and at the other end was the old church, which now served as dispensary, outpatient department, laboratory and animal house (for experimental rats). The other two sides of the courtyard were occupied by small rooms where inpatients were accommodated. In the centre was an orange tree which bore lots of fruit.

The staff of the hospital (in addition to myself) comprised an African dispenser, Isaiah Baldwin Chimaliro, who, like so many of that grade and time, had been trained in a Church of Scotland mission hospital in Nyasaland (now Malawi). He was a most dependable and pleasant colleague. His pay was about 100 – 120 shillings per month. There were also dressers and orderlies as well as a cook and water carrier.

The main medical work was the supervision of patients who had already been treated for sleeping sickness and attended for further treatment or for assessment. The examination always included lumbar puncture to obtain fluid from around the brain for microscopic and chemical examination. I think I performed this examination some 1100 times in one year.

It was from Ushirombo that I made my first foot safari. It was in the wet season, and my wife remained behind at the Convent of the White Sisters. The object was to visit the country north of Ushirombo towards Lake Victoria and inspect sleeping sickness dispensaries. It took numerous porters to carry the tent, camp bed, food, clothing, microscope and medicine chest — perhaps twenty in all at a wage for each of 20 cents daily. There was no trouble in recruiting them through the local chief, Mtemi Kizozo.

Day after day we walked through forest from settlement to settlement. The sleeping sickness dispensaries were simple huts with a staff of a single dresser,

who had been trained to use the microscope and to diagnose and treat blood and intestinal parasites. It was a solitary life, and I often admired these men for their conscientious work when they might have passed their days in drinking pombe (the native beer). Their wage was 15 – 20 shillings per month. A few years later I remember Sir Archibald McIndoe, the distinguished plastic surgeon, when on holiday in Tanganyika, visiting one of these bush dispensaries and writing a hurtful comment in the dresser's record book. It told me more about Sir Archibald than about my own man, and I made a strong protest at the time. My longest day's march on this safari was twenty-seven miles.

Our contacts with the mission were most pleasant and friendly. The fathers numbered three, an Alsatian, a Breton and an Italian. None spoke English and our intercourse was in French. The sisters were I think five in number, four French and one German.

The mission buildings were all of burnt brick, the fathers' residence being separated from the sisters' by a brick wall. The church was spacious with a tower. The demands of the religious order were severe. The first tour of a White Father was ten years, with one year's leave, followed by a tour which ended only by death. A White Sister never returned home. Such was the rule in those days. I understand that it has been greatly relaxed nowadays. ("White" refers to the religious order — not race).

We often visited the sisters and were entertained in their parlour and shown old photographs of their various native lands and towns. The fathers, too, would entertain us to lunch on feast days when the Algerian wine, which was supplied from their mother house in Algiers, was dispensed liberally, along with some exotic dishes, which were unfamiliar both to my wife and me. One such, we remember, was goat's brain.

My contact with the fathers was not, however, only social. They were in need of medical help at times. On the first occasion a father had come from the Belgian Congo to celebrate his jubilee in the priesthood at Ushirombo. He was bitten by tsetse flies on the journey and he developed sleeping sickness. There were no complications, and he was treated successfully, and returned to his mission in due course, and, as I heard, lived for many years to come. One of the three resident fathers was accustomed to journey widely through the country on a motor cycle to visit the faithful and also go shooting. Both exercises exposed him to the fly, and one day he sent for me as he was ill. He, too, had sleeping sickness which was treated successfully. He became depressed after the end of his treatment and expressed a strong desire to return to France for a short time to see his aged mother. I wrote to the Bishop in Tabora supporting his request for sick leave as strongly as I could. The reply from the Bishop was a letter of thanks to me for my great care of the fathers and no mention at all of sick leave. Such was the stern discipline. My patient made a full recovery and died at the age of ninety in his native land. The third member of my trio of White Fathers with sleeping sickness was the father superior — a stern man who used to spend hours sitting in the church meditating. He was neither a motor cycle rider nor a game hunter. He too was treated successfully.

The mission was very much the heart of Ushirombo, although the local chief (Mtemi or Mwami) Kizozo was not a Christian. The large church was always filled

for Mass on Sundays and Holy Days, and usually the main Mass of the day was a High Mass, celebrated by the three priests chanting the service in Latin as it might be in Notre Dame or even St Peter's. The singing by the congregation was of a high standard and I can still see Father Martin, the Breton, conducting while walking up and down the aisle.

The fathers had an advantage over me in that I could only speak Swahili; they were fluent in Kisumbwa, which was the local language. They were regular visitors to the hospital, catechising their own flock and endeavouring to gain converts. An Italian father, who always seemed to be almost burnt up with zeal, excelled in perseverance. I have seen him almost bully a dying man into repeating a word or two of Christian teaching, and if eventually the words came from the dying lips, the father would turn to me triumphantly saying "you heard him, you heard him". I found this distasteful.

Towards the end of the rainy season of 1932 the acting Sleeping Sickness Officer (Maclean being on leave), who was living in Kahama, and conducting all the work from his house there, for reasons which I do not mention, sent me word to travel to Itigi, which was a station on the central railway between Tabora and Dodoma; and from there to go on foot southwards to an area from which there had come reports of many deaths, which could only have been due to an outbreak of sleeping sickness or else to famine. My wife accompanied me this time.

We took the train from Isaka to Manyoni where the District Officer had arranged that porters should be ready. This time we must have had about thirty porters since the report of a possible famine made it advisable for us to carry sufficient food for the porters as well as our own necessities. I had also with me several sleeping sickness scouts who would visit villages, inquire about sickness and bring back blood smears for me to examine in camp. The whole caravan entrained for Itigi, which was the next station up the line and from there our long walk started.

The country through which we passed was almost uninhabited, and the distance between villages sometimes so great that we had to camp in the bush. We had our tent but the servants and porters had only rough shelters of boughs to sleep in, and care was taken to keep a huge fire burning all night to keep off (they said) lions or leopards.

The road was a mere track and its surface so soft that we often had to pick our way among deep holes which were the foot-prints of elephants, although we never caught sight of one. The strangest sight we saw was the whole forequarters of a giraffe wedged high up in the fork of a tree — clearly a leopard's lair. One day we met an elderly German who, with his son, had been hunting rhinoceroses. He told us that he was seventy years old. One of my souvenirs of the journey is a photograph of Herr Harms with his rifle, sitting beside one of his bags.

When we reached the inhabited country, which was our goal, the scouts visited the villages, inquired about illness, and took blood samples for examination. All were negative for trypanosomes, and as for famine — it was possible to buy food for the porters locally, and indeed we had lots of meal to spare at the end of the journey.

After a few days we began the walk back to the railway, distributed the surplus meal to the porters, and paid them their wages (20 cents per day). We had walked

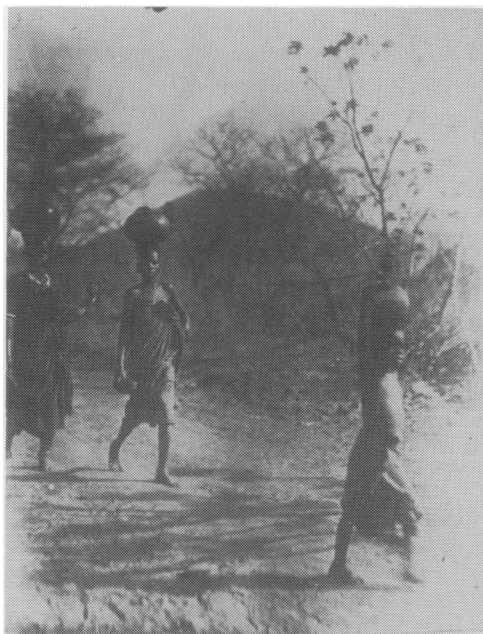
200 miles and spent three weeks on the journey, had found neither epidemic nor famine, but had seen a lot of the African bush. We caught the up train to Itigi for Isaka and so back through Kahama to Ushirombo. The dry season had now arrived and travelling was again easy. We got back just in time to receive my father and sister who had come to visit us, having arrived at Dar es Salaam after a voyage from England by the west coast and South Africa. They had barely unpacked when my superior in Kahama sent me instructions to set out once again — this time to the Musoma district which had been the scene of several outbreaks of sleeping sickness.

This time my wife remained in Ushirombo with my sister, and I went off accompanied by my father to Kahama. The train for Mwanza left

Isaka in the middle of the night, and we spent the evening with the acting Sleeping Sickness Officer in Kahama (and indeed the early hours of the morning too) listening to gramophone records of Scottish singers such as Harry Lauder. We reached Mwanza on Lake Victoria and went on board the SS Clement Hill, which took us to Musoma. The District Officer there was expecting me and had a lorry in readiness for the journey to Ikoma (between 60 and 70 miles distant), where an old German fort had been converted into a sleeping sickness hospital. The assistant district officers were F A Montagu (later a trustee of the *Manchester Guardian*) and A T Sillery (later resident commissioner of one of the British protectorates in Southern Africa).

From Ikoma I visited many villages in the tsetse country. One camp site was in the shade of tall trees in the branches of which monkeys constantly leapt about, and it was there one Sunday afternoon that I sat in the tent writing my lower standard Swahili examination under the supervision of Montagu. I took the oral part of the examination at Mwanza on my way back from Musoma.

In one part of the area of my survey there were no roads, and it was necessary to employ porters. This was the only occasion on which I had an unpleasant experience on safari. We had reached a tribal boundary, and after making camp the porters demanded to be paid, announcing that they intended to return home the next morning and would on no account accompany me further. It was impossible for me to pay them as I had not the money with me, and if they departed, I would be left stranded. There was a lot of grumbling and things looked unpleasant. To add to the difficulty, my cook with the kitchen loads and food had gone ahead in the morning but had been led astray and was not to be found. We passed an uneasy night, the porters remaining menacingly close to our tent and



Bush scene in Tanganyika in Doctor Calwell's time.

lions roaring. When morning came the camp was deserted except for the cook, who had found his way to the camp, and some sleeping sickness scouts. They set out to seek help and we were soon rescued from our plight. What McMahon, the District Officer did about the "rebel" porters I never heard.

And so back to Ushirombo where the only mishap that had befallen my wife was the invasion of the house by saifu (ants) which had necessitated taking the beds outside and sleeping there until the invaders had left. It was now time for our visitors to leave for Dar es Salaam to join the steamer for home, and time for us to take local leave. On the way through Kahama I called on the acting Sleeping Sickness Officer and was denied entrance by his servants. I made my way into the house and found him in bed in a poor state, I reported the matter to the Senior Medical Officer in Tabora on my way through, and he sent one of the medical officers to Kahama to fetch the sick man to hospital.

We all joined the SS Llanstephan Castle in Dar es Salaam, my father and sister for London, and we for Mombasa. Going ashore at Tanga we visited our old Dar es Salaam friends Fred Dalton and his wife and daughters. He was superintendent of the Tanga-Arusha railway at the time; later he became manager of the Kenya and Uganda Railway, and when I last heard of him he was living in Nairobi. The Daltons were insistent that we should not spend our local leave in Kenya, as we had intended, but instead should return to Tanga after bidding farewell to my father and sister in Mombasa. There was no ship available for the return, but Fred Dalton overcame the difficulty by arranging a flight from Mombasa to Tanga. The aeroplane was very small; it had seats for the pilot and only two passengers. We had a bumpy flight to Tanga where we spent a day with the Daltons and then took the train to Arusha, where we spent a week enjoying many delightful walks in that beautiful countryside. We returned to Tanga by train and flew from there to Dar es Salaam in the same small plane as before, landing at Zanzibar for fuel. Somewhere over the sea a large dhow was seen under sail, and the pilot, to add to our interest, descended very low over the sea so that we could get a close look at the vessel.

And so back to Ushirombo again and to learn that we must be on the move again — this time to Kibondo in Kasulu district, where there was a fresh outbreak of sleeping sickness. Our route followed the Kahamba-Bihramulo-Bukoba road for between 40 and 50 miles, and then turned south for 60 miles. Kibondo was 90 miles from Kasulu. Our road lay through tsetse country from which the population had been removed, and then on through more tsetse country with many small bush villages, often of only one or two households. Near Kibondo the bush was replaced by bamboo trees. There had been an administrative station for many years which was now closed. The house previously occupied by the district officer was now ours. There were no other government officers except for an administrative cadet who came periodically from Kasulu and spent much time on safari. The other house in the station was occupied by him during his visits.

The boma was a well built building, the only function of which was to provide me with an office and the native treasury clerk with a strong room in which to lodge tax money pending its remittance to Kasulu. This was very convenient for me as he was permitted to accept my own cheques and vouchers for cash. This man, Rajabu, was the husband of the local chief, Ruhaga, and he and she were an intelligent and helpful pair.

Kibondo had also a prison which was empty and served me for keeping experimental animals. There was one Arab shop which, with a few houses for such as a police askari and hospital dressers and (later) a compounder, comprised the village. The hospital was at the head of the street and close to it was the house of the Asian sub-assistant surgeon. On his departure I turned the house into accommodation for in-patients.

The climate was very pleasant, and there were few nights when the fire was not lighted. The view from our hilltop extended unbroken away to the borders of the Belgian mandated territory, Burundi, 30 miles distant, and many of the patients who came seeking medical aid were Warundi. In the foreground was the hill Buhima where, as we were told, the first Mtussi had descended miraculously. These were the cattle people, and there were some of them and their cattle about, so that, unlike in Ushirombo, we were now able to get a scanty supply of fresh cow's milk — the full of a beer bottle daily. Our own servants always referred to the milkman as "Your Mtussi".

The rainy season was just beginning and there was, therefore, little travelling. As I remarked earlier the reason for my posting to Kibondo was a serious outbreak of sleeping sickness, the infection having spread from western Kahama. Many of the patients were able to make their way to Kibondo for treatment, and others were being treated in bush dispensaries. The plan was to carry out a major resettlement of the people, at risk in the bush, in the coming dry season. The strategist was Dr Maclean, who covered a great deal of the ground on foot. The administration was strengthened by the secondment of an administrative officer, W F Page, with whom was J E S Griffiths, an administrative cadet. Both later became Provincial Commissioners. Our own settlement officers (formerly agricultural surveyors) also took part.

A rough census was carried out, and, after due consultation with the several chiefs, areas of country were chosen and delimited to provide at the beginning three to four acres of cultivable land for each family. I think that some 50,000 persons in all were involved in this settlement. I cannot remember any need for coercion. Sometimes arrangements had to be made for sacred places such as ancestral burial sites to be exempted from the wholesale desertion of large parts of the countryside that was taking place.

I have, however, run ahead of myself, and the resettlement described was still some months ahead. Kibondo was in the centre of Buha. Life was very primitive; the usual article of attire was a goatskin, and the spear, the bow and arrows were carried by the men everywhere. Swahili was little spoken. I remember stopping on the way from Ushirombo to ask the way from a party of men and women we encountered. Their response was to run off into the bush. Nevertheless, they were ordinarily a polite people, and if we met a casual wayfarer in the course of our afternoon walk, he would lay his spear and bow and arrows on the ground and give a salutation with a handclap.

As at Ushirombo there was no post office, and we were dependent on the mail runner who brought our mail weekly. A train from the coast arrived at Kigoma on a Sunday morning. I am not sure how the mail reached Kasulu, but from there it was carried to Kibondo on foot and arrived on Wednesday. It thus took about 72 hours for the journey of some 140 miles. Our runner left for Kasulu the next day,

Thursday, and our mail caught the down train from Kigoma on Monday. The sight of the runner coming up the hill to the boma with the mailbag over his shoulder and his spear in his hand never failed to excite my admiration for his faithful service, especially in the wet season. I do not remember any letter or parcel going astray. One of the most welcome parcels he brought was the weekly consignment of books from the Women's Services League in Dar es Salaam. Letters from home were also very welcome, and the official gazette kept us up to date with the news of the arrival or departure of our friends and colleagues.

As I have already mentioned, Buha was a primitive country. The poll tax at the time was four shillings per year and tax exemption was widespread. For example, taxpayers who had suffered from sleeping sickness and completed the course of treatment were given exemption for one year. The commonest coin in currency was the one cent piece (100 cents = 1 shilling), and the native treasury clerk, whom I have mentioned, often gave me bundles of cent pieces strung together with bark when I called on him for money to pay the wages of the dispensers and dressers. I remember the late F J Bagshawe, on a visit from Tabora when he was Provincial Commissioner, remarking that it was his ambition to get silver currency established in Buha.

The cost of living was low, both for us and our servants. The cook, who had been with us in Dar es Salaam and Ushirombo and had accompanied me on walking safaris, must have grown tired of the life, for, when he went on local leave as described earlier, he left our service and was replaced by a young man who had joined our household in Ushirombo as a kitchen boy and whom my wife had taught to cook. He and the houseboy found Kibondo agreeable since their cost of living was about three shillings a month.

Daily necessities such as milk, eggs, chickens, and bananas were brought to the house. The milk was from a regular supplier, and paid for monthly, but the other articles were bought at the door. As I remember eggs and bananas cost one cent each, and the business was transacted by placing a one cent coin opposite each egg or banana; in that way the vendor could see that there was no cheating. There was no meat; instead we had chicken in various forms twice daily. The cost of these varied from ten to twenty cents. There was a garden of sorts some distance from the house from which the water carrier occasionally brought us vegetables and strawberries.

The cost to the medical department of food for patients in a bush sleeping sickness "hospital" at the end of 1932 is found in a notebook which I still have. There is no record of the number of patients or of the quantities of food:

	Shillings	Cents
Beans	1	00
Maize	7	50
Cassava leaves		32
Cassava	7	50
Bananas	1	20
	<hr/> 17	<hr/> 152

This was one of the largest of the hospitals, since, as I remember, it was in the charge of an African Dispenser, Adamson Barton Mkandawire, a very experienced man who was my colleague for many years both in peace and war.

Before leaving Ushirombo I told Dr Maclean that we were expecting a baby in June 1933 and asked his advice about what arrangements I should make. The nearest hospital was Tabora. Maclean at once replied "Stay where you are. We'll not see you stuck". With that assurance we spent the rainy season in Kibondo awaiting not only the birth of our first child, but also the massive resettlement of the small bush communities when the dry season came. Both projects were successful.

Careful planning had gone into selecting suitable sites for the concentrations as they were called at the start. This word was later replaced by the less ominous word "settlements". News of what was afoot had stirred interest in some of the missionary societies who saw that Buha in its new shape offered opportunity for the expansion of their work.

Just about the end of the rainy season in 1933 the Roman Catholic bishop came from Kigoma to inquire about our plans. He had a large map with him on which he asked me to indicate the sites of the proposed settlements. This done he returned to Kigoma and very soon afterwards there arrived a Dutch White Father to "stake out" claims. Before very long primitive schools were set up in the centre of the various sites, and so was the White Fathers' mission established in Buha.

Some weeks later the Anglican bishop of Central Tanganyika arrived from Dodoma on the same errand as his counterpart in Kigoma. He represented the Church Missionary Society. I had to tell him that Bishop Birraux had already been in the district and that all the settlements had already been surveyed by a White Father, who was having schools built in each. Nothing could be done about it as the government had ruled that only one mission would be permitted in each settlement. The Church Missionary Society set up an organisation in Kibondo after my time. It was strictly a sleeping sickness settlement being outside the tsetse belt.

I cannot leave this incident without a few words about the Dutch Father whom I have mentioned. He travelled around in a battered box body car alone. He was equipped with a bag of beans, which seemed to be his main nutriment, tea or coffee and a camp bed on which he slept under a tree. My first meeting with him was when he called at our house with a box of chocolates for my wife — an unheard of present there. After the resettlement he and others opened a mission in the north of the district, not far from the Belgian border. This was a remarkable mission station. In front of it flew the Union Jack (as though it were a government administrative office) and within on a table were the volumes of statutes such as would be seen in such an office. I do not know if the local inhabitants took it for a government office.

There was, however, something more. The father had studied medicine for three months in London and had arrived with better medical equipment than I had in Kibondo. He was a zealous medical practitioner. Once when on safari I visited the mission and found him busy with out-patients. Everybody with an enlarged spleen was treated by painting the skin over the organ with iodine. The microscope which was sitting there was not used. However, both parties, patient and practitioner, appeared to be satisfied.

We had little or no connection with our Belgian counterparts, but on one occasion Dr Maclean arranged a meeting with a Belgian doctor on the other side of the border, who too was concerned in sleeping sickness control. We went to the border in the north of the district, which was marked by the dried course of a small river, and camped there. After waiting two days without sighting the Belgian party we left.

I have mentioned that the birth of our first child was expected in June. Towards the end of May Dr Maclean arrived in Kibondo on foot from Kahama (the roads being still impassable to motor traffic) to keep his promise of help for the confinement. He told us that he had asked Dr Harold Fairbairn to come from Tinde in Shinyanga district where he was working in the trypanosomiasis research laboratory. Fairbairn had an especial interest in midwifery and had followed a post-graduate course in the renowned Rotunda Hospital in Dublin. This was reassuring. After a short time Fairbairn arrived. The rains had come almost to an end, and he had been able to bring his lorry all the way. He and Maclean set up camp in Kibondo to await the birth.

I had already arranged for a nurse, the wife of a German missionary in Kasulu, to come to Kibondo in good time. The family Kube lived in the high land about Kasulu, and one of Herr Kube's accomplishments which attracted the people was his playing of the cornet in the market place when he was busy evangelising. Frau Kube was a trained midwife. I drove to Kasulu one day and collected her and her three year old daughter. We had prepared accommodation for them in a room in the boma where they were comfortably installed.



Mrs Margaret Calwell (née Earls) when President of the Women Students Hall at Queen's University.

Came the 9th June when the baby was born with the assistance of Frau Kube and Drs Maclean and Fairbairn, and all was well. The first returned to Kasulu and the last to Tinde, Maclean remaining in Kibondo for the resettlement work already described. The basis of such settlements was that the normal agricultural activity of a population of the concentration planned would get rid of the tsetse fly. It was a different concept from that of expensive bush clearing.

The medical needs of the people were met by the building of sleeping sickness dispensaries and indeed of more ambitious dispensaries with accommodation for in-patients. The aim was to promote the general health of the people. For example,

I once carried out a hook-worm survey in a settlement and provided mass treatment for the disease. Another disease which was treated on a large scale was yaws. There was an almost immediate effect on the epidemic of sleeping sickness. The number of new cases

reported in the district fell from 852 in 1933 to 535 in 1934 (37%) and this fall continued steeply in the succeeding years.

By the end of 1933 it was time for home leave. We packed up and drove the 140 miles to Kigoma, breaking the journey for one night at Kasulu, where we stayed with the Kube family. I left my car in Kigoma with a Greek contractor who undertook to build a box body to replace the car's touring body. We took the train to Dar es Salaam and caught the SS Mantola for the voyage to England. We disembarked at Plymouth after a stormy last few days, and so back to Belfast.

As I have already mentioned Dr Maclean had encouraged me to study the pathology of the brain in sleeping sickness, and I had taken every opportunity of carrying out post-mortem examinations of patients who had died of the disease, and removing and preserving their brains. I was thus able to bring back at least twenty brains, and by the kindness of the Professor of Pathology in the Queen's University of Belfast I was given the necessary facilities to study them. An added advantage was that my old friend Dr Peter Clearkin, who had by this time retired from his post in Tanganyika, was now working in Belfast as a research fellow. He allowed me to share his room in the Institute of Pathology and gave me much help with my work. I was thus enabled to prepare my material for microscopic examination and to bring the numerous brain sections and my notes back with me, in preparation for writing the thesis for the MD examination.

On the expiry of leave we sailed from London in July 1934 in the SS Dunluce Castle for Dar es Salaam, via Tenerife, Lobito Bay, South Africa and up the east coast to Dar es Salaam. The voyage took exactly six weeks and was a "vacation leave" in itself. Among the passengers were the late Dr Charles Wilcocks and his wife Frances, with whom we became very friendly. Wilcocks was the tuberculosis specialist. His headquarters were at Moshi. It would not be long before he himself was invalided from the service to pursue a long and distinguished career in London as Director of the Bureau of Hygiene and Tropical Diseases. I mention in passing that another Tanganyika doctor who worked there was the late J F Corson, and yet another was the late J J O'D Burke Gaffney who succeeded Wilcocks as Director, and was himself succeeded by I A Apted, my own successor in Tanganyika in 1949. There has thus been a preponderant Tanganyika input into the bureau, whose Bulletin of Tropical Diseases and Abstracts of Hygiene are circulated worldwide, and in many places provide the only contact that isolated doctors have with contemporary medical literature. During the past thirty years I have written hundreds of abstracts for both journals, having been enlisted for this work by Wilcocks.

But to get back to Tanganyika. On reporting for duty in Dar es Salaam I found that contrary to my expectation I was not to return immediately to the western province for another tour of sleeping sickness duty. I was instead to visit the Lupa goldfield in the Mbeya district and report on the medical needs of the mining community there. Dr Maclean handed his house in Dar es Salaam over to my wife and baby son to live there during my absence. This was characteristic of his great kindness.

The point of departure for the Lupa was Manyoni on the central railway, which I had last visited in 1932. This time there was no caravan of porters for it was the dry season, and the whole journey would be done in my car with a single servant.

The centre of the gold field was at Chunya which was some 200 miles from the railway. The area derived its name from the Lupa river. There were many individual prospectors, some accompanied by their wives and others on their own, but all living in primitive and unsanitary conditions. Government was represented by M J B Molohan, an assistant district officer, whose encampment included a reed or grass built courthouse. The law enforcement branch was represented by a few police askaris.

The district headquarters, Mbeya, was some 30 miles distant. It had a government hospital. There was a private medical practitioner in Chunya, a German baron, who was trying to make a living by attending to the needs of the mining community. The latter had been vociferous in demanding that a government medical officer be stationed at Chunya, and the object of my mission was to assess this need. After some weeks travelling around and talking to many people I concluded that the German doctor was providing a good service, and that the hospital at Mbeya was not too distant. The chief need, I thought, was a public health inspector with a few assistants to advise on sanitary matters and enforce, if possible, elementary rules of hygiene. I reported accordingly.

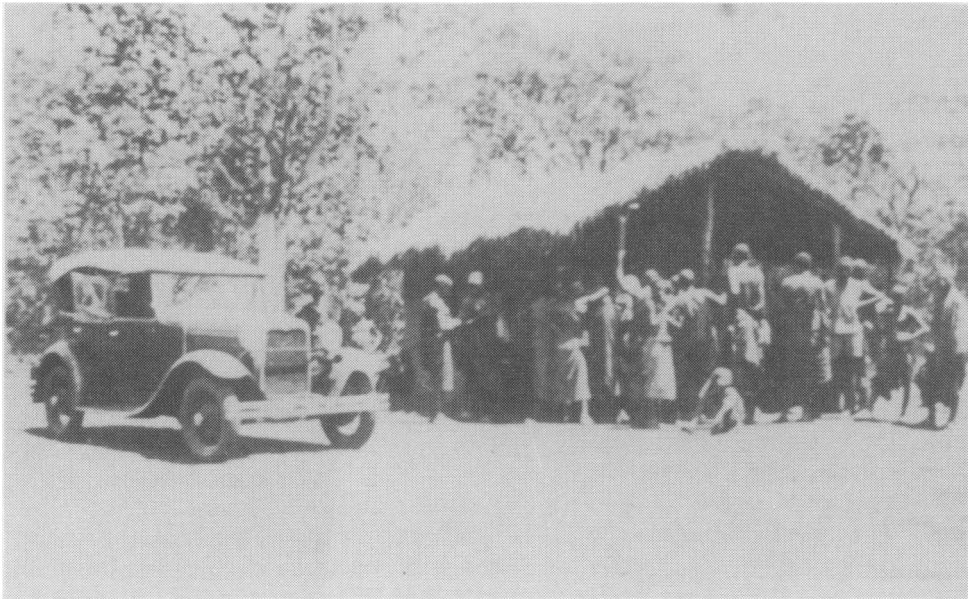
During my stay I exchanged my newly converted model A Ford car for a larger box body car of the same make, which its owner, the German doctor, persuaded me I needed. It was not nearly as well built as mine but had much more space for safari loads. I then returned to Dar es Salaam, submitted my report, and received instructions to return to Kibondo to sleeping sickness duty for a short time, and then to move to Tinde in Shinyanga district to take charge of the trypanosomiasis research laboratory during Dr J F Corson's absence on leave.

Dr Fairbairn was now effectively in charge of sleeping sickness work although not yet officially appointed Maclean's successor (the latter shortly to become Deputy Director of Medical Services). During our leave Fairbairn had got married, and he and his wife were now living in Kibondo in the house we had occupied in our previous tour. We were now in the small house used by the Kasulu assistant district officer when visiting Kibondo. During our short stay we had a very anxious time because of our son's illness. He was about 16 months old at the time and had an acute dysenteric condition. There was at that time no effective treatment, and indeed no way of making an accurate diagnosis. However he recovered completely.

Towards the end of the year it was time to set out for Tinde. The rainy season had begun, and we had a long journey ahead of us through unpopulated country. We were retracing our steps of a year ago. All went well until about ten miles from Ushirombo when we got bogged down to the axles in mud. There we were, my wife and the baby and I and two servants. It was late in the afternoon and darkness was not far away. I set up my camp bed by the roadside, my wife and baby curled up on the seat of the car. I lit the pressure lamp and set it on the roof of the car, and the two boys took a hurricane lamp and volunteered to walk on to Ushirombo for help. This took courage.

We settled down as best we could. About one o'clock there was a noise of singing in the distance, and soon a large company of men appeared. They manhandled the car through the swamp to dry ground, and we were thus able to drive on to Ushirombo and spend the rest of the night in the rest camp there. After a short

visit to our old friends the White Fathers and Sisters we pressed on to Jahama. It had taken us 24 hours to cover the 120 miles. The next stage of our journey, Tinde, was some 50 miles over a good (by our standards) road. Tinde is on the east side of the Tabora-Mwanza railway line at some 10 miles from Lohumbo station. This was very different from Kibondo which was about 140 miles distant from the railway, over a road that was impassable in the rains. We could now send and receive mail twice weekly by the travelling post office on the train. Our messenger had only a ten miles cycle ride instead of a tramp of two to three days. The road to Lohumbo was never impassable except for an hour or two in the rainy season when one of the hill streams would rise to a height of several feet for a short time.



At a sleeping sickness settlement.

On arrival at Tinde we were received by the late Dr J F Corson who was awaiting our arrival. I must pause here to say something about this remarkable man. He had come to Tanganyika from the West African Medical Service. Early in the 1920s when on sleeping sickness duty, investigating new drugs for the treatment of the disease, he contracted it himself. He was far away from other medical help and treated himself initially. He spent the whole of his years in Tanganyika investigating the nature and behaviour of the trypanosome and, as I have mentioned earlier, on his retirement in 1939 joined the staff of the Bureau of Hygiene and Tropical Diseases in London. Apart from his first infection in the course of his ordinary duty he was later infected three times, once by accident in the laboratory and twice when he used himself as "guinea-pig" to determine whether or not a strain of trypanosome which had been maintained in antelopes for many years was still virulent for man. It is among the great privileges of my life to have known him.

After a few days spent in “handing over” Corson caught the train at Lohumbo and departed on leave, and we settled in to our new home. There were two dwelling houses on the station. The one we now occupied had been empty until our arrival — at least empty of humans. Corson mentioned that if we were away in the evenings we should always close the shutters of the rooms, especially of the one where the baby slept. He explained that he had sometimes kept dikdiks in that room, and one night a leopard had jumped through the open window and taken one of them.

Our new colleague was a Yorkshire man called Smith who had general charge of the experimental animals — their fodder and their purchase, for the people were always bringing animals (even porcupines) for sale. As the main work of the laboratory was the investigation of the behaviour of the trypanosome of human sleeping sickness in antelopes and other animals, it was necessary to keep a large stock of such animals as eland, duiker, dikdik, kudu, impala, and reedbuck, as well as baboons and grey monkeys. There was a very large animal enclosure with a high lion-proof thorn fence. During the day the eland grazed outside like domestic cattle. As well as the large animals we had great numbers of guinea-pigs, rats and mice. Their keeper knew them almost by name.

One of the functions was to supply pupae of tsetse flies to one of the research institutes in England (I forget which). We got jars filled with these from suitable areas, those who gathered them in the bush being paid for their work, and sent them off by post weekly. We also kept some for daily use, allowing the flies to hatch out. These were kept in small wooden boxes with mosquito-proof netting sides, through which the flies would feed on an animal when the box was held against its skin. The technique was to allow the flies to feed on an infected antelope or other animal and after an interval to allow the same flies to feed on an uninfected animal or a human volunteer (such as Corson). There was no lack of African volunteers. They were quite confident (and rightly so) of being cured if they became infected, and the financial reward was high.

There was an unusual sideline to this work. Dr Fairbairn, whose prowess in midwifery I have already mentioned, had worked in Tinde during some of Corson's previous leaves. He had encouraged women round about to seek help from him in pregnancy or childbirth. He was always ready to answer a call, and he would set off on his motor cycle, with his cook on the pillion to give the anaesthetic if necessary to the woman in labour. Corson did all he could to discourage this obstetric practice. During my time in Tinde I was never summoned to attend a woman in labour but every day several heavily pregnant women came to the laboratory seeking to know when the baby would be born. It was not too difficult to give an approximate forecast.

The nearest government centre was Shinyanga, which was but a short drive away on a good road. Various government officers were stationed there. A monthly visit was necessary to obtain money for paying wages and to buy stores. The shop I recall was Mambo Leo Store which could be translated Up to Date Store. Here was a good supply of all necessities. Not far from Shinyanga was Old Shinyanga. This had been a German station with a fortified boma. It was now the headquarters of the Tsetse Research Department. The old German fort was a picturesque feature of the station. The director was the late C F M Swynnerton who had earlier

served in the game department. He had a staff of botanists and entomologists. Swynnerton and Burtt (a botanist) lost their lives when their aeroplane crashed in the bush during an aerial survey. The former is commemorated by the massive volume on the tsetse flies of East Africa which was published by the Royal Entomological Society of London in 1936 and by the name of a tsetse fly *Glossina swynnertoni* which was identified by him.

Early in 1935 I had my first attack of malaria, that is nearly four years after my arrival in Tanganyika. Tinde was a very malarious place as there were many breeding grounds of *Anopheles gambiae*. Moreover, there were many Africans (including children) living in the immediate vicinity, so that there was an extensive reservoir of the malaria parasite. One morning I found a gorged anopheles mosquito inside my mosquito net when I awoke. I took note of this ominous sign, and in due course fell ill. I examined my blood in the laboratory and found the subtertian parasite without difficulty. I treated myself with quinine initially, followed (I think) by mepacrine which was called Atebrin. Neither my wife nor son was infected during our stay in Tinde.

As I mentioned above, I had spent much of my leave in Belfast working on the pathology of sleeping sickness. I now had the opportunity of writing my MD thesis, the subject of which had already been approved by the Faculty of Medicine of the Queen's University. I sent to Dar es Salaam to the Tanganyika Standard stationery shop for suitable paper on which to type the thesis (which I did myself). I had a very scanty reference library which Corson had assembled during his years in sleeping sickness work, and I had all the pathological material which I had prepared in Belfast. After some months' work the task was complete. The thesis had, however, to be presented for examination in a suitable manner, and there was no bindery at hand, or so I thought, but I was wrong.

About ten miles away was a small mission station of an American mission where a family called Bates worked. Every Sunday afternoon Mr Bates would come to Tinde village to conduct a religious service, after which he and his wife and children visited us. One day I mentioned my thesis and the difficulty of binding it, when to my surprise he offered to see to it, explaining that he had a small printing press and binding material for producing school books for the mission.

I took my typed sheets to him. The printing shop was a small mud and wattle hut. He selected suitable stout covering material, set up the type to print the title of the thesis and my name and degrees, and produced three well-bound copies of it — two for the examiners and one for me to keep. Not many university theses can have emanated from the African bush as this one did. I parcelled them up, and handed the packet to the Indian stationmaster at Lohumbo for posting on the Mwanza - Tabora travelling post office on the next down train. They duly arrived in Belfast, and I was successful in gaining the MD degree with honours in July 1935.

While I was thus holding the fort for Corson, he wrote to me that he did not intend to return to Tanganyika on the expiry of his leave and asking me to dispose of his effects. His household goods were few as he was a man who lived sparsely, but there were his books, and some valuable laboratory equipment which was his own. I took no action for some months and I was much relieved to get a letter from him saying that he had changed his mind and would be returning.

It was at Tinde near the end of the dry season that I had my one and only encounter with a lion. One morning some villagers came to the laboratory seeking help because a lion was in their village and they were very much alarmed. Tinde had many small rocky hills or kopjes all round and we knew that they were the haunts of lions. On this occasion it was surmised that this particular one had been on the prowl during the night and somehow had not managed to get home before daylight.

My colleague Smith fancied himself as a big game hunter and had lately killed a lion in the hills. He did not need a second invitation to render the aid asked for, but insisted that I should accompany him. He produced a rifle and a shot gun and explained that he would shoot first, but if for any reason he missed and the lion came on, I was to wait until it was close and then discharge both barrels at its feet and head. That he assured me would be sure to stop it. We went to the village in our lorry, and there we found a gathering of people who pointed out a patch of standing maize where the lion was. An elderly man armed with an old muzzle-loader musket such as many Africans possessed was standing guard.

The object now was to dislodge the lion from the maize, and this was done by throwing stones. The animal duly emerged, Smith fired without effect, and on it came in my direction. I didn't get the chance to fire, or I was too slow, but the next thing was, that she (for it was a she) ran past me so close that I stumbled and fell. At that moment my only thought was "Who is going to stitch me up if I'm savaged?" However, she did not stop but took refuge in the dried up bed of a small stream, from which we could occasionally see her tail raised. More stones were used to get her out of this hiding place, soon she emerged, and this time Smith did not miss.

There was general rejoicing. We loaded the carcase on to the lorry and returned to the laboratory where our African workers were quick to carve up and distribute the meat, which they prized highly. The beast measured 9ft 3in from nose to tail. Apart from a vain attempt to shoot a zebra once, to get meat for the porters when on a foot safari, this was my only game hunt. I may mention in passing that as an officer on sleeping sickness duty I had a Governor's licence to shoot game for scientific purposes. I still possess it.

During our stay in Tinde I was instructed to keep an eye on the medical work in Kahama, and this I did by a weekly visit. It was an easy journey of some 50 miles. In Kahama there was a small hospital in charge of an Asian sub-assistant surgeon; there was also a fairly large maternity hospital in charge of a nursing sister with much experience in midwifery. This had been in operation since the late 1920s. From time to time there had been a medical officer in Kahama, and at times Maclean had worked from it as his headquarters.

At this time there was some mining activity in the district when a few Europeans employed by a London company prospected for gold. I cannot remember any success they had. One of these young men became ill with blackwater fever and died in the rondavel of the medical officer's house, where I "camped" during my weekly visits. I did what little I could for the patient. The mining company was told of his condition by cable and replied that further medical advice must be sought from Nairobi. The result was that a young doctor arrived in a light aeroplane (I am not sure where he landed) and examined the patient. This was the first time he

had ever seen a case of blackwater fever (as it was my first time). Our patient died and was buried in a small graveyard in Kahama. I saw only one other case of blackwater fever during my whole service.

On Corson's return to Tinde later in 1935 we moved to Kahama which was a pleasant station. The tsetse bush began some miles to the west so that the station itself was fly free. There were two administrative officers and a post office. The telegraph line passed through from Tabora and Mwanza on its way to Bukoba, so that for the first time since leaving Dar es Salaam in 1931 we were close to the post office. The medical officer's house was spacious with a wide verandah and a thatched roof. As in the Ushirombo house there were three rooms but in addition there were two rondavels, one of which we used as a bedroom. There were a few Indian shops with a good range of goods, and it was even possible to find someone to carry out car repairs, which had previously been very much a "do it yourself" affair. Petrol and kerosene could be bought locally so that there was no longer the need to stock up with either as opportunity offered.

On leaving Dar es Salaam for Kibondo at the end of 1934 we had bought our first short-wave radio set which was operated by a low-tension and high-tension battery. It was difficult to keep the former charged. This was done by connecting it to the car battery, but in the wet season it was difficult to keep the car battery charged. Reception was fickle. In Kahama I managed to have a telegraph pole erected in the garden which enabled me to attach a high aerial. This improved reception, and I well remember listening to London one night and hearing the announcement that King George V was dying. That was in January 1936.

Our stay in Kahama was short. We visited Tabora at Easter and stayed a few days with Dr Fairbairn and his wife. He had now succeeded Maclean as Sleeping Sickness Specialist (Maclean being Deputy Director of Medical Services), and my posting was in his hands. He suggested that I come to Tabora for the remainder of my tour, and the transfer took place.

The work in the African hospital in Tabora and life in Tabora were very different from what we experienced in the bush. I was now in charge of a busy, well equipped hospital with a nursing sister, two sub-assistant surgeons, a compounder, African medical assistants, and a large ancillary staff. Selemani, who was in charge of the operating theatre, was a veteran who had been trained for his work when Tanganyika was German East Africa. The head orderly, Suedi, was an excellent man and an enthusiastic soccer player in the Tabora League, (of which I later became secretary).

My wife and son preceded me on home leave in about August and I followed in November, again sailing in a British India ship. Thus ended our second tour. It is appropriate here to mention the terms of vacation leave. It amounted to six days for each month of service, plus the time taken for the sea voyage to England and back. If an officer did the journey in a shorter time than the ship took from Dar es Salaam to London (for example by disembarking at Marseilles and travelling overland by train or air) the time thus saved could be added to the period of leave. On the occasion mentioned I did this. I remember the many newspaper placards in Paris giving news of King Edward VIII and Mrs Simpson which was not yet public in England.

Leave was spent in Whitehead, a small seaside town near Belfast, where we had also spent part of our first leave. I had looked forward to having part of the summer there, but before the expiry of my stated leave I was recalled to Tanganyika. I do not remember the reason for this shortening of my leave. I sailed in the MV Llangibby Castle of the Union Castle Line by the Mediterranean and the east coast. It must have been in late April. I joined the ship at Marseilles in order to enjoy the extra week this allowed at home with my family.

On arrival in Dar es Salaam I found that I was again posted to Tabora, and after a few days in the capital, staying with the late J B Budge, an administrative officer seconded to the medical department, I went back up country. I cannot remember how I had disposed of my box body Ford car but I now had a Vauxhall saloon, which I had brought out with me in the ship. This was a luxurious car by the standards of the time, but it was quite unsuitable for bush roads. It was, however, unlikely that in my new posting I should have to travel far afield from Tabora.

I was given one of the old German houses (22 Mission Street) which, as I have already mentioned of the Dar es Salaam house, were much superior to recently built government houses. It had a large mango tree at the front which provided good shelter for the car, and at the side were pawpaw trees which provided us with a supply of that breakfast juice. Tabora was full of mango trees and jacarandas, which blossomed profusely. The house was said to have been an officers' club in German times, and judging by the size of the lounge it probably was.



Dr Hugh Gault Calwell in Tabora,
Tanganyika, 1947.

Tabora was a large town and had been an important centre of the slave trade. It was an important staging place for caravans going to and from the coast. Livingstone and Stanley had stayed nearby after the latter had found the explorer at Ujiji, and they had travelled together as far as Tabora, near which, at Kwihara, the house they shared was still to be seen.

In September of that year (1937) I went to the coast to meet my wife and son who had arrived in a British India ship, and we returned to Tabora to settle in for the tour. It was a change from our previous stations. Not only had we running water and electricity, but a telephone (even if only a local one and very temperamental especially during thunderstorms).

No longer were we dependent on the library of the Women's Service League, for there was a good lending library in Tabora Club where there were also magazines such as the Illustrated London News, the Spectator, the Tatler, etc. The club in

those days was strictly European. Asians and Africans could not join. It was a pleasant meeting place for the many officials (civil and military) and their wives and families. One very popular event was a cinema show once a fortnight on a Saturday night. The club possessed an excellent projector, and the films were hired from a film library in Nairobi. Dances were held frequently ("dress" of course), the music being provided by a large gramophone which had to be wound between records. The operator I remember was Mr John Gower, a teacher of handicrafts at the neighbouring school for the sons of chiefs. Other recreations were tennis and golf.

I may as well say something here about the school I have just referred to. It was indeed for the sons of chiefs and was run like an English public school. The building was impressive and the teaching staff enthusiastic. The headmaster at the time was P A W Williams, and the other masters I remember were J A C Blumer and H A Lindeman. There were school "houses" as in England, sport was greatly encouraged (association, not rugby, football), and there was a wide curriculum of studies. The aim was to turn out young men with a superior education which it was believed would assist them if and when they became tribal chiefs.

Tabora was a provincial headquarters with a provincial commissioner (at that time the late F J Bagshawe) and many administrative officers. All other government departments were represented by resident officials, and there was a post office with a European postmaster — again a great change from our mail runner in Kibondo.

Tabora had two hospitals — a small one for Europeans and Asians and a large one for Africans. The latter was well equipped with a laboratory and a good operating room. There were no such facilities in the European hospital, and its patients requiring surgical operations had to be transported to the other hospital in an ancient Armstrong-Siddeley ambulance driven by an old retainer called Jim. He was kept busy transporting the sick from the African town (and further afield) to hospital. This vehicle also served as a hearse on the rare occasion of the death of a European.

The African hospital provided a good service. It had a large staff which included the medical officer, two sub-assistant surgeons, a compounder (these three being Asians), African dispensers (medical assistants), nursing orderlies, ayahs (nurses) and laboratory assistants who were proficient in the use of the microscope. There was an excellent office clerk whose "paper work" was impeccable. There were three nursing sisters in Tabora, the senior of whom supervised both hospitals, the other two working in the European hospital. The other doctors were the senior medical officer, who was an administrator, and the medical officer in charge of the European hospital who was always available to help in the African hospital. The former (acting) was the late G S P Noble in 1937, and a little later the second medical officer was A H Morley, who had come from British Somaliland. He later became surgical specialist in Tanganyika. At the time of which I am writing, he was a great help to me in the surgical work of the African hospital.

The work was wide-ranging and varied. Pneumonia, food deficiency diseases, anaemias, infectious diseases such as measles and chickenpox, malaria, relapsing fever, hernias, tumours and enormously swollen scrotums caused by filariasis were the commonest conditions seen in the wards. The work of the outpatient department was carried on by the two sub-assistant surgeons.

There had been in existence in Tanganyika for many years tribal dispensaries which were managed and staffed and paid for by native authorities. This was part of the "indirect rule" policy of Sir Donald Cameron, by which some responsibility for local affairs was given to tribal chiefs. The "tribal dressers", as they were called, had been given a very short and elementary training, and there was now a movement to raise the standard of the service they provided. Tabora was chosen as one of the places for higher training.

A small school was built in the hospital grounds for the purpose. I was given charge of it. Teaching equipment (including a whole articulated skeleton) was purchased, and additional microscopes were provided in the hospital laboratory for the use of the students. Six boys who had just left school were enrolled as students. I found them intelligent and interested. One whom I remember best was of mixed African-Asian blood, and his curiosity was insatiable. Another man I remember was Leo, a very tall thin young man and a good student, who after training found the wages too small and went off to the Belgian Congo, where he became a bank clerk, earning about five times the amount he earned in the medical world. Much of the teaching was clinical in the wards, and I was hard put to it to answer some of the questions. There was a formal examination at the end of the course (with an outside examiner), and, as I recollect, all six of this first batch of students passed. Their commencing salary was 25 shillings per month.

There was a good deal of medico-legal work to be done in Tabora. Dead bodies were often brought to the hospital for post-mortem examination. In many cases death had taken place a few (and sometimes many) days earlier. The coroner's order required a report on the cause of death, and if death was due to injury and some person was accused of the crime, medical evidence had to be given in the subordinate court, and later in the High Court when the judge came on circuit to Tabora. This was a lucrative occupation — 63 shillings for the report and 63 shillings for giving evidence.

Murder trials were unfortunately common. As I remember, the High Court sessions were held twice a year, and there was usually a long list of trials. The judge was attired in scarlet and bewigged like his counterpart in England. I often wondered what the spectators and the accused and the witnesses made of it all.

There was no trial by jury, nor yet was the trial entirely in the hands of the judge, for he was accompanied on the bench by two assessors chosen like jurors. At the conclusion of the evidence he sought their opinion of guilt or innocence but he was not bound to accept it. Assessors were always of the same race as the accused, Africans for an African defendant, Asians for an Asian, and European for a European. There was a court interpreter who travelled on circuit, but, as he only interpreted from Kiswahili into English and the reverse, it was often necessary to have an interpreter who could interpret the local tribal language used by the defendant and the witnesses. The prosecuting counsel always came from the legal department in Dar es Salaam. Defending attorneys (if any) were always, in my experience, Asian.

I remember at least two cases which exemplify the efforts of the judge to treat the accused with sympathy. In a murder trial the accused had to plead to the charge (translated) that he did with intent feloniously kill and slay etc. to which he at once replied "Guilty". The judge then remarked to him "you must not say that. It is for

me to decide your guilt". In another case a young woman had killed her six months old baby and was on trial for murder. I had seen her in prison several times and had not detected any signs of insanity such as would have supported the less serious charge of infanticide. The judge was worried about the case, and before the trial began he sent for me and almost begged me to find reasons for reducing the charge.

As I have said, I had never detected any signs of insanity in the girl. I consulted a book called "Crime and Insanity" and found a short mention of "lactational" insanity as a cause of crime in nursing mothers. This girl was a nursing mother, and when I was called to give evidence the next day I referred to the possibility that the accused fitted into this category. The judge asked for my authority for the opinion and I referred to the book, which he then said must be handed in to him as part of the evidence and that he would examine it. The result was a verdict of infanticide whilst of unsound mind due to lactation. No punishment was imposed.

Not all cases ended as happily as this one. There were many in which the mandatory sentence of death by hanging was imposed. Many of the murders which occurred were unexplained, and it used to be thought that witchcraft was behind some of them. For example, a death of a child or some other individual might be attributed to a spell having been cast on him by a witch (man or woman). Tongues would wag, the identity of the witch would be hinted at or even named, and the end of all this fear and suspicion might lead to the murder of the suspected person. None of this would, however, come out in evidence.

One of my duties was to act as medical officer of the prison. The day to day work was carried on by the sub-assistant surgeons, but there was a general inspection of the prison every Saturday morning when all the prisoners were paraded with warders and prison officers present; every prisoner had the opportunity of making any complaint to me that he felt necessary to make. Men condemned to death were kept in a separate compound of the prison, and they did not go out to work in the town as the other prisoners did. Adjoining the male prison there was a female prison.

The most unpleasant duty was attendance at hangings. It used to be said that the distant communities, from which a condemned man came, never actually believed that the death sentence had been carried out, but that he was still in prison. Occasionally, when a particularly savage murder had been carried out, representatives of the community of the condemned man were brought to the prison, so that they might see him before execution and later view his corpse. I saw this done only once. It should be stressed here that only a small proportion of those condemned to death were hanged. In the great majority of cases the death sentence was commuted to life imprisonment. Only those guilty of the most horrific murders were hanged.

There was no escape for the medical officer from the duty of being present while the sentence was being carried out. The hangman came from Dar es Salaam, and the executions always took place on a Monday morning. I did not receive notification until the Saturday. I remember still the apprehension with which I approached this disagreeable task and the sick feeling and sleeplessness of the night before. It was my practice to visit the prison on the Sunday night to see if the condemned men required sedation. They were invariably asleep. Hangings took

place at 8 am after the remainder of the prisoners (except other condemned men) had left the prison for their daily work outside. I remember an occasion when His Excellency the Governor happened to arrive in Tabora on the same morning as a hanging was taking place. He was holding a reception at the boma (an old German fort near the prison). A band was playing rousing tunes which were clearly audible to us in the execution shed which was at the front of the prison. The incongruity of the jollity outside and the grimness inside struck me forcibly. However distasteful and emotionally disturbing it was for me to attend these hangings, I had the satisfaction of knowing that I was there to see that nothing was botched, and that the prisoner was put to death as expeditiously and humanely as possible. The coroner's inquest was always held the same morning, and I never had occasion to testify otherwise.

During this tour I was greatly afflicted by hay fever (which had first attacked me in 1934), and it became so bad that it interfered with my work. Early in 1938 I applied for sick leave, which was granted, and my wife and I took a trip in the SS Liemba on Lake Tanganyika. We went on the Saturday night train from Tabora to Kigoma, the port where the ship was based. The train arrived on the Monday morning and the ship sailed that evening.

The Liemba was a steamer belonging to Tanganyika Railways. She had been in service on the lake in German days, had been scuttled during the 1914 – 18 war to prevent her from being captured by the British, and had been salvaged after the war and restored to service. Her task was to carry passengers and cargo to the extreme southern end of the lake, following the eastern shore as far as Mpulungu and back. The round trip took two weeks.

There were about a dozen saloon passengers and as many deck passengers as could find room. They were a lively company of men, women and children on their way to one of the many ports of call. My wife and I had a comfortable two-berth cabin, and there was a small dining saloon which never wanted for the freshest of lake fish. The captain, as I recall, was a young man called Vaughan, who was a lieutenant in the Royal Naval Reserve. Such a one might do a tour as master of the Liemba and another tour as a pilot in Dar es Salaam. The engineer was, I think, permanently employed in the ship.

During the voyage the ship rarely sailed at night; she anchored off one of the many villages on her route or at a refuelling place where there were stacks of ready chopped logs which were brought on board and stowed in the hold for firing the boilers. On anchoring in the afternoon the boats would be lowered to ferry passengers to and from the shore, and, this work done, the captain would take those of us who wanted to accompany him on a fishing expedition until sundown. These were very pleasant excursions. An alternative was a visit ashore to visit a White Fathers' mission or the remains of an old one or a village dispensary (although at that time I had no medical duties in that part of the world).

On arrival at Mpulungu the remaining passengers and cargo were put ashore, the ship remained there for several days before resuming the journey north. Mpulungu was not far from the border of Zambia (then Northern Rhodesia), and it was customary for passengers in the Liemba, who were doing the round trip, to spend a few days in the town of Abercorn. The hotel proprietor there provided transport from and to Mpulungu. We thus spent a night or two in the pleasant

coolness prevailing at that time in Abercorn. One evening we were taken to the club where I was surprised to see a large photographic portrait of one of the Dukes of Abercorn after whom the town was named. I had not previously known of the part played by that member of that Ulster family in the development of Zambia.

All during 1938 there was much talk of war. Maclean was busy making preparations for the formation of a medical corps of some kind, which would be ready for mobilisation if war broke out. There was no military medical establishment of any kind in East Africa. Tabora had been a garrison town for many years, where either the first or the second battalion of the King's African Rifles was stationed. The medical care of the soldiers was in the hands of the hospital medical officer. I remember that one routine task was the annual inspection of the battalion's medical stores. The various items had been assembled, I should think, according to the experience of the British army in the bush warfare against the Germans in 1914–8. The drugs and dressings and instruments were all packed into loads suitable to be carried by porters on foot. Something different would be needed now.

As evidence of the preparations for war I received a letter from Maclean telling me that if war broke out, I would be asked to join the army. There was no conscription, and I could accept or decline military service. I was to serve in a casualty clearing station which was being organised. As the year wore on, war seemed more and more likely, and it was with relief that we heard of Chamberlain's parley with Hitler and his message of "Peace in our time".

In that September our second child was born — this time a daughter. There was no anxiety, as in Kibondo in 1933. Nursing and medical assistance were available on the spot, and the birth took place without difficulty in the European hospital. Dr A H Morley was the medical attendant, and in the following month I returned the compliment by attending his wife at the birth of their third child. With the addition of a baby girl to our family we had to engage a nurse (ayah) for her. A very small Uganda woman was recommended to us, and we engaged her to our great satisfaction. Our son was now five years old and ready for school. It was fortunate that two young women, the daughters of a public works department official in Tabora, were running a small school for children. This rendered great service to our child and others who attended it.

Preparation for war continued. The next step was an instruction to seek volunteers for army medical service from among the African hospital staff. This entailed some explanation of what would be involved for them. There was a universally favourable response.

We were able to receive the BBC news on short wave, and I well remember Sunday morning the 3rd September 1939, when we heard Neville Chamberlain announcing the outbreak of war against Germany. There was no mention at all of Italy, and it was that country's intentions that were of immediate interest to us in East Africa. On the following Tuesday I left by the down train for Dar es Salaam accompanied by a large number of the African staff. Others would follow. My place in Tabora was taken by the late Dr A J Keevill, a Moravian medical missionary, who had worked at Sikonge in the Tabora district since 1923. His wife, who was a midwife, had also been there for many years. Keevill did not

return to the Moravian mission but remained in the Colonial Medical Service in Tanganyika, and later in Antigua.

On arriving in Dar es Salaam on 6th September I was told that we medical officers were to be given commissions in the King's African Rifles Reserve of Officers as there was no army medical service in East Africa. I was posted to the casualty clearing station which had three medical officers: W A Young (a senior medical officer) with the rank of major, commanding officer; A H Morley with the rank of lieutenant, and myself with the rank of captain. This was quite anomalous as Morley was senior to me in colonial service. In addition, there were three European public health inspectors holding warrant or commissioned rank, and a European sergeant from Nairobi. My old friend of Kibondo days, Adamson Barton Mkandawire, was a Warrant officer class 1. The Sewa Haji hospital became our headquarters where our African volunteers had to be duly attested and given their uniforms; these at the beginning consisted of blue jerseys, khaki shorts and pill box caps with red cross badges. We had our uniforms of khaki drill made locally at a cost of thirty shillings each, and we were issued with army slouch hats. We wore the regimental badge of the King's African Rifles. Rank badges were unobtainable until an Asian prisoner was found who was able to fabricate fairly good replicas of crowns and stars from scrap brass, using genuine badges as models.

Maclean was now a full colonel with the appointment of Assistant Director of Medical Services (lines of communication). I remember others of my medical colleagues, such as Dr J W Walker, with whom I had served in Tabora at one time, who was now in command of the Tanganyika Motor Ambulance Convoy; Dr R C Speirs, who commanded the Tanganyika Field Ambulance; and others such as Dr W J Aitken and Dr P E C Manson-Bahr (grandson of the great pioneer in tropical medicine, Sir Patrick Manson) who were regimental medical officers.

During our stay in Dar es Salaam we were the envy of our civilian medical colleagues who were toiling away in the hospitals or the laboratory or in medical administration, whilst we were kicking our heels waiting for orders to move. The days passed pleasantly, and at times I was given duties other than helping to organise our unit.

In the context of the outbreak of war it should be remembered that Tanganyika had once been a part of German East Africa and that many Germans had settled there before 1914. Sometime after the end of the war in 1918 those who desired to return were allowed to do so, and there was a still considerable German population by 1939. There was uncertainty about their attitude if war should break out. The years of resistance put up by a small German army against large British Forces in 1914 – 18 were remembered, and that is why the administration moved quickly to intern German adult males who might otherwise have taken to the bush as a resistance force. A very large internment camp had been got ready in Dar es Salaam, planned largely and supervised by Dr B O Wilkin who had served in Tanganyika since 1925.

There was a large commercial concern in Dar es Salaam called the Usagara company. They were the agents for Ford for example, and also carried on a widespread general trade. They were also agents for the firm of Bayer in Germany which manufactured valuable drugs. The infallible cure for early sleeping sickness was one of their products (Germanin). The premises were closed at once when

war broke out, and one day I was given the keys of their warehouse and instructed to go and collect any drugs that would be useful to us. I did so with most disappointing results. There was hardly a drug to be found. The stock had been cleared out in good time by the German staff.

During our stay in Dar es Salaam I was ordered to go to the Tanga province along with an officer of the King's African Rifles to examine recruits for the army. We went in a small aeroplane very like the one I have described, in which my wife and I had flown in 1932. There was just room for three people on the plane. I cannot now remember exactly where we went but it was a very rough and bumpy trip, and when we arrived I was so sick that I could not begin my work for some hours. My main recollection of the men I examined was the very bad state of their feet with deep cracks in the soles. Rightly or wrongly I rejected most of them as unfit for marching. The next day we flew back to Dar es Salaam.

It must have been early in October that we got orders to move to Arusha in the northern province. I had been there last in 1932. I was sent ahead with our lorries and their drivers by goods train to Dodoma. During our stay in Dar es Salaam we had acquired a Ford touring car — taken over from a German owner by the Custodian of Enemy Property. The vehicles were loaded on to the open flat wagons, and I had forbidden the drivers to sleep in their vehicles lest during the night they might step out and fall on to the railway line. This was to have an unforeseen consequence. I was housed in my camp bed in a closed wagon. The motion of the train through the night was so violent that not only was sleep impossible but it was difficult to keep the bed from being jolted from one side of the wagon to the other.

We arrived at Dodoma in the early morning some fourteen hours after leaving Dar es Salaam when the consequence of forbidding the drivers to stay in their lorries was seen. Thieves had been busy during the night plundering the bales of dressings, and worse still, they had taken away all the ignition keys of the lorries which had carelessly not been removed by the drivers. There we were, unable to drive the vehicles off the wagon, and we were still sitting wondering what to do, when the main party of the unit arrived later in the morning. I cannot now remember how we got over the difficulty, but it was resolved somehow, and the vehicles were unloaded and ready for moving north. Arusha was about 270 miles distant over a good road by Tanganyika standards, and we were able to reach it in a single day's journey. The battalion of the King's African Rifles, which had been so long garrisoned in Tabora, had moved there earlier when war became imminent, and had then moved on into Kenya; so that there was plenty of good barrack accommodation available for our unit in the empty cantonment. We had no duties other than continuing the organisation of the unit and familiarising ourselves with the role of casualty clearing station in time of war.

As I have mentioned, we had only one motor car in our transport, and we now had the opportunity of obtaining another from among the many vehicles confiscated from the Germans who had been taken away for internment. I had by now been given the responsibility of transport officer for the unit, and the local representative of the Custodian of Enemy Property permitted me to choose any one of a number of vehicles in his charge. I chose a fairly modern Ford saloon, signed a receipt for it and drove it away.

The next stage of our journey was into Kenya. We packed up and moved off again. We encamped for the night at Namanga near the Tanganyika - Kenya border. In the morning we saw signs of elephants having passed through our camp during the night but there had been no disturbance of any kind, and nobody was aware of their presence. We stopped for a short time in Nairobi and then pressed on to our final destination which was Nanyuki some 80 miles farther north, and almost exactly on the equator. There was a branch of the Kenya and Uganda railway which ran from Nairobi to Nanyuki.

We were now in the midst of a large military encampment where two brigades of the King's African Rifles had assembled — the 1st, 2nd and 6th battalions from Tanganyika and Nyasaland (Malawi) and the 3rd, 4th and 5th from Kenya and Uganda. We found a hutted hospital ready for our occupation on the lower slopes of Mount Kenya, whose snow-covered peaks dominated the scene. The town of Nanyuki was down below. The climate was most agreeable, the nights being cool and even cold. There was plenty of hutted accommodation for our Africans. Major Young, our commanding officer, slept in one room of a corrugated iron hut, the other room being our mess, and the other officers had tents. I should mention that each of the three medical officers had his own peacetime personal servant with him who had also joined the army. For example, our cook Buhabi, who had been with us since 1932 was there, but now a soldier on the strength for pay and rations.

It did not take long to get our hospital working, and we found plenty of work to do. There was also a hospital for officers which was sited in the peacetime officers' mess. There was very little surgical work to be done, but there was a great deal of sickness — fevers and dysentery — to be dealt with. The battalion medical officers kept us busy, and occasionally we got patients from further north at Isiolo on the edge of the Northern Frontier Province, where the Tanganyika Motor Ambulance Convoy was stationed.

The Italians had not yet come into the war, but no one knew when they might do so. We were aware of their presence in strength on the Ethiopian border, and we heard stories of their powerful artillery, and we wondered what would happen if they invaded Kenya. I cannot remember any artillery on our side although an Indian mountain battery arrived later. I did see, however, a "cannon" one day. I encountered one of the Tanganyika battalions on the march and saw an outsized weapon on the shoulder of an askari. I asked the company commander (Captain Dudgeon, an old friend from his days in Tabora) what it was, and he called out (in Swahili) to the man, "Juma, bring your cannon here". It was an anti-tank rifle. I don't think we had a single water "cart" in the whole army!

There were very pleasant walks around the camp up through the thickets of bamboo trees on the mountain slopes or down into the town. We lived on standard army rations which proved to be entirely satisfactory. The men were also well fed — probably better than ever before in their lives, and the army pay was much better than they had been earning in Tabora hospital. Those of us who had been in the medical service continued to have our army pay supplemented to bring it up to our civilian level. I remember once we were visited by a regular Royal Army Medical Corps colonel, who had come to Kenya to organise an East African Army Medical Corps (we were still King's African Rifles Reserve Officers). He asked

about our terms of service, and when he heard that we were still receiving our civil salaries, he remarked that we were the most expensive casualty clearing station in the whole British army.

The East African Army Medical Corps came into being, and we were regazetted into it. The anomaly of me being a captain, and A H Morley, my senior in the colonial medical service, being a lieutenant was not abolished. We got a new badge — an elephant's head, the staff and serpent, and the motto *Ex Africa Semper Aliquid Novi* (always something new out of Africa). The story was that it had been designed by Dr R P Cormack, a senior medical officer in Kenya, who had served in the war of 1914 – 18 and was now in a military administrative post.

Early in December I was given leave to go to Tabora where my family was. I went by train from Nairobi, thence to Kisumu and by lake steamer to Mwanza, and by rail to Tabora. I found my wife and two children well. I left Tabora by train in Christmas week for Dodoma, where I would catch a plane for Nairobi. My wife came with me as far as Dodoma, where we spent a day or two in the hotel. I left for Nairobi on Christmas Day in a South African Junkers plane, and my wife returned to Tabora by that night's train. The plane landed at Moshi to refuel, and I remember wondering whether the pilot knew where among the clouds the 19,000 feet Kilimanjaro mountain was. Anyhow we didn't hit it either on landing or on taking off. I spent the night in Nairobi there with my old friend Fred Dalton, whom I had last seen in Tanga in 1932, and the next day took the train to Nanyuki and my unit.

The Christmas festivities were still on, and one of them was a visit by a concert party from Nairobi, which entertained us with such war-time ditties as "We'll hang out the washing on the Siegfried Line" and "Run Rabbit Run". These still stick in my ears although over forty years have passed since that Christmas. We were also given gifts sent by the people of Nairobi.

As far as East Africa was concerned peace still prevailed, but our military preparations continued apace. I remember West African and Northern Rhodesian troops arriving, and a batch of medical officers from South Africa who were entrusted to me to teach them some Swahili (and some parasitology). For the latter instruction I placed each of them beside one of our excellent African laboratory assistants to learn how to stain and examine blood smears. It was an education for them in more ways than one.

I had by now completed a tour of three years without home leave which was considered a long time, and I was given vacation leave to the United Kingdom. I returned to Tabora to my family, packed up and stored all our household goods, and we left for the coast. Our cook, whom I have mentioned, was released from military service. It was a very accommodating army. We embarked at Dar es Salaam in the SS Madura of the British India Line and sailed for home by her usual route — Mombasa, Red Sea, Mediterranean, UK. Italy was still out of the war, but after some days in Mombasa orders came that we were not to sail north, but south via Capetown and the west coast.

It was at this point that trouble struck me. In Nanyuki we had had very many patients suffering from bacillary dysentery. During our stay in Mombasa I began to have signs of the disease, but I hoped that it would pass. I was mistaken, and as the voyage progressed I got worse. The ship's doctor (formerly of the Indian

Medical Service) insisted that I had amoebic dysentery, although he had no microscope evidence of this. I too looked for it with his microscope and could not find any signs of amoebae. Nevertheless, he treated me for that condition. I continued to get worse, and to add to my troubles malaria developed with fever and vomiting. I suggested that, as I was vomiting so much, an injection of quinine would be of service. This suggestion was received with horror. He wasn't going to give me tetanus, he said (an old phobia with quinine injections). I had with me, however, some ampoules of the German preparation of Atebrin (mepacrine) with which he was not familiar, and I persuaded him to inject this drug, with great benefit to me. My dysentery however continued.

When we arrived at Capetown the ship was detained to be "degaussed" ie given protection against magnetic mines, the technicalities of which procedure I do not understand. This completed, we sailed and the next port of call was Freetown, Sierra Leone, which was a very busy assembly point for convoys. We lay off for several days. An old friend of mine, the late Professor Tom Davey of the Liverpool School of Tropical Medicine, was at that time in charge of the Sir Alfred Jones Research Laboratory in Freetown, and in the hope that he might be there I had a message sent ashore to him. A few hours later he came on board and had a chat about my case, but could not help me.

Our convoy being assembled we sailed for home with a Union Castle liner, the Caernarvon Castle, acting as armed escort. We heard that three of the ships in the convoy were lost by submarine attack, one of them immediately astern to us. When we were nearing our destination, it was early in June 1940, France had already fallen, and the German army was pushing across the country. Our ship was ordered into the estuary of the Gironde to receive refugees from Bordeaux. In the end we sailed for England with some 1,500 passengers in a ship which normally carried about 250. All this time I was in bed, and my poor wife was coping with our two children, but we had much help from a Tanganyika nursing sister on board.

With the enormous number of passengers and the various alarms of attack, things became chaotic. The presence of some eighty Royal Marines and their officers who were taking passage from Freetown gave some stability to the situation. The stewards' department broke down completely and there was no service of meals. Mr Cheyne, a Tanganyika Administrative Officer, as I remember, took charge and with the help of other government officers organised things so that meal tickets were issued, and every person received a meal of soup and bread twice daily. The refugees were mostly French, and many of them had brought food with them, but they concealed this and did not add it to the common store. Among the refugees was the distinguished war correspondent, the Hon. Edward Ward.

We arrived at Falmouth where the town was so full of refugees that people were sleeping in the doorways of shops. The order was given that all passengers were to be landed, and the ship was to go on to London for discharge. She had her holds packed with Kenya butter. I was so ill that the ship's doctor told the captain that he would not be responsible for the outcome if I were put ashore in Falmouth. After some communication with the competent authority, permission was granted for my wife and children and Miss Sampson, the nursing sister, and me to remain on board. The ship continued up Channel alone with a cruiser escort, through the

Dover Strait (the Germans holding the French coast) and into the Thames. The port medical officer came aboard off Greenwich and took me on a stretcher into his launch and so ashore with my family and Miss Sampson. An ambulance was waiting and we were taken to the Dreadnought Hospital, Greenwich to which I was admitted, the others finding accommodation in the nearby Ship Inn. So began my vacation leave. It would be a very long time before I would see Tanganyika again.

I did not sufficiently recover my health to resume military service until October 1941 when a medical board passed me fit for service, but only within the United Kingdom. I was then posted to a General Hospital (No 4) which, pending its departure overseas, was acting as a prisoners-of-war hospital. It contained a large number of German and Italian prisoners. I worked there as a physician (now in the Royal Army Medical Corps) and I also gave a course of lectures on tropical diseases to the medical officers. When the unit finally moved to Egypt I was left behind. My last posting was as specialist physician in the Cambridge Hospital, Aldershot, where I had the care of many soldiers who had contracted malaria both in West Africa and the Mediterranean area. During these years my connection with the Colonial Medical Service was non-existent except for two important matters. On one occasion my army sick leave exceeded the period for which I was eligible for pay. The Colonial Office stepped in and resumed my civil pay until I was again fit for army service. The other benefit was that United Kingdom income tax was not levied on personnel from overseas.

I was released from the army in December 1945, and the Belfast consulting physician to the Colonial Office recommended that I should not return to Tanganyika for some three or four months. In due course I was recalled from leave in May, 1946 and left for Dar es Salaam, leaving my family at home. The voyage out was a most unusual one. Passenger ships were not yet available for regular sailings to East Africa nor could they meet the demand being made on them. HMS Fencer, an escort aircraft carrier, was therefore used as a passenger ship, and I was one of the hundreds of passengers who embarked on her in Southampton for Mombasa.

The hangar had been converted into a dormitory with hundreds of tiered bunks, and in addition there were many cabins which had accommodated her wartime officers. I was given a berth in one of these near the engine room. This was warm and comfortable in English waters but later on the heat in it was unbearable. The 700 passengers included naval and colonial service personnel of many departments, including nursing sisters, commercial men, missionaries such as young White Fathers on their first (and long delayed) journey to Africa. They wore the red tarboosh or fez which I had never seen worn by their colleagues in Tanganyika. One great difference from the peacetime scene on a ship bound for East Africa was that there were no families — husbands and wives with children.

An unusual call was at Gibraltar which I had not visited before. When we got to Malta we heard that the captain had sought permission from the Admiralty to call there but this had been refused, which was a great disappointment. And so on through the canal into the Red Sea where conditions on board were unbearable. There was no shelter above decks anywhere. The flight deck was exposed to the blazing sun, and if one sat in the shade of the superstructure (bridge and funnel) one was exposed to as much sunburn as in the open. I discovered this to my cost.

The vessel rolled horribly at times in the Indian Ocean, her engines broke down once, and it was a great relief to enter Kilindini harbour and go ashore. To my great surprise the SS Madura was lying there, from which I had been carried ashore in the Thames in 1940. Those of us who were bound for Tanganyika completed our journey in her. HMS Fencer then went on to Colombo.

I had left Dar es Salaam six years previously, and in that time there had been changes in the medical department. Dr Scott had now gone, and the new Director of Medical Services was Dr P A T Sheath, a Canadian, who had been only seven years in the Colonial Medical Service before the war, including a short time in the Gold Coast (Ghana). The Deputy Director of Medical Services was now Dr Alan McKenzie. Maclean had not returned to Tanganyika after the war. He had been medical administrator in Ethiopia after the defeat of the Italians, and had then gone to Trinidad as Director of Medical Services. His departure was a great loss to Tanganyika.

After a short time in Dar es Salaam picking up the threads I was posted again to Tabora for sleeping sickness duty. Dr Harold Fairbairn had succeeded Maclean as Sleeping Sickness Specialist. He was spending all his time in the Trypanosomiasis Research Laboratory in Tinde, and he would shortly relinquish his substantive post for research. I succeeded him as Sleeping Sickness Specialist.

I found Tabora unchanged since I had left it in 1940 except that there was a large prisoner-of-war camp for Italian soldiers, captured in the conquest of Ethiopia and Somaliland. These men carried out much useful work in building and other construction. One of their achievements was the transformation of the Roman Catholic Cathedral from a plain unadorned church to a replica of a classic Italian church. Pillars were painted on the walls, and arches also, so that one seemed to be looking at an aisle on either side of the nave. An apse was painted on the east wall behind the altar (where in reality there was no space) so that one seemed to be looking beyond the altar. There was a theatre in the camp with various famous Italian scenes painted on the backcloths on the stage. There were craftsmen of many skills. I still have a set of trays beautifully inlaid which one of these men made. Another example of their skill is the granite obelisk which they constructed at Ujiji to replace an older and inferior one commemorating the meeting of Livingstone and Stanley in 1871.

Before I left Dar es Salaam for Tabora the Director of Medical Services was uncertain of my immediate future. Fairbairn was awaiting the creation of a research post either in Tanganyika or Uganda, the funds for which were not yet assured. He was in Tinde working almost exclusively on trypanosomiasis in the laboratory, and I was to do the field-work throughout the whole country. I was to be given his post as Sleeping Sickness Specialist when his new post was created or else to be promoted the Senior Medical Officer. The latter post was entirely administrative, and I was pleased when I was given the former.

The senior medical officer in Tabora was now Dr B O Wilkin whom I have mentioned earlier in connection with the internment camp in Dar es Salaam in 1939. He had served in Tanganyika since 1925 and was now in his last tour. When I arrived, his wife was dying. Her death took place a few days later, and he invited me to move in to his house and share it, instead of setting up on my own. His son, a boy of ten or twelve years of age, was also there. This arrangement was

a happy one. The house had previously been occupied by successive provincial commissioners, but when the King's African Rifles left Tabora, the provincial commissioner moved into the commanding officer's house which was regarded as a superior one.

The old provincial commissioner's office was now given up to medical administration and I was given accommodation there from which to operate the territorial sleeping sickness service. All returns of cases of the disease diagnosed anywhere in the country came to me, and I had a block grant of money from which I provided for the upkeep of sleeping sickness dispensaries and the wages of the dressers employed in them. As two-thirds of Tanganyika were the habitat of tsetse fly, it is not surprising that human trypanosomiasis was widespread. My responsibility extended from Lake Victoria to the bottom end of Lake Tanganyika and throughout the western and central provinces, and part of the northern province, right down into Lindi and along the border in Portuguese East Africa (Mozambique).

I now had a great deal of travelling to do, but I had no suitable vehicle, and there was great delay in obtaining one, for I was not the only government official with a similar need. Eventually the medical department obtained for me a Ford half-ton pick-up truck which I had used during the remainder of my service. Before this time I was familiar only with the western province, but now there was hardly any part of the country that I would not visit.

The first new area I went to was Kondoa in the central province where a new outbreak of sleeping sickness had occurred during the war. The disease had been introduced there by an infected labour recruit, who had evaded the sleeping sickness quarantine in Tabora, where all recruits from the western province were by law required to spend fourteen days before journeying east. The disease had then spread to Mbulu.

The problem of labour recruitment in the western province was always one that worried me. The sisal interests looked upon the sleeping sickness settlements that we had created as valuable reservoirs of labour. My view was that the migration of large numbers of men to the coast was a form of depopulation of the settlements, and there was much argument about the matter. I advised government that recruiting in the settlements should be prohibited. I cannot now remember the outcome.

On my first visit to Kondoa I discovered that the returns of new cases of sleeping sickness were exaggerated because of faulty examination of blood smears. I examined (I think) 11 newly reported cases and found that the smear was positive in only two. There had been some resettlement already, and there had been some bush clearing, and the outbreak was under control. I paid several visits to Kondoa, usually taking the train to Dodoma with my truck on board. At one time the Director of Medical Services suggested that I might move from Tabora and live in Dodoma, but this move never took place. Dodoma was a much smaller town than Tabora, and it was drier and had less greenery. The only mental hospital in the whole country was there. It was in charge of the late Dr E J Foley, with whom I became friendly. My first demonstration of electroconvulsive therapy was by him. It looked a horrifying sight. The hospital accommodated many criminal lunatics, such as those found guilty of murder but insane, but I do not remember any great problems of security.

One memorable safari was from Shinyanga across the Wembere Steppe to Mkalama and Singida. There was sleeping sickness in both districts but on a very small scale. Singida had a more sinister connection, in that it was one of the places in Tanganyika where plague was endemic and occasionally became epidemic. It was also at that time the scene of many murders by so-called "lion men". There were always stories of witches who could assume the guise of animals for their depredations and then resume human form. I was once solemnly assured by an African in Ushirombo that he knew of men who became hyenas at night, and could cover great distances to kill, return home and become men again.

I should here mention the Groundnut Scheme briefly. Its full history is found in many government publications and in the reports of the debates about it in Parliament in Westminster. I first heard of it in 1946 when a conference was held in Tabora of representatives of the administration, the agricultural department and the medical department. It was attended by representatives of the planners of the scheme from London. I was present, and my abiding memory of the conference is the contribution of the late Norman Rounce, the agricultural officer in Tabora. He stated that he had grown groundnuts experimentally in Tanganyika in all sorts of conditions and had never obtained a yield even one half of the yield on which the whole plan was based. His words went unheeded, and the scheme went ahead on the basis that yields obtained in West Africa would be matched in Tanganyika.

One of the locations chosen for the experiment was Urambo, west of Tabora. Early on I had a visit from Colonel Woods, an officer of the Army Medical Service in the United Kingdom, who had been seconded to organise a medical service for the various locations where the scheme would be implemented. I gave advice about sleeping sickness control in the Tabora district. Some months later Tabora was inundated by European workers, straight from London by air, who knew nothing about tropical conditions. Earth-moving machinery collected from all over the world followed for bush clearing, and when the Urambo groundnuts efforts got going, it even had its own medical officer with much more medical equipment than I had ever had in the bush. Similar activity, but on a much larger scale, was going on in Kongwa north of Mpwapwa further down the railway line between Dodoma and Kilosa and in the southern province at Liwale (also an old sleeping sickness area). Expectations of bumper crops were so high that a seaport was developed at Mtawara for the import of machinery and stores and the export of the crop. The entire project was a failure. No doubt some of the machinery is still lying in the African bush. The Kongwa buildings later became a school for the training of African public health inspectors and a cattle ranch.

When Dr Wilkin, who was by then provincial medical officer administering both the Central and Western Provinces, went on leave pending retirement, I took over administration as well as sleeping sickness control. No new outbreaks were occurring, and the sleeping sickness settlements were working well.

I continued to visit all the areas concerned, and in this way I managed to cover the whole country. One memorable safari was to the southern province by way of Dar es Salaam. I took my truck there by train and drove down the coast, crossing the Rufiji river by pontoon at Utete, where I spent the night in the boma, an old German fort with a courtyard in the centre. Then on to Kilwa Kivinge, an old Arab town, again with a castellated German boma. One afternoon the administrative

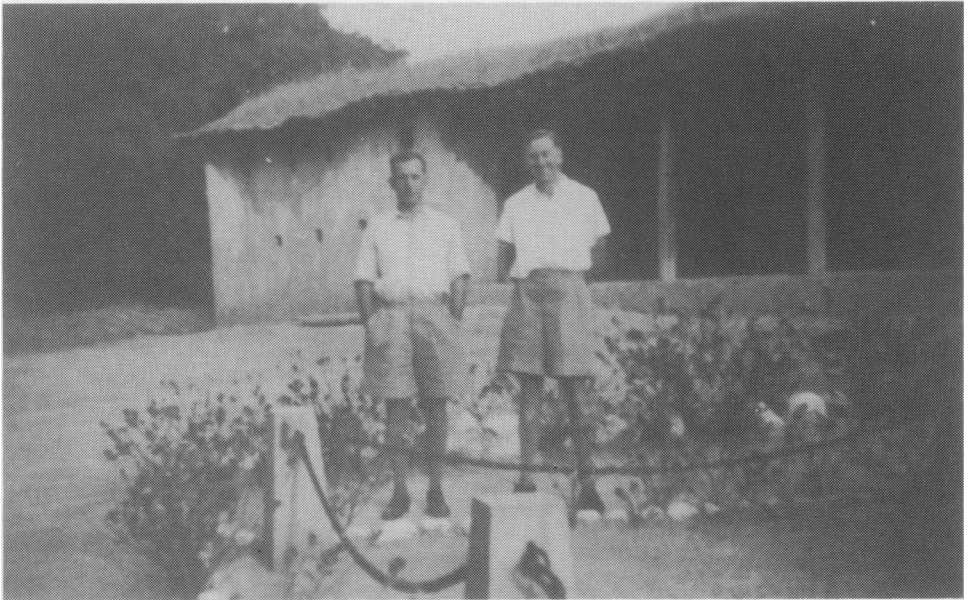
officer took me to the island of Songo Manara, where I saw Persian ruins and gathered Persian beads lying here and there in the sand on the seashore. I do not remember if it was between Utete and Kilwa, or between Kilwa and Lindi, on a very deserted road, where I had not seen another vehicle all day, that the petrol pump became blocked. I removed it and cleared the blockage, but when replacing it I stripped the thread of the attachment to the engine. I was a long distance from help and my servant and I were prepared to spend the night where we were, but just then a truck came along and stopped. The driver asked if he could help and I replied that I did not think so unless he had a spare Ford pump. To my amazement he replied that he had, as he was using a gravity tank (which he thought gave better petrol consumption) and I could have his pump. He fitted my defective one to his engine and the sound one to mine, and off we went — he north and I south. I got a new pump in Lindi and posted his back with heartfelt thanks.

Lindi was my next stop. It used to be known as a punishment station because of its hot coastal climate and remoteness. During the rains the only communication between it and Dar es Salaam was by sea. The Tanganyika Railways steamer *Azania* sailed each month (I think) down the coast to Mikindani, the most southerly port in Tanganyika. There was also dhow traffic, both coastal and from the Arabian gulf. The provincial commissioner at the time was Theodore Pike (Ted) who later became Governor of Somaliland and acquired a knighthood. I had never met him before, but I had some acquaintance with his wife dating from 1934, when during a short locum in the European Hospital in Dar es Salaam I attended her in childbirth.

This mention of Lindi reminds me of a story about the Anglican bishop of Masasi in the 1930s (Bishop Lucas) who was called upon to interpret in a murder trial from the accused's tribal language. The man was acquitted by the High Court judge on circuit. The same evening the bishop was walking on the shore when a man ran to him, knelt down, and clasped his legs in thanksgiving for the successful plea he had made to the judge on his behalf. The bishop explained that he had only translated the evidence as given, but the man wouldn't believe this because, he said, he had really committed the murder.

I spent a few days in the tsetse bush in the neighbourhood of Lindi where sleeping sickness was endemic, but cases were now few. Liwale had been the centre of the main outbreak in the mid-twenties and mid-thirties. I then drove inland on the road to Songea, passing Newala, Masasi, and Tunduru. Masasi was the headquarters of the Universities Mission to Central Africa in that part of Tanganyika. There was a cathedral (St Edward's I think). The bishop was not there but I met one of the priests. The UMCA had a philosophy at that time (and may still have) of living a very simple life. Some of the houses of the English missionaries I visited were mud and wattle huts. They were not even whitewashed inside so that they were more attractive shelters for mosquitoes than if they had been whitened. Illumination at night was provided by hurricane lamps which hardly gave enough light for reading. I myself had been carrying around on safari a kerosene pressure lamp of 300 candle power for years previously.

Somewhere on this journey I visited a mission (Benedictine, I think) where there was a remarkable woman doctor, Sister Thekla, whose name I had long known. She had written an excellent manual for African laboratory assistants, and I was



1948: Doctor Calwell and Professor T H Davey (MB, QUB, 1925) at the house in Kwihara near Tabora where Doctor David Livingstone lived from February to August 1872, H M Stanley being with him for a month after their famous meeting.

anxious to meet her and see her work at first hand. As far as I could judge her mission hospital was well equipped and run. Sister Thekla had qualified in medicine in Germany. My onward journey took me through Songea. It was in that neighbourhood that I visited another Benedictine mission, Peramiho, where there was a flourishing community of monks. The cathedral was superb and had an organ which one of the lay brothers had built after being taught the art in Switzerland. Passing through Mbeya I arrived back in Tabora, having driven some 900 miles in all.

Another memorable safari at this time was to the Mahenge district where there had been a small outbreak of sleeping sickness in 1939 – 40. The disease had been recorded there in the 1920s but only in a small way. This time my departure from the railway line was Kilosa where I found a countryman of my own in the provincial administration. He was Major J J McPhillips, whose brother had been my fellow student in Belfast in the 1920s. His wife, who was a doctor, was with him at that time. I enjoyed their hospitality before going on my way. Mahenge was about 170 miles from Kilosa. It was an elevated station which was reached by a steep climb up the escarpment from the tsetse-infested bush. As far as I recollect there was only one administrative officer when I was there. In earlier years it had been a more important place with a provincial commissioner and a garrison of the King's African Rifles.

The climate was cool, and flowers and streams abounded. In the early morning one looked down on nothing but mist; the countryside below was invisible until the sun gained strength. I cannot now remember who the district officer was at the time, but I remember his flower-filled garden and how his servant ironed each

copy of the London Times before placing it on the breakfast table. The papers arrived in batches but were always read in due order. Another memory is of work in the boma starting very early in the morning, and finishing for the day about one o'clock.

Mahenge district was a location of the Capuchin Fathers mission. Their Superior at the time was Archbishop Maranta, who lived in Dar es Salaam on the harbour front. His church was St Joseph's Cathedral. There were several mission stations in the district. One was close to Mahenge itself, and there was a large one at Ifakara. These were well found with good buildings and amenities, but there were others staffed by a single priest far removed from contact with other Europeans. There were several sleeping sickness dispensaries, separated from one another by desolate country which was subject to floods in the wet season. The object of my safari was to visit these and check on the work of the sleeping sickness dressers. The Franciscan sisters also engaged in medical work.

One night I camped in the mud and wattle baraza (local native courthouse) in a village near which I encountered a Capuchin Father living in a mud hut. The only furniture was a bed, a table, and a couple of chairs. As we sat talking, he suddenly struck the table with both fists and exclaimed "Ich bin müde in Afrika" (I am weary in Africa), for our conversation was in German. He told me he was going on his bicycle the next day to Ifakara, the main mission station, which was some 40 miles distant. He was considerably cheered when I told him that I was going that way the next afternoon and that I would be glad to give him a lift in my truck.

The next day he arrived on his bicycle in the village where I was camping and in the early afternoon we departed. It was a very slow journey over a bad road, and dusk was falling when we got to a broad river which had to be crossed on a pontoon. I can still see the scene. There was still some light in the sky, the truck was unloaded, as the pontoon could not carry it and its contents in one journey, and while we waited my Capuchin passenger used what light was left to finish reading his breviary for the day.

We reached the mission in Ifakara about 9 o'clock and were given a great welcome. On entering my friend knelt down to greet the Father Superior. I learnt later that this was the rule among Capuchins. In the refectory three or four of the monks divested of their habits and clad only in shirts and shorts were enjoying a game of cards under the bright light of several large oil lamps. We had had nothing to eat since midday but this was soon put right. The table was set for us, and in no time a bounteous meal was served. When bedtime came I was shown upstairs to the bishop's room, where I enjoyed a good sleep in a comfortable bed.

Wakening in the morning I saw from the window a small group of Africans approaching the church which was close by. A family was bringing the body of a dead infant for Christian burial. One of the monks received them at the door of the church and conducted a service, at the conclusion of which he and the family and others moved away to the cemetery for the burial. The baby had been given as much honour as the greatest in the land.

And so back to Kilosa through the bush again. It was on this journey that I first saw rubber growing and met a rubber planter, who seemed to be living comfortably in his house among the rubber trees.

My next long safari was down Lake Tanganyika in the SS Liemba. I had done this journey with my wife in 1937 on local leave. This time I was on duty, visiting the various dispensaries in the lake shore villages. One of the passengers on the ship was the new Roman Catholic Bishop of Ufipa returning there from his consecration and a visit to the Pope in Rome. Monsignor Holmes-Siedle, a White Father, was one of the few English men I encountered in that order, in which, as in Ushirombo, French and German fathers and brothers preponderated. One of the stories of the bishop's stay in Europe that he told me, was of his pectoral cross being stolen in Rome. When he went to his papal audience and mentioned that theft, the Holy Father at once took off his own cross and hung it round the neck of the bishop.

At the various villages where the ship stopped we went ashore, and there was usually a crowd of Christians waiting to welcome the bishop. The highlight of the journey for me was to meet the venerable Adrien Atiman at Karema, one of the White Fathers missions. He received me wearing his medals. He had received his medical training in Malta, having been ransomed from slavery by a White Father in North Africa. He told me that he had come to Zanzibar with a mission party and they had walked all the way from the coast, arriving at Lake Tanganyika early in 1889. He had been doing medical work at Karema ever since. He estimated his age as about 80 years. One of his sons had been with me in Kibondo and Kasulu nearly fifteen years earlier working as a hospital dresser. I had lost sight of him by the time I met his father. Adrien Atiman's medals, which I have mentioned, included those given for service in the 1914 – 18 war (Belgian), two papal crosses, and the Jubilee Medal of King George V.

Other long safaris at the time included another visit to western Kahama, taking in Ushirombo, where our old house was no more, having been destroyed by fire. It had not been occupied for a long time. Moreover, the old seminary which was our sleeping sickness hospital had been demolished. A few years ago my younger son, who was a medical officer in Zambia, spent a holiday in Tanganyika, and for the sake of sentiment he visited Ushirombo. He found a White Father still there, with whom I had been very friendly in Tabora before the war. He was a French Canadian, Father La Croix, and when my son arrived at the mission he found the father reading a letter he had just received from me. There was much conversation about the old days in Ushirombo, and a visit was paid to the site of our old house. Inquiry about our cook of many years' service led to him being summoned to the mission to meet Dr Calwell's son, whom he had never met but whose name and photograph he was familiar with. There was almost a family reunion. His parting gift to my son and his wife was a live hen, which they took away with them and gave to the first needy-looking wayfarer they met.

My last paragraph is an interpolation in my account of my last safari in the western province in 1948. After leaving Ushirombo I went on to Kibondo, visiting the various sleeping sickness settlements we had created in 1933. They were in good state, but what changes had taken place. The White Fathers and White Sisters were well established in mission stations with substantial buildings. Father van der Ven, with his battered old box body car and his bag of beans and his camp bed under a tree, had begun it all.

My tour was wearing to an end, and in November 1948, after almost thirty months service, I embarked on the SS Mantola in Dar es Salaam, leaving all my

household possessions in store in Tabora. My leave would end about July 1949. I joined my family, my wife and our two sons and a daughter, and caught up with their doings. I found them all well and busy. It was my intention to return to Tanganyika for at least one more tour, but when I surveyed the medical scene I reached the conclusion that if I were to find a permanent job in the new National Health Service, the sooner I investigated the possibility the better. I was now in my 48th year, and the chance of employment over the age of 50 was remote.

Before the end of my leave I applied for a clinical medical post with the Northern Ireland Tuberculosis Authority, with the intention, if successful, of resigning from the Colonial Medical Service; and if unsuccessful returning to Tanganyika. I obtained the post, and I thus terminated my colonial service. When later I applied for, and was given, a senior post, I discovered that if the period of my army service had not been deducted from my age, I would have been debarred. My colonial service amounted to almost 19 years, to which I finally added 17 years in the National Health Service, from which I took my departure in 1966 on the attainment of my 65th birthday. I am happily still working for the Bureau of Hygiene and Tropical Medicine as an abstractor and reviewer so that my links with medicine in the Tropics have not been entirely broken. My other occupation is that of honorary archivist of the Royal Victoria Hospital, Belfast, my old teaching hospital which I first entered as a student just over 56 years ago.

Would I do it all over again? I would.

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