Annual medical report / Colony and Protectorate of Kenya.

COLONY AND PROTECTORATE OF KENYA

MEDICAL DEPARTMENT ANNUAL REPORT 1948

INCLUDING

MEDICAL RESEARCH LABORATORY ANNUAL REPORT, 1948

INSECT-BORNE DISEASES DIVISION ANNUAL REPORT, 1948

1950
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MEDICAL DEPARTMENT HEAD OFFICE,
NAIROBI.

SIR,

I have the honour to submit for the information of His Excellency the Governor, and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitary Conditions of the Colony and Protectorate of Kenya for the year 1948, together with the Returns, etc., appended thereto.

I have the honour to be,
Sir,
Your obedient servant,

NORMAN M. MACLENNAN,
Director of Medical Services.

The Honourable the Chief Secretary, Nairobi.

MEDICAL DEPARTMENT ANNUAL REPORT, 1948

SECTION I

INTRODUCTORY

The amount of medical relief provided in 1948 with the cost thereof is shown below, and is compared with the three previous years:—

Year	Sanctioned Estimates (Recurrent)	Actual Expenditure	Qualified Medical Staff	European		Asiatic and African		Out-dispensary attendances
				In-patients	Out-patients	In-patients	Out-patients	
	£	£						
1945 ..	362,693	361,417	47	3,328	8,236	124,619	674,832	1,029,860
1946 ..	425,287	408,951	53	3,369	9,567	145,898	796,008	1,218,073
1947 ..	478,019	462,939	58	3,457	9,658	156,888	801,395	1,286,879
1948 ..	578,061	589,859	58	3,621	4,233	184,986	831,552	1,457,873

From a scrutiny of these figures the relentless increasing pressure that is being maintained upon medical facilities will be apparent. From the general point of view this is most acceptable as furnishing evidence especially of African appreciation of the facilities afforded, and of the greater amount of work performed annually. But on the other hand such circumstances not only expose the severe limitations and inadequacies of existing facilities, but also throw into marked relief some points which have a distinct bearing upon the future of medical administration. The first of these is that very little progress has been made with the Department's development schemes. It had been hoped that it would have been possible to bring about an increase in general and specialized hospital accommodation that would have helped to meet the demand. Owing to considerable material difficulties such has not proved to be the case, and the result has been to perpetuate and worsen a position that is unfair and disadvantageous to staff and patients alike.

On a number of occasions considerable emphasis has been placed on the necessity not only for increasing accommodation, but also for improvement as regards facilities and amenities which are at present extremely poor. Under the conditions that exist the qualities of performance and of technique on the part of the staff are remarkably high, but individual effort is limited, and it is inevitable that standards of treatment must depreciate if the position remains as it is. On a second point the generally difficult state of affairs was not improved by the lack of recruitment of medical staff, about one-third of the vacancies for medical officers remaining unfilled. At the end of the year the position worsened owing to invaliding and prospective retirements, and will reflect seriously in 1949 unless there is a stimulus to recruitment.

Again, very little progress was possible with the establishment and staffing of health centres or with the proposed new medical training school, which is designed to produce the greater flow of African medical auxiliaries that will be necessary in the future. By this retardation of development and on account of shortage of medical staff, a position was created that has a serious adverse effect at a time when every progressive influence is required in view particularly of the heavy demand upon services. It is now clear beyond doubt that the early implementation of certain schemes within the development plan is absolutely necessary if a breakdown is to be avoided.

It was especially unfortunate that no health centre came into being. While it is not necessarily expected that in the first instance their operation will effect marked relief to the strain on hospital accommodation, yet their ultimate importance is great in regard to extension of health services and as a reinforcement of the somewhat restricted curative services. Furthermore, by surveys of disease conditions and others affecting health it is hoped to obtain factual data, which are at present lacking, and on which a sounder remedial policy can be based.

In all, it is disappointing to have to record this lack of progress, which to some extent was due to unavoidable circumstances; but the delay was depressing in view of the accumulating evidence of the magnitude of the task that lies ahead.

RESEARCH

It was understood that an appointment would be made in 1949 to the Directorship of the East African Bureau of Research in Medicine and Hygiene, the formation of which was recommended in a report made by the late Professor McSwiney. With the large number of important medical research projects that await investigation the establishment of the bureau as a central focus will be of great value.

In respect of tuberculosis a medical officer specially seconded for the purpose conducted a survey, the object of which was primarily to establish the number of reactors to the Mantoux tuberculin sensitivity test. While final results are not yet collated the fact that there is a very high reactor rate has already emerged; and, though not entirely reliable, the estimated figure of 11 cases per 1,000 of population gives some idea of the size of the problem in dealing with this disease. When the full report is available it will give extremely useful indications of the extent of measures to be applied and, in addition, of further lines of research which it is essential should be pursued on certain aspects of tuberculosis.

The report on the investigation into leprosy submitted by the interterritorial leprologist shows the incidence rate of this condition to be very much higher than was previously thought, the overall rate throughout the Colony being 10 per 1,000. Following this preliminary reconnaissance it is intended that further work be done on therapeutic and other lines of research.

A Research Officer appointed by the Colonial Medical Research Committee was conducting investigations into the bionomics of *O. monbata* with reference to relapsing fever, and complementary work on spirochaetes was being done at the Medical Research Laboratory.

The Insect-borne Diseases Division continued with a number of investigations, full details of which will be found in the relative section. Among these were the important D.D.T. impregnation experiment at Kericho and eradication of *S. maovi* by treatment of rivers with the same insecticide.

ADMINISTRATION

The higher administration of the Department continued under the general control of the Member for Health and Local Government. With the increasing volume of work that has accumulated the internal administration of the Department had become difficult and the agreement of Government to the appointment of an Administrative Secretary was welcome. This should permit of the removal of routine administration of a non-technical nature from the medical staff at headquarters and permit of concentration on purely medical matters. Further reorganization of the clerical and medical stores branch was under consideration at the end of the year.

European Services

Full control over the hospitals at Nairobi, Mombasa and Kisumu had not been exercised by the European Hospital Authority at the end of 1948, and the Medical Department still continued to be responsible for a great part of the administration and provision of staff. In general the hospital accommodation for Europeans throughout the Colony is inadequate and there was particular and justifiable complaint in this respect concerning Nairobi and Mombasa. However, the Authority had plans for considerable extension and improvement of the hospitals at these two centres while similar projects for hospitals in other districts were receiving attention.

Asian Services

In 1945 a committee under the chairmanship of the Director of Medical Services and consisting of official and Indian and Arab members was appointed by His Excellency the Governor to examine what hospital facilities seemed to be necessary to meet the reasonable requirements of the Asian population and how the cost of providing and keeping up these hospital facilities could be met.

The committee in its deliberations took advice and heard the views of leading Asian organizations and examined closely those parts of the report of the Development Committee which deal at length with Asian hospital requirements.

The committee submitted its report in 1948 and recommended that a system of hospital insurance should be introduced for Asians. This was qualified by the further recommendation that, as a first essential, a constructional programme for building new Asian hospitals and improving old hospitals should be undertaken by the Government, which will raise the number of beds in hospitals in the Colony for Asians from its present level to 356. This, according to estimates of population in 1946, would mean that there would be 3.5 beds per thousand of population and was the standard of accommodation recommended by the Hospitals Health and Nutrition Sub-committee of the Development Committee. The committee advises that when reasonable progress has been made by Government with such a programme of hospital improvement and construction then the Asian community should accept responsibility for the introduction of a scheme to finance and administer all Asian hospitals in the Colony, somewhat on the lines of the present scheme under the European Hospital Authority. These recommendations have been accepted by Government, but their implementation must be fitted into general proposals.

Meanwhile, apart from the successful operation of an Asian hospital in Mombasa under the Pandya Memorial bequest, little has been done to ameliorate conditions for Asians in public hospitals. Offers of assistance from private beneficiaries were made in respect of the accommodation at some district hospitals, but in each case, it was not possible to finalize the matter during the year. Work on the construction of the proposed new Asian block at the Group Hospital was again delayed, and little progress was made in respect of a new Asian maternity hospital at Mombasa. It is devoutly to be hoped that these projects can receive early priority, as the position in respect of Asian hospital accommodation generally is far from good.

African Services

The position regarding African medical services, with the demand completely beyond the capacity of available facilities, is that a re-examination of the whole question is necessary in its relation to finance.

It is certain that general and also special hospital accommodation must be supplied to a very much greater degree, and this is provided for in detail in the revised programme under consideration by the Development and Reconstruction Authority. Certain new commitments are quite inescapable. These include the completion of the Group Hospital, Nairobi, the construction of a much larger new hospital at Mombasa, considerable extensions and improvements to most of the district hospitals, as well as the establishment of health centres. The total capital programme is a formidable one, however, and must reflect very considerably in regard to annual estimates for maintenance. It is on this point that the difficulty may arise as to whether the colonial budgetary capacity is great enough to permit of the required annual provision.

Admitting the great need for expansion and improvement of services, it is not only necessary but wise to endeavour to estimate the ability of the Colony to pay the increased annual cost. The details of cost supplied by the Department, based on capital provision recommended in its programme, amount to a large total figure; one which under existing conditions may be sufficiently deterrent to the whole scheme.

Realizing this, the question has again been raised as to whether medical services should remain free to the African, and whether, as a matter of necessity he should not be required to contribute directly to their cost. If this necessity be shown, some method must be introduced. The alternative would appear to be to slow down the degree of development which, apart from the fact that the whole programme is an integrated one, would be extremely retrograde particularly in view of the known demand and requirements. Careful consideration is being given to the whole question. Despite this difficulty there are, as already mentioned, certain requirements the provision of which cannot be shirked. In some instances the position is acute, notably in regard to the Infectious Diseases Hospital, Nairobi, the existence of which is being threatened by industrial development. Additionally, it is more than time that an effort was made to provide properly for such conditions as tuberculosis and leprosy.

Progress, however, with physical construction during the year was disappointingly slow. The first African block of the Group Hospital, Nairobi, could not be made ready for occupation by the end of the year, though occupation early in 1949 was envisaged. Completion of the second block and the building of ancillary requirements was delayed, though all preliminary planning was done. Apart from some minor works, the only project to proceed to the stage of construction was the new 48-bed proposed hospital at Voi. Otherwise the year was taken up with planning work on a proposed number of other projects, including the projected new hospital at Mombasa. The material difficulties responsible for the delay are recognized, but it is nevertheless depressing to strike this somewhat constant note regarding the retardation of development.

STAFF

Recruitment of medical staff was at a very low level and a large number of vacancies remained unfilled during the year, while a forecast of the position in 1949 did not inspire optimism. The reasons for this halt in recruitment are to some extent speculative, but no doubt the disparity between the salaries recommended under the National Health Service and those paid in the Colonial Service has some bearing on the subject. It would be idle, however, to disguise the fact that there is discontent among medical officers not only over salaries, but in regard to general terms of service where some anomalies exist. In particular there is the feeling that too much administrative work, which should be undertaken by non-professional staff, is thrust upon medical members of the service. An attempt is being made to improve matters in this regard, but unquestionably an

excess of time must still be devoted to it. It is very much to be hoped that early steps will be taken to reconcile the variation in salaries between the services, and that the vexed question of private practice can at the same time be satisfactorily settled.

It is considered most important that recruitment of medical staff should be stimulated to the full for two reasons. One is, of course, that the progress of medical development in the colonies is very largely dependent upon this.

The second is that it is necessary at this critical stage to obtain medical men of the highest calibre through whom young African staff can be imbued with the spirit, tradition and ethics of British medicine. Any lowering of standards may provoke distinct repercussions for a long time to come and is very much to be avoided in the general interest.

As regards medically trained African staff the position in respect of the flow of diplomates from Makerere is extremely poor, and hardly any from this Colony are expected to qualify for a number of years. It seems that the reason is that very few can approach the necessary academic standards for entry, and if this is so the outlook is most depressing. It would appear that it is therefore all the more necessary to attract British medical officers to cover this hiatus in the next decade or so, and that the question as to how this should be done requires the closest and earliest investigation.

In the prevailing conditions throughout the year full credit must be given to the staff of the Department for loyal devotion to duty and the accomplishment of an immense amount of work in increasingly difficult circumstances.

The staff which was retained to administer the public health and medical services, with disposition, etc., are set out in the following table, which it should be noted differs from that previously employed.

TABLE I—MEDICAL HEADQUARTERS AND OTHER ESTABLISHMENTS IN NAIROBI (EXCLUDING HOSPITALS)

	Medical Headquarters	Medical Stores	General Dispensary	Loco Dispensary and Sandiford Road Clinic	Fort Hall Road Dispensary	Shauri Moyo Dispensary	Railway Dispensary	Medical Training Depot	Medical Research Laboratory	School Medical Service	Tuberculosis Survey
Director of Medical Services	1	—	—	—	—	—	—	—	—	—	—
Deputy Director of Medical Services	1	—	—	—	—	—	—	—	—	—	—
Deputy Director of Medical Services (Supernumerary)	1	—	—	—	—	—	—	—	—	—	—
Assistant Director of Medical Services	1	—	—	—	—	—	—	—	—	—	—
Chief Health Inspector	1	—	—	—	—	—	—	—	—	—	—
Accountant	1	—	—	—	—	—	—	—	—	—	—
Medical Storekeeper	—	1	—	—	—	—	—	—	—	—	—
Assistant Medical Storekeeper	—	1	—	—	—	—	—	—	—	—	—
Officer i/c Records	1	—	—	—	—	—	—	—	—	—	—
Clerks (European)	7	—	—	—	—	—	—	—	1	—	—
Senior Specialist (Surgical)	1	—	—	—	—	—	—	—	—	—	—
Specialist Ophthalmic	1	—	—	—	—	—	—	—	—	—	—
Specialist (Anaesthetist)	1	—	—	—	—	—	—	—	—	—	—
Specialist (Surgical)	1	—	—	—	—	—	—	—	—	—	—
Specialist (Medical)	1	—	—	—	—	—	—	—	—	—	—
Radiologist	1	—	—	—	—	—	—	—	—	—	—
Senior Medical Officer	—	—	—	—	—	—	—	1	—	—	—
Medical Officers	1	—	1	—	—	—	1	—	—	1	1
Instructor in Hygiene	—	—	—	—	—	—	—	1	—	—	—
Wardmaster	—	—	1	—	—	—	—	1	—	—	—
Matron-in-Chief	1	—	—	—	—	—	—	—	—	—	—
Nursing Sisters	—	—	1	—	—	—	1	—	—	—	1
Assistant Director of Laboratory Services	—	—	—	—	—	—	—	—	1	—	—
Senior Parasitologist	—	—	—	—	—	—	—	—	1	—	—
Pathologists	—	—	—	—	—	—	—	—	3	—	—
Biochemist	—	—	—	—	—	—	—	—	1	—	—
Entomologist	—	—	—	—	—	—	—	—	1	—	—
Laboratory Superintendent	—	—	—	—	—	—	—	—	1	—	—
Laboratory Technicians	—	—	—	—	—	—	—	—	6	—	—
Entomological Field Officers	—	—	—	—	—	—	—	—	3	—	—
Librarian	—	—	—	—	—	—	—	—	1	—	—
Asian Dental Officer	—	—	1	—	—	—	—	—	—	—	—
Senior and Assistant Surgeons	—	—	6	1	1	—	—	—	—	—	—
Laboratory Assistants (Asian)	—	—	—	—	—	—	—	—	—	—	—
Issuers of Medical Stores	—	1	1	—	—	—	—	—	—	—	—
Compounders	—	1	2	—	—	—	—	—	—	—	—
Clerks (Asian)	10	4	1	—	—	—	—	—	—	—	—
Clerks (African)	1	—	3	—	—	—	—	1	1	—	—
Hospital Assistants	—	—	2	1	—	1	—	1	—	—	—
Compounders	—	—	2	—	—	—	—	—	—	—	—
Laboratory Assistants	—	—	—	—	—	—	—	—	23	—	—
Other African Staff	11	27	39	3	3	4	4	15	52	—	—
African Entomological Assistants	—	—	—	—	—	—	—	—	16	—	—

TABLE II—HOSPITALS

	Beds	Medical Officers	District Surgeons	Specialist Psychiatrist	Physiotherapist	Radiographers	Wardmasters	Dispenser	Matrons	Housekeepers	Nursing Sisters	Chief Male Mental Nurse	Female Mental Nurses	Male Mental Nurses	Superintendent Infectious Diseases Hospital	Hospital Steward	Secretary Accountant	Clerks (European)	Pharmacist	Technicians	Asian Medical Officers	Senior and Assistant Surgeons	Compounders (Asians)	Nursing Sisters (Asian)	Asian Clerks	Other Asians	African Assistant Medical Officers	Hospital Assistants	Compounders	Laboratory Assistants	African Clerks	Other African Staff
EUROPEAN HOSPITALS:—																																
Nairobi	50	1	—	—	—	—	—	—	1	1	18	—	—	—	—	—	1	3	—	—	—	—	—	—	—	—	—	1	—	—	—	63
Kisumu	16	1	—	—	—	—	—	—	1	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21
Mombasa	24	1	—	—	—	—	—	—	1	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	20
NATIVE HOSPITALS:—																																
Eldoret	79	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	3	1	—	2	36
Embu	27	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	—
Fort Hall	200	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	6	—	1	1	43
Gilgil	6	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kabarnet	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	15
Kajiado	76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	14
Kakamega	255	2	—	—	—	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	4	1	2	2	83
Kangundu	26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—
Kapenguria	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
Kapkatet	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
Kabsabet	67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	9
Kericho	96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	20
Kerugoya	116	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	37
Kiambu	115	2	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	4	—	—	—	56
Kilifi	46	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	4	—	—	—	51
Kisii	103	2	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	17
Kisumu	268	1	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	1	2	1	—	1	—	—	6	—	—	—	43
Kitale	111	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	87
Kitui	72	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	49
Lamu	20	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	29
Lokitaung	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	22
Lodwar	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	10
Londiani	44	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	7
Machakos	125	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	22
Makindu	28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	3	—	58
Malindi	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	13
Meru	80	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	1	—	14
Molo	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35
Mombasa	232	2	—	—	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—	3	1	5	1	—	—	8	2	7	3	110
Moyale	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	15
Msambweni	30	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	24

TABLE II—HOSPITALS—(*Contd.*)

	Beds	Medical Officers	District Surgeons	Specialist Psychiatrist	Physiotherapist	Radiographers	Wardmasters	Dispenser	Matrons	Housekeepers	Nursing Sisters	Chief Male Mental Nurse	Female Mental Nurses	Male Mental Nurses	Superintendent Infectious Diseases Hospital	Hospital Steward	Secretary Accountant	Clerks (European)	Pharmacist	Technicians	Asian Medical Officers	Senior and Assistant Surgeons	Compounders (Asians)	Nursing Sisters (Asian)	Asian Clerks	Other Asians	African Assistant Medical Officers	Hospital Assistants	Compounders	Laboratory Assistants	African Clerks	Other African Staff
Muriranjas	41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	15
Nairobi	612	8	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—	1	—	1	—	—	4	1	—	2	35	2	—	7	308
Nakuru	249	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	6	2	2	2	87
Narok	94	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	1	24
Nyeri	72	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	1	2	3	43
Rumuruti	16	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
Tambach	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9
Taveta	44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17
Thika	52	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	17
Tigoni	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11
Voi	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17
Wajir	48	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	23
Wesu	45	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	1	2	28
INFECTIOUS DISEASES HOSPITAL:—																																
Mombasa ..	140	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	41
Nairobi ..	197	—	—	—	—	—	—	—	—	1	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	4	—	1	2	87
Mathari Mental Hospital, Nairobi ..	418	—	—	1	—	—	—	1	—	—	—	1	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	98
Rehabilitation Centre, Nairobi ..	59	1	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	3	—	—	—	—	—	1	—	—	1	29
Leper Camp, Kakamega	130	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9
Leper Camp, Msambweni	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14
PRISON HOSPITALS:—																																
Nairobi	87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	13
Garissa	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Isiolo	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Karatina	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
Mandera	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Marsabit	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Naivasha	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Nanyuki	6	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
Thomson's Falls ..	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	5
Baragoi	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wamba	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maralal	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
	5112																															

FINANCIAL

The total of the sanctioned estimates for the Medical Department for the year 1948 was £589,061, an increase of £90,312 on the previous year, and the actual total expenditure during the year amounted to £596,660.

The comparative table of the sanctioned estimated expenditure of the Medical Department for the past three years is as follows:—

Year	Sanctioned Estimates (Recurrent)	Sanctioned Extraordinary Estimates	Total Sanctioned	Actual Recurrent Expenditure	Actual Extraordinary Expenditure
	£	£	£	£	£
1945	362,693	23,205	385,898	361,417	26,982
1946	425,287	19,360	444,647	408,951	26,907
1947	478,019	20,730	498,749	462,939	16,025
1948	578,061	11,000	589,061	589,859	6,801

II—PUBLIC HEALTH

GENERAL REMARKS

This year has been free of major epidemic disease. Precautions of a routine nature have been continued against smallpox, plague and yellow fever by means of vaccination, rat campaigns and anti-ædes measures. With regard to these last two diseases, active experimental attention has been devoted to the newer insecticides with the object of achieving economy in the application of our control measures and to attain a combination of these measures with the control of malaria and relapsing fever.

GENERAL DISEASES

The total number of cases treated during the year at Government hospitals and dispensaries, but not including out-dispensaries, was 1,012,776.

The total number of cases of all races treated as in-patients at Government hospitals was 176,991. Among these occurred 5,481 deaths, giving a hospital death rate of 3.2 per cent. No deaths were recorded from out-patients treated.

Deaths recorded from among in-patients, within groups of diseases, were attributable in descending order of importance to:—

	Per cent of Total Deaths
Epidemic and Infectious Diseases	32.56
Diseases of the Respiratory System	28.31
Diseases of the Digestive System	12.47
External Causes	6.53
General Diseases	6.82

As in previous years, pneumonia was the highest single cause of death.

Epidemic, Endemic and Infectious Diseases

The total in this group of 129,509 was made up of 73,911 out-patients and 55,598 in-patients, among the latter 1,372 deaths being recorded.

Malaria, as in the previous year, was outstanding with a combined total of 96,052 cases as against 118,303 cases in 1947. Of these there were 26,061 cases amongst in-patients with 406 deaths, being 29.59 per cent of the deaths within the group, one death occurring in Europeans.

There were 3,579 cases of tuberculosis being treated as in-patients. Deaths from tuberculosis, numbering 642, were 46.79 per cent of all deaths within the group.

There were 87 cases of acute poliomyelitis, with seven deaths. This disease has shown no epidemic tendency in late years.

Only 10 cases of Kala-azar were recorded.

Respiratory System

The total of 184,347 cases in this group was made up of 24,831 in-patients and 156,403 out-patients. Among in-patients there were 1,552 deaths, of which 1,426 were due to all types of pneumonia, this disease alone being responsible for 26.01 per cent of all deaths. Three thousand one hundred and thirteen cases of asthma were recorded, including in-patients and out-patients.

Diseases of the Digestive System

There were in this group 200,812 cases, or 19.82 per cent of the total; 17,392 being in-patients and 183,420 out-patients. Deaths, numbering 684, were 12.47 per cent of the total deaths from all causes.

The total number of in-patient cases of appendicitis was 470, with 10 deaths, 143 of these cases were European, 199 Asian and 128 African. If the incidence of appendicitis among Africans is believed to be increasing it is still comparatively very low.

There were 2,779 in-patient cases of diarrhoea and enteritis in children under two years; among these there were 283 deaths. Among the 2,091 cases of diarrhoea and enteritis in ages two years and over, deaths numbered 85.

External Causes

In this group there was a total of 114,731 cases, 16,896 being in-patients. Deaths among in-patients numbered 358, or 6.53 per cent of the total from all causes.

There were 3,177 cases of fracture, not including crush injuries which may have produced fracture.

There were 1,567 in-patient cases of burns by fire, with 124 deaths.

General Diseases

Of the 25,918 cases in this group 4,699 were in-patients and 21,219 were treated as out-patients. There were 374 deaths, or 6.82 per cent of the total deaths.

The prominent diseases in this group are rheumatism and anæmia of all types. One thousand five hundred and forty-eight cases of rheumatism were treated as in-patients.

Among out-patients a total of 2,647 cases of acute rheumatism were treated and 14,603 cases of chronic rheumatism, but it is more than probable that while rheumatism is common the numbers shown of the acute type are unduly high.

Of the anæmias, only two cases of pernicious anæmia were treated, in Europeans.

A variety of deficiency diseases is included in this group. Important among these is the syndrome variously described as infantile œdema, "Kwashiakor", etc., of which 326 cases were treated as in-patients, with 59 deaths. "Kwashiakor" has been recognized increasingly in adults, and the association of this disease with some forms of cirrhosis of the liver has become established. Although diet is a recognized and important factor in the causation of this disease, we are as yet at a loss to explain why adequate diet will not cure the disease even before noticeable anatomical changes in the structure of the bowel, liver and other viscera have become evident.

Of malignant conditions there was treated a total of 1,108 cases, with 97 deaths. Racially these occurred: in Europeans, 29 cases and 4 deaths; Asians, 10 and 6 deaths; Africans, 1,069 and 87 deaths. The total is a considerable increase over the number recorded for last year.

Circulatory System

One thousand six hundred and fifty-four cases treated as in-patients and 2,614 as out-patients constituted a total of 4,268 cases treated in this group. There were 183 deaths among in-patients, this representing 3.33 per cent of total deaths.

Affections of the Nervous System and Organs of Sense

Of the diseases in this group there was a total of 136,032 cases, composed of 14,836 in-patients and 121,167 out-patients. This was 13.42 per cent of the total cases treated, ulcers alone representing 6.60 per cent. The enormous numbers of ulcer cases still presenting for treatment constitute a great problem. Seven thousand seven hundred and fifty-one were treated as in-patients and 59,227 as out-patients.

COMMUNICABLE DISEASES

Mosquito or Insect-borne

In 1948 97,167 cases of malaria were treated in Government hospitals and in dispensaries as against 118,303 in 1947.

The cases were classified as follows: —

Benign tertian	1,568
Quartan	630
Aestivo-autumnal	18,227
Clinical	75,313
Cachexia	1,327
Blackwater	73
Cerebral	29

The spread of malaria into the western Kenya Highlands was noted prior to 1946 and has been the object of special attention with a view to combating further encroachment. The aim has been to banish malaria from heights above 6,000 feet at least. Large-scale experiments have been carried out in the Kericho District on adult anopheline control with financial assistance from the Colonial Development and Welfare Vote. Particulars of these experiments are to be found in the sectional report of the Division of Insect-borne Diseases.

Trypanosomiasis.

Twenty-four cases of trypanosomiasis were recorded. These were treated in hospital or at bedded-dispensaries which were specially constructed and staffed for the purpose in South Kavirondo. The preponderating infection was by *T. gambiense*, but the position with regard to *T. rhodesiense* in the Masai District has been investigated by the Division of Insect-borne Diseases, especially in respect of the association of this pathogen with *G. swynnertoni* and *palpalis*.

Plague.

Twenty cases of bubonic plague and one case of septicæmic plague, with 12 deaths, were recorded from all sources, 20 being treated in hospital; 10 of the cases being notified from the Thika District. The remainder occurred in Kiambu, Naivasha, Nakuru, Nyeri, Kitui, Muriranjas and Mandera. Mombasa and Kisumu municipal areas remained free of the disease.

Typhus.

There were 79 cases of non-epidemic typhus reported, compared to 76 in 1947.

Relapsing Fever.

There were 93 cases of relapsing fever treated, with 17 deaths. No recrudescence occurred of the epidemic of louse-borne relapsing fever which was experienced at the coast late in 1946. Our experience from this epidemic leads us to the view that *T. duttoni* can be transmitted by body lice and even bed bugs in addition to the better known *O. moubata*. Since this epidemic very stringent precautions have been taken against the importation of this disease by dhows, as all cases of jaundice and indeterminate pyrexia amongst the vessel's complement are isolated in quarantine. The dhow itself and all personal clothing are disinsectized by D.D.T.

INFECTIOUS DISEASES

Smallpox

Thirty cases of smallpox were notified, with nil deaths. The total number recorded was from all sources and that treated in Government hospitals as in-patients numbered 29, with no deaths. The disease generally was of a lesser virulence, though occasional small local outbreaks with high virulence occurred. Preventive measures consisted in isolation and vigorous pursuance of vaccination with lymph manufactured at the Medical Research Laboratory.

Pneumonia

A total of 13,924 cases of all types of pneumonia was treated as in-patients at Government hospitals, and among these there occurred 1,391 deaths, a mortality rate of 10.13 per cent.

Of the total in-patients, 6,580 were cases of lobar pneumonia, with 379 deaths, a hospital mortality rate of 5.76 per cent; and 6,085 were cases of broncho-pneumonia, with 952 deaths, a mortality rate of 15.64 per cent.

The position, technically speaking, with regard to this disease has been much clarified by the publication from the Uganda Pathological Services which indicates that the pneumococcus in Africans takes the place of the streptococcus in Europeans, but we have yet to discover the reason for the variation in susceptibility.

Venereal Diseases

These diseases are discussed later in the report under the heading "Venereal Diseases Clinics".

Tuberculosis

A total of 3,641 cases of tuberculosis of all kinds was treated at Government hospitals and dispensaries. Two thousand six hundred and seven of these were in-patients and among this number there were 590 deaths.

As already mentioned there is a general impression that tuberculosis is on the increase. Corroboration of this is awaited from the results of the Mantoux Sensitivity Survey which was initiated towards the end of the year. The only firm figures available at the moment are the hospital in-patient attendances, which may conveniently be given in the form of the number of cases of tuberculosis presenting per thousand total patients treated. These figures for the last three years were:—

1945—19 per thousand.
1946—19.2 per thousand.
1947—20.9 per thousand.
1948—20.56 per thousand.

The rise shown is slow and doubtfully significant, but tuberculosis is a chronic epidemic and dramatic rises are not to be expected. Just as its slow insidiousness is our enemy in clinical practice, so, too, is it our enemy in epidemiological practice. We are not to be lulled into a sense of false security by slowly rising figures, as there is no reason to expect a fall in tuberculosis incidence in view of the country's position with regard to increasing population densities and the fall of available food supplies.

An incidental finding during the year indicates a somewhat different position with regard to the incidence of tuberculosis in cattle than was previously thought to be the case. Instead of substantially negligible incidence of tuberculosis, it has been found in parts of the Central Province at least, that the rate is more near 4 per cent in slaughter stock. The significance of this finding has not yet been assessed, but there may be a possibility that the cattle could be infected by human strains of tubercule bacilli. This point requires careful investigation.

Specific preventive measures against tuberculosis have yet to be applied in the Colony, but the problem can no longer be delayed, notwithstanding the enormous difficulties that lie in our way.

Enteric

A total of 617 cases of enteric fever was treated under Government ægis, 104 deaths occurring among the 617 hospital in-patients. Alcoholized T.A.B. vaccines for the control of enteric fevers were introduced during the year.

Dysentery

The classification of cases treated at Government hospitals and as out-patients is:—

	1945	1946	1947	1948
Amœbic	4,268	4,530	3,544	1,364
Bacillary	2,082	2,773	1,518	1,425
Undefined	2,897	2,921	2,704	1,954

Diphtheria

The total number of cases reported from all sources, these being 102 with 14 deaths, was higher than for 1947. Seventy-nine cases were treated in Government institutions, and among these there were 14 deaths. The mortality rate in 1948 is one below that for the previous year.

Cerebro-spinal Fever

A total of 193 cases, with 100 deaths, was recorded, a considerable drop in the incidence from 1947.

Anthrax

Eight hundred and thirty-four cases in all were treated at Government hospitals and dispensaries, 631 being in-patients. Deaths from this cause were 39.

In some districts an attempt was made to control anthrax by the mass immunization of cattle. The inoculations were highly unpopular and met with considerable resistance from African stockowners. It has to be admitted that the beneficial effect of these inoculations in so far as the reduction of the incidence of anthrax in cattle was concerned was negligible. Possibly the trial was not continued for a sufficiently long time and viable spores were still present on the pasturages. Nevertheless, the inoculations had to be suspended as the result of the popular outcry. In any case, the African seems to be partially immune to this disease and he cannot be dissuaded from eating diseased carcasses or using the fat to smear his body. This last habit is the probable reason why cutaneous anthrax is relatively so much more common than the visceral forms. It would appear that we must attempt the control of this disease through propaganda and by prosecutions under the Meat Marketing Rules where necessary.

Leprosy

While only 291 cases of leprosy, among whom there were three deaths, were under treatment during the year, the total number of cases throughout the Colony is unquestionably very much higher. A Colony-wide survey of the position with regard to leprosy is now due, and on the basis of the results obtained must rest our plans for the alleviation of this disease. Funds are available under the provisions of the Development and Reconstruction Authority Ordinance. The newer sulphones did not become available for trial during the year.

Helminthic Diseases

The comparative table of cases of helminthiasis treated over the last three years is as follows:—

	1945	1946	1947	1948
Ancylpstomiasis ...	2,517	1,898	2,240	2,199
Ascariasis ...	13,166	17,856	15,862	11,504
Tæniasis	27,880	26,203	24,501	23,146
Schistosomiasis ...	2,577	2,815	2,815	3,802

Trichiniasis has fortunately not yet been reported in the Colony, where it would be a calamity to the rising pig-breeding industry, especially in the African reserves.

Schistosomiasis has been treated at the coast with success by means of the intensive course of antimony sodium tartrate, but the problem of control of all helminthic diseases depends upon the eventual improvement of rural sanitation services.

III—HYGIENE AND SANITATION

(1) General Measures of Sanitation

As previously recorded increase in the health inspectorate, with extension of activity in sanitary control in consequence, was of short duration and European supervisory staff was reduced in number to the lowest for many years. Retirals, resignations and the departure of officers overdue for leave left five long-established districts without European health inspectors and two inspectors were compelled to carry on in two districts where four are normally employed. The position was particularly unsatisfactory at the end of the year, but information concerning recruitment indicated the possibility of improvement. European medical officers and African personnel did well to maintain efficiency during a difficult period.

In addition to the one established municipal council and four municipal boards, Kitale Municipal Board came into being and completed its first year as an health authority. No revolutionary changes occurred, nor were they expected to in so short a period, but detailed reports of the unsatisfactory public health conditions and comprehensive proposals for improvement indicate that the new authority appreciates the problems with which it is faced

Without exception reports from the medical officers of health for urban areas continue to emphasize the dangers of overcrowding, and in spite of the efforts of some of the municipal authorities, together with the activities of private builders, the solution of the problem is far from being in sight. The housing needs of the people of all races are greater than it seems practicable to supply and it need only be reiterated that outbreaks of infectious diseases are always possible and lowering of the standards of health of the population must

be anticipated whilst overcrowding conditions remain. Many are the suggestions that have been put forward, including control of the numbers taking up residence in towns, but a change for the better is unlikely except by way of more and more building, unless a recession of the present rate of industrial development arises.

Although the manufacture, handling and sale of foodstuffs cannot be reported as entirely satisfactory, legislation and educative efforts have to a degree produced results. In the larger municipalities a competitive spirit is evident and more modern methods have been adopted by some manufacturers, particularly in the production of bread, confections and mineral waters. The more progress that can be made in this direction offers prospect of the elimination of the backward manufacturer, especially if the public can be made to appreciate the value of hygienically produced foodstuffs. In rural areas control is more difficult as the number of African eating-houses, bakeries, butcheries and provision stores increases. The African does not emerge from his normal environment imbued with ideas of cleanliness, and the handling of foodstuffs in the initial stages means little to him. He is subject to teaching, however, and where visits from European health inspectors are frequent there is ample evidence to show that contact is having good effect.

Local authorities have not failed to take advantage of the laboratory services, and samples of food and drink were submitted for analysis from all parts of the Colony.

In the smaller townships and trading centres district commissioners, as local authorities, are taking an increasing interest in sanitation, and much encouragement has been given to health department staffs. Unfortunately, the type of building used for the combined purposes of trading and residence is generally basically defective. Demolition and reconstruction upon sound building principles is the only remedy and it is hoped that the administrative aim of offering longer leases for better buildings will materialize.

Routine mosquito control continued satisfactorily, particularly along the main lines of communication.

African areas are so extensive and in parts so thickly populated that it is quite impossible with existing staff to carry public health activity into every area. Nevertheless, reasonably effective control was exercised over wide areas and no place was left untouched when threatened or faced with an epidemic. Vigorous anti-plague and anti-smallpox measures were adopted when necessary.

The improvement of housing, whether it be in wattle and daub or of permanent materials, was carried on as a routine duty, and considering the immensity of the task results were reasonably gratifying. In some districts where the spread of infectious diseases was imminent local chiefs co-operated in a better housing campaign and the huts of complete locations were renovated. This merely meant the plastering of walls internally and externally and opening up of the eaves for ventilation and whitewashing as an aid to lighting, but in dwellings occupied by the masses not too well endowed in worldly wealth notable improvements just the same. In conjunction with this work village cleaning was not neglected, and where adequate supervisory staff is properly established well maintained villages are features of the district.

The supply of clean water is no longer a novelty or confined to isolated areas and the protection of springs, the provision of bathing places, washing slabs, wells and cattle-drinking troughs are perhaps more appreciated by the people than any other part of public health work. During the year these facilities were extended and previously completed installations were kept in a good state of repair.

Propaganda was carried out in the villages, in the schools, and on several occasions an African health worker broadcast, most impressively, lectures relating to his work in the field and upon matters directly affecting the health of his people. In addition many exhibitions were held to display models, pictures and films of public health interest.

The need for meat inspection cannot be ignored, but it must, because of the lack of trained staff, be confined to small areas where a fair degree of efficiency can be assured. European health inspectors have given this matter much thought and have given administrative aid in the establishment of slaughtering places at many markets where meat inspections are possible. This achievement, however, cannot prevent the population from indulging in the consumption of meat derived from carcasses of animals that have died from disease, especially in cattle-owning communities. In the Central Province the number of human cases of anthrax has given cause for grave concern and the compulsory inoculation of cattle against this disease must be seriously considered.

The African trading areas are no longer the bartering places of some years ago; some of them now being as large as many of the established townships and Asian trading centres. It can be anticipated, therefore, that gazetting as townships or trading centres will occur in due course. Whatever the designation may be, built-up areas demand services, and it is to be hoped that the provision of water supplies, cleansing services, drainage and roads will receive more of the attention of local authorities than has been possible in the past.

(2) School Hygiene

New schools have been erected and others are in course of construction, but no great progress in school hygiene can be reported. The provision of additional accommodation has failed to meet the demand. Buildings in temporary type materials and improvised premises never designed for use as schools have had to be tolerated, and it seems quite likely that as new buildings are brought into use the accommodation gained will be offset by the increasing number of pupils calling for admission.

Arrangements are in hand for the provision of a school health service, and it is anticipated that the nucleus of such an organization will be set up in 1948.

(3) Labour Conditions

The Senior Medical Officer, Labour Department, co-operated closely with officers of the Medical Department with good results. Housing and sanitation on farms, living conditions of labour in trading centres and legislation concerning the health of the workers were matters discussed.

A more detailed record of the housing, diets and general condition of the labouring classes can be referred to in the annual report of the Labour Commissioner.

(4) Housing and Town Planning

Whilst most local authorities have given consideration to the provision of housing, progress has mainly been confined to the Nairobi Municipality, where houses for different races have been provided, in Nakuru where the Board has completed a *pisé-de-terre* scheme for the housing of Africans, and in Eldoret where the Municipal Board has extended the existing African location. Buildings of substantial structure for the housing of Government employees have been erected in almost every municipal area, township and administrative station. The efforts of private enterprise are also evident everywhere, but in no place, except in some of the smaller administrative centres has the supply equalled the demand.

The production of development plans by the Town Planning Adviser has not been lacking and many proposed schemes for townships and trading centres have been given approval. The need for development along sound lines deserves every encouragement, but from a public health viewpoint it is not sufficient to subdivide land, allocate plots and to permit the creation of closely built residential and industrial areas without giving due consideration to the provision of all the services essential to good town planning.

Towards the end of the year discussions took place between the Commissioner for Local Government and representatives of the Public Works and Medical Departments, following which the Director of Public Works prepared estimates for submission to Government for a proposed unit of his department to deal with sewage problems.

(5) Food in Relation to Health and Disease

A—Food Supplies

The inspection and control of foods have been maintained at a fair standard of efficiency in areas where inspection staff is available, and in Nairobi and Mombasa where full-time food inspectors are appointed headway is recorded. In rural areas efficiency is quite impossible with the existing inadequate health inspection units and, apart from the training of African personnel in this connexion, activity has been mainly confined to the inspection of factories producing foods for urban markets.

The general food supply was not unsatisfactory, no major shortages being reported.

B—Markets, Dairies and Slaughterhouses

The importance of well-constructed and conducted markets is recognized by most local authorities and extensions and repairs have been carried out in various municipal districts. In African areas markets are well distributed, but as yet nothing in the nature

of model conditions have been created. Certain European health inspectors have, however, given the matter much thought and arrangements are in hand to set up better examples in places where the provision of markets is still in the preliminary stages.

As most dairies are situated in outlying areas responsibility for the production of clean milk is entirely in the hands of the producer, and the degree of interest in cleanliness varies with the individual. Adequate inspections at sources of supply are quite impracticable and so far the only improvements have been achieved at the points of distribution. In Nairobi "Resazurin" tests are applied and producers are informed when samples are below standard, and in Kisumu all milk, except that from approved sources, is passed through a central inspection depot.

It may be unfair to regard all milk supplies as being suspicious as many producers do make creditable efforts to supply clean milk, but in general it is still advisable for the public to boil milk before consumption. Proposed additional legislation for the better control of milk was discussed during the year.

Repairs and improvements were carried out at many slaughterhouses and proposals have been put forward in some cases for new buildings and major alterations, but Government proposals for the construction of a central abattoir have created a complete deadlock. Until such time as the position is clarified it is unlikely that local authorities will approve of a further expenditure and conditions in slaughterhouses can be expected to deteriorate in the meantime.

(6) Measures taken to Spread the Knowledge of Hygiene and Sanitation

Propaganda activity was intensified during the year and comprehensive exhibits were staged at the shows arranged by the Royal Agricultural and Horticultural Society of Kenya at Nairobi and Nakuru. At the Nairobi show the activities of the Medical Research Laboratory, Rehabilitation Centre and Insect-borne Diseases Division were demonstrated, whilst at Nakuru the Health Department staged a better housing and anti-plague exhibit. Smaller shows, equally great in importance, were held at different times in all provinces.

(7) Training of African Sanitation Personnel

A second class of 12 students was admitted to the three-year course for the training of African health inspectors during January, and at the end of the year the first class had completed the second year course. The total number under tuition is now 22.

Only one European instructor was available and his time was fully occupied in maintaining simultaneous theoretical tuition to both classes. The field work, so essential to students before they take the final examinations was thus limited, but provision for an assistant instructor has been approved for 1949, when the practical side of the training can be given more attention.

It is still necessary to maintain the establishment of sanitary assistants, but as no courses of training are now available for this class of worker, candidates with suitable qualifications are selected and trained by district personnel.

ANNUAL REPORT OF THE PORT HEALTH OFFICER FOR THE YEAR 1948

(1) General

The ports on the Kenya seaboard are as follows: —

Kilindini (Mombasa).
Mombasa Old Port.
Lamu.
Malindi.
Kilifi.
Vanga.

Kilindini is the only port at which large ocean-going ships call. Mombasa Old Port has a considerable seasonal trade in dhows and small motor vessels. Lamu accommodates a small number of ocean-going dhows. Malindi, Kilifi and Vanga deal mostly with coastal dhows and a very few ocean-going dhows.

Unless otherwise stated the measures described below are those carried out by the Port Health Officer in Kilindini and Mombasa Old Port.

(2) Port Health Organization

Staff

Post	*Filled By*
Port Health Officer	Dr. R. S. Adam from 1-1-48 to 7-1-48. Dr. W. Harden-Smith from 8-1-48 to 19-2-48. Dr. A. J. Walker from 20-2-48 to 11-10-48. Dr. C. W. Davies from 12-10-48 to 31-12-48.
Assistant Port Health Officer	Dr. N. R. E. Fendall from 3-3-48 to 30-9-48. Dr. A. R. Watson from 1-10-48 to 31-12-48.
Port Health Inspector	Mr. A. C. Anderson from 1-1-48 to 31-12-48.
Entomological Field Officer	Mr. C. Teesdale from 20-11-48 to 31-12-48. Mr. M. Furlong from 1-1-48 to 31-12-48.
Clerks (Asian)	Mr. V. M. Vitor from 1-1-48 to 18-10-48. Mr. C. A. Patel (part-time) from 19-10-48 to 31-12-48.
Clerk (African)	Livingston M. Ezekiel from 20-11-48 to 31-12-48.

Sanitary Assistants: Gr. II, 1; Gr. III, 14.

The Port Health Officer and the Medical Officer of Health remain the same person. He is responsible for all health services in the town and the port area.

A second medical officer fills the posts of Assistant Port Health Officer and Assistant Medical Officer of Health and is responsible for all routine duties in connexion with clearing of ships and the supervision of the Infectious Diseases Hospital and Male Venereal Diseases Clinic.

A Port Health Inspector is in charge of Mosquito Control and is responsible for all measures regarding ships and the port from the general sanitation standpoint.

The Port Health Officer is in administrative charge of anti-aedes measures along the whole coastal area, which includes the small ports of Lamu, Malindi, Kilifi and Vanga, and the entomological field officers supervise the work.

(3) Application of the International Sanitary Convention of 1944

Article 6—Trapping and Examination of Rats

	1946	1947	1948
Rattus rattus kajabius	2,193	1,965	2,825
Rattus rattus norvegicus	91	53	224
Mice	2,683	2,321	1,693
Totals ..	4,967	4,339	4,742
Spleen smears examined	148	335	374

All spleen smears negative to *Bacillus pestis*. In addition regular campaigns by gassing and poisoning were carried out during the year.

Measures taken under Article 8—Control and Notification of the Notifiable Diseases

No cases of plague, cholera, yellow fever, typhus or smallpox occurred in the port during 1948.

In the event of any of the notifiable diseases being discovered in the port or vicinity the necessary measures for transmitting the information to all concerned are already in force.

Article 13—Measures Adopted to Prevent Exportation of Disease

1. The Port Health Officer does not medically examine every traveller who embarks from any port under his supervision, but the various shipping companies refuse to issue a ticket to any person who is not in possession of valid smallpox and yellow fever certificates.

2. No cases of plague occurred during 1948.

3. No cases of cholera occurred during 1948.

4. Strict control is still exercised in the two port areas, but mosquito breeding, although greatly lessened, is still prevalent in some areas. A survey with a view to redesigning the drainage at Kilindini has been carried out but work has not yet commenced.

5. Aedes control in the Old Port is shown in the attached report of the Port Health Inspector.

6. Aircraft.—Two entomological assistants are continuously on duty at the Port Reitz Aerodrome and all incoming and outgoing aircraft are subjected to thorough disinsectization.

Details are given in attached report of the Port Health Inspector.

Article 15—*Measures of Defence Against the Notifiable Diseases*

1. *Plague.*

All vessels entering the port are examined by the Port Health Inspector for evidence of rat infestation and regulations are in force for the provision of efficient rat guards to be affixed to all ships.

At the request of the shipping companies negotiations are at present being carried out for the reintroduction of fumigation by H.C.N. at Kilindini under the provisions of Article 28 of the Convention and it is expected that the service will be in operation early in 1949.

In the interim a request has been made under the Convention for Kilindini to be notified as an international port for the issue of exemption certificates only.

2. *Cholera.*

In his letters Nos. SAN. 975/30 of 25th November, 1948, and SAN. 975/40 of 16th December, 1948, the hon. Director of Medical Services has notified that all travellers arriving in Kenya from India, Pakistan and Goa are required to be in possession of valid cholera inoculation certificates; the introductory date for this measure is to be 1st March, 1949.

3. *Yellow Fever.*

All ships entering harbour are examined for mosquito breeding as soon as possible after arrival.

4. *Smallpox.*

The procedure adopted for ships arriving from infected ports is similar to that of previous years.

All vessels from infected and suspected ports are required to keep the quarantine "Q" flag flying until the vessel has been boarded by the Port Health Officer or his representative and every individual examined.

The mere production of a smallpox vaccination certificate is not accepted as evidence of immunity unless supported by good vaccinal scars.

Persons with inadequate scars or invalid certificates are vaccinated on board and landed under surveillance, and in the case of persons proceeding outside Mombasa notification of names and addresses is sent as soon as possible to the medical officer of health of their district.

5. *Relapsing Fever.*

No cases were reported during 1948, but in the event of any case being reported provision is available for dealing with same by delousing of persons and clothing and disinfectization of vessels.

6. *Control of Dhows.*

All dhows from foreign ports are kept in quarantine until boarded by the Port Health Officer or his representative.

All passengers and crew are examined and it is ascertained that the bill of health corresponds with the number of persons on board. Provision is made by means of a dhow quarantine anchorage to isolate infected or suspected ships.

All dhows are also inspected for evidence of mosquito breeding, all water receptacles are immediately emptied and kept unused until the dhow is thoroughly disinsectized by spraying before departure.

Measures are in force whereby no dhow can leave the harbour without being inspected by a representative of the Port Health Department and the necessary clearance certificates.

(4) Application of the Public Health (Port Health) Regulations, 1923

1. *Importation of Second-hand Clothing.*

Importation restrictions are rigidly enforced and frequent examination of consignments are carried out. Details are as shown in the attached report of the Port Health Inspector.

2. *Inspection of Foodstuffs.*

The importation of foodstuffs during 1948 has been extremely high and a high condemnation rate has been necessary.

Details are shown in the attached report of the Port Health Inspector.

A serious outbreak of typhoid occurred on the s.s. *Toscana* which arrived at Mombasa on 24th August, 1948, with one dead person on board. The post-mortem examination of the body indicated that death was due to typhoid. Six cases were removed from the ship and transferred to hospital. Examination of water on the ship proved negative. The ship itself only remained in port a matter of eleven hours and was directed to quarantine in Zanzibar by wireless, following the confirmation of the clinical diagnosis of typhoid in one of the passengers removed to hospital.

V—STATISTICS

(*a*) Shipping entering the port during the year:—

	Number	Tonnage	Number	Tonnage
	1947	1947	1948	1948
STEAMSHIPS—				
Overseas	500	2,043,337	624	2,377,264
Coastal	181	55,474	182	55,745

(*b*) Sailing ships, including native vessels:—

Number of foreign dhows entering the port	221
Number of coastal dhows entering the port	987

(*c*) Vessels medically inspected on arrival:—

Steamships	496
Sailing ships, including native vessels	221

(*d*) Vessels arriving in port infected or suspected:—

Steamships	3
Sailing ships, including native vessels	221

(*e*) *Vessels placed under quarantine restrictions or subject to special measures*:—

Steamship	1
Sailing ships, including native vessels	21

(*f*) Passengers medically examined under special smallpox regulations:—

Steamships	35,534
Sailing ships, including native vessels	3,515

(*g*) Passengers landed under surveillance:—

Steamships	502
Sailing ships, including native vessels	301

(*h*) Bills of health issued 998

VI—MATERNITY AND CHILD WELFARE

Maternity and child welfare services continued to be provided by local authorities and local native councils assisted by the Medical Department with the secondment of nursing sisters and health visitors. As in previous years the work could not be confined to preventive measures but had also to embrace curative aspects which are difficult to withhold in the face of an inability to understand the reasons on the part of an African community. These services are well organized in the larger towns such as Mombasa and Nairobi and the following information contained in the annual reports of the medical officers of health for the respective municipalities is of interest.

A—MOMBASA

(1) *Annual Attendances at African Ante-natal and Child Welfare Clinics*

	1946	1947	1948
Child Welfare	18,851	15,915	15,843
Venereal Diseases	4,331	4,857	6,586
Ante-natal	6,355	7,467	8,826
Dispensary	25,298	28,274	25,417
Home Visits	32,623	40,204	22,729

These figures comprise attendances at the three clinics of Majengo, Mwembe Tayari and Makupa. In addition, large numbers of women suffering from venereal disease had to be treated there. Persons attending ante-natal clinics tended to report more often than necessary.

(2) *Maternity Services*

The Lady Grigg Municipal Maternity Hospital provided accommodation for Africans as well as facilities for the training of African and Arab midwives for the Coast Province and elsewhere. Provision for the Asian community is made by the Pandya Memorial Clinic and private nursing homes. Statistics for the past four years are as follows:—

LADY GRIGG MUNICIPAL MATERNITY HOSPITAL

CASES	1946	1947	1948
Patients admitted	824	809	923
Births	617	495	656
Stillborn infants	36	41	31
Deaths—Maternal	5	—	10
Deaths—Infants	—	12	18

B—NAIROBI

(1) *European Services*

(a) Maternity.

Four private nursing homes were available and financial assistance under the European Hospital Authority Scheme was payable. The need for a separate maternity home became greater than ever, especially as the general shortages of hospital beds made the reservation of accommodation for cases of this kind very difficult. Patients were also accommodated before and after delivery in the Lady Northey Home.

(b) Child Welfare.

The Lady Northey Home and Nursery School continued to expand with the demand for admissions to the school much in excess of the accommodation available. Child welfare clinics were also held, assisted by staff from the Municipality and the Army from where children attended. An important event was the opening in October of a child welfare centre and day nursery in the Parklands area under Municipal auspices with gratifying results. This much welcomed innovation not only relieved the pressure on the Lady Northey Institution but also afforded residents in other areas more readily accessible services.

(2) *Asiatic Services*

(a) Maternity.

The Lady Grigg Indian Maternity Hospital was hardly able to meet increasing demands for accommodation and the following table indicates the work performed compared with three previous years:—

LADY GRIGG INDIAN MATERNITY HOSPITAL, NAIROBI

CASES	1946	1947	1948
Admissions	588	682	769
Births	509	583	577
Twins	3	12	9
Stillbirths	10	26	22
Deaths—Maternal	2	5	—
Deaths—Infants	5	8	21
Triplets	—	1	—

The training of Indian midwives continued to make a very important and useful addition to the social services of the community throughout the Colony.

(b) Ante-natal and Child Welfare.

Attendances at these Municipal clinics again increased and the amenities provided are proving very popular. Figures are as under:—

ATTENDANCES AT THREE ASIAN CLINICS AND HOME VISITS

	1	2	3	Total
ANTE-NATAL—				
Total Attendances	3,117	2,988	600	6,705
New Cases	824	571	109	1,504
CHILD WELFARE—				
Total Attendances, 0–5 years	4,557	2,972	2,162	9,691
Infants, New, 0–1 year	657	389	105	1,101
Toddlers, New, 1–5 years	375	354	133	862
HOME VISITS—				
By Health Visitors	2,223	2,364	1,309	5,896
By Health Assistants	1,429	1,543	1,109	4,081

C—AFRICAN

(a) Maternity.

The Lady Grigg Welfare League Maternity Hospital not only provided maternity services but also the training of midwives for which there was a long waiting list. The undermentioned table is of interest:—

	Resident in Nairobi	Non-Resident	Total
Cases admitted during the year	1,311	1,145	2,456
Number of beds	—	—	46
Patients days	—	—	13,620
Baby days	—	—	10 578
Motherless baby days	—	—	1,529

AFRICAN MIDWIVES IN TRAINING

January	34
July	36

In the June examination 11 candidates sat and all passed; in December seven sat and were successful.

The hospital is in charge of a lady medical officer assisted by a matron and European sisters. The senior African nurses act as charge-nurses under European supervision in the last six months of their two-year course of training thereby gaining a sense of responsibility.

(b) Ante-natal and Child Welfare.

The five clinics administered by the Municipality were well attended as the following table shows:—

ATTENDANCES AT FIVE AFRICAN CLINICS

	1	2	3	4	5	Total
ANTE-NATAL—						
Total Attendances	958	1,067	870	1,289	748	4,932
New Cases	163	364	107	342	202	1,178
Confined at Home	49	88	51	196	91	475
CHILD WELFARE—						
Total Attendances, 0–5 years	9,423	7,468	3,031	7,124	5,149	32,195
Infants, New, 0–1 year	251	535	831	414	231	2,262
Toddlers, New, 1–5 years	210	407	194	384	192	1,387
HOME VISITS—						
By Health Visitors	1,694	1,888	811	1,446	873	6,712
By African Staff	2,531	4,672	1,250	4,695	2,982	16,130

D—Ante-natal, Maternity and Child Welfare Work in Rural Areas

Figures in respect of Government hospitals and centres established and partly maintained by local native councils are:—

Station	*Cases*
Kabarnet	43
Kapsabet	216
Kiambu	2,217
Kerugoya	687
Kisumu	1,399
Kakamega	542
Embu	204
Narok	29
Kitui	47
Eldoret	331
Kilifi	35
Machakos	207
Fort Hall	1,160
Nyeri	750
Kajiado	9
Kitale	186
Lamu	18
Kisii	536
Others	7
Total ...	8,625

VII—HOSPITALS, DISPENSARIES, OUT-DISPENSARIES, VENEREAL CLINICS, THE MENTAL HOSPITAL, MEDICAL WORK CARRIED OUT BY MISSIONARY SOCIETIES, ETC.

The number of patients treated at hospitals and dispensaries during the year was as follows:—

European In-patients	European Out-patients	Asiatic and African In-patients	Asiatic and African Out-patients
3,621	4,233	184,986	831,395

In addition, 1,397,873 attendances were recorded at out-dispensaries in the native reserves.

In- and Out-patients Treated at Government Hospitals, Dispensaries and Out-dispensaries in 1948

Hospitals in Townships	In-patients	Out-patients
European Hospital, Nairobi	1,463	2,122
Native Civil Hospital, Nairobi	21,181	—
Mathari Mental Hospital, Nairobi	750	—
Infectious Diseases Hospital, Nairobi	6,563	—
Prison Hospital, Nairobi	2,007	4,983
General Dispensary, Nairobi	—	69,437
Loco Dispensary, Nairobi	—	35,794
European Hospital, Mombasa	1,430	1,002
Native Civil Hospital, Mombasa	5,497	44,594
Infectious Diseases Hospital, Mombasa	2,063	2,401
European Hospital, Kisumu	428	577
Native Civil Hospital, Kisumu	8,076	27,318
Native Civil Hospital, Nakuru	11,325	—
Native Civil Hospital, Eldoret	4,469	15,657
Railway Dispensary, Eldoret	553	2,247
Native Civil Hospital, Kitale	4,726	11,381
Total ..	70,531	217,513

Hospitals in Turkana and Northern Frontier Province and Lamu

	In-patients	Out-patients	Out-dispensaries
Isiolo	396	6,023	—
Lodwar	524	2,942	—
Lokitaung	424	2,156	—
Wajir	1,050	8,666	—
Moyale	485	7,364	—
Lamu	285	10,707	22,992
Garissa	288	5,790	—
Total	2,452	43,648	22,992

Hospitals in the Native Reserves

Districts	In-patients	Out-patients	Out-dispensaries
Karatina	5,749	21,120	61,076
Wesu	—	—	18,191
Voi	—	—	—
Kabarnet	825	7,605	10,722
Kitui	5,266	32,909	39,639
Kapenguria	469	7,288	—
Narok	1,390	410	7,404
Malindi	—	—	—
Kakamega	7,910	28,091	81,114
Kilifi	1,553	6,253	56,749
Kericho	4,456	11,241	45,520
Machakos	3,686	31,298	68,670
Muriranjas	4,238	19,905	—
Kisii	4,123	23,659	69,608
Nyeri	6,634	37,724	208,219
Fort Hall	7,260	21,673	86,859
Meru	6,521	57,259	311,013
Kiambu	7,548	23,700	20,176
Embu (District)	2,559	19,193	—
Kajiado	1,627	4,496	21,592
Msambweni (Digo)	2,286	6,711	75,569
Kapsabet	2,786	12,014	39,399
Kerugoya	5,749	21,120	16,243
Tambach	688	7,546	—
Rumuruti	841	8,286	—
Naivasha	304	7,167	—
Shauri Moyo Dispensary	—	33,884	—
Wei Wei Dispensary	—	—	11,904
Thomson's Falls	454	16,705	—
Maralal	538	4,274	—
Thika	2,550	13,117	—
Maseno	—	—	—
Sandford and Fort Hall Dispensaries	7,260	—	148,206
Makindu	885	8,538	—
Taveta	943	5,134	—
Londiani	1,968	8,844	—
Molo	1,851	14,009	—
Total	101,247	521,173	1,387,873

Anæsthetics

The report of the Specialist Anæthetist includes the following data:—

	General	Local	Spinal	Total
Europeans	207	15	14	236
Asians	829	237	143	1,209
Africans	9,134	2,272	578	11,984
Total	10,170	2,524	735	13,429

Surgery

The demand for surgical interference continued to increase and its fulfilment was only limited by the facilities available.

List of Operations

Nature of Operation	*Number performed*
1. Stomach and Duodenum:—	
(*a*) Closure of perforations	5
(*b*) Gastro-enterostomy	5
(*c*) Gastrectomy	4
Others	—
2. Intestines:—	
(*a*) Closure of wounds and perforations	12
(*b*) Resection and/or anastomosis	11
(*c*) Reduction of volvulus	23
(*d*) Reduction of intussusception	7
(*e*) Division of adhesions or bands	17
(*f*) For any other cause of obstruction	15
(*g*) Formation or closure of artificial anus	5
(*h*) Appendicectomy and/or appendicular drainage	194
(*i*) Drainage of other peritoneal abscesses	22
(*j*) Omentopexy	—
(*k*) Exploratory laparotomy	83
(*l*) Paracentesis	44
Others	1
3. Rectum and Anus:—	
(*a*) Excision of rectum	1
(*b*) Treatment of prolapse	17
(*c*) For fissure and fistula	28
(*d*) For ischio-rectal abscess	15
(*e*) Ligature of hæmorrhoids	42
(*f*) Injection of haemorrhoids	134
(*g*) Sigmoidoscopy	79
Others	1
4. Hernia:—	
(*a*) Inguinal	460
(*b*) Femoral	10
(*c*) Umbilical	13
(*d*) Incisional	6
5. Liver, Spleen and Pancreas:—	
(*a*) Upon liver	14
(*b*) Cholecystectomy	17
(*c*) Other operations upon gall bladder and bile ducts	10
(*d*) Splenectomy	4
(*e*) For pancreatitis	8
Others	—
6. Urinary System:—	
(*a*) Nephrotomy	7
(*b*) Nephrectomy	7
(*c*) Perinephric exploration	7
(*d*) Upon ureters (excluding operations for vesico-vaginal fistula)	61
(*e*) Cystotomy and suprapubic drainage	47
(*f*) Prostatectomy	25
(*g*) Urethrotomy	15
(*h*) For urethral fistula and abscess	4
(*i*) Cystoscopy and ureteric catheterization	88
(*j*) Urethral catheterization and passage of sounds	468
Others	—
7. Male Organs of Generation:—	
(*a*) Circumcision	221
(*b*) Others for paraphimosis	59
(*c*) Amputation of penis	1
(*d*) Hydrocelotomy	148
(*e*) For varicocele	6
(*f*) Upon testis and epididymis	15
(*g*) Tapping hydrocele	42
Others	—

Nature of Operation	*Number performed*
8. Female Organs of Generation:—	
(*a*) Ovariotomy	27
(*b*) Salpingotomy	31
(*c*) Salpingostomy, for sterility	9
(*d*) Myomectomy	17
(*e*) Hysterectomy	58
(*f*) Hysteropexy	8
(*g*) Cæsarian section	83
(*h*) Uterine suture	7
(*i*) For extra-uterine gestation	18
(*j*) Drainage of pelvic abscess	14
(*k*) Instrumental delivery and destruction of fœtus	282
(*l*) For vesico- or recto-vaginal fistula:—	
(i) Plastic repair	22
(ii) Uretero-colic anastomosis	1
(*m*) Colporrhaphy and perineorrhaphy	26
(*n*) Removal of uterine contents and/or dilatation and curettage	633
(*o*) Induction of labour or abortion	11
(*p*) Insufflation of fallopian tubes	6
(*q*) Uterine drainage	—
(*r*) Examination and/or manipulation of uterus or fœtus	159
(*s*) Upon cervix	26
(*t*) Others upon vagina and vulva	37
Others	—
9. Eye:—	
(*a*) For entropion	30
(*b*) For cataract	43
(*c*) For glaucoma	—
(*d*) Iridectomy	9
(*e*) Enucleation and evisceration	38
Others	—
10. Ear, Nose and Throat:—	
(*a*) Myringotomy	—
(*b*) Mastoidotomy	9
(*c*) Removal of foreign bodies	91
(*d*) Reduction of nasal fracture	3
(*e*) Resection of septum	16
(*f*) Turbinectomy and/or drainage of sinuses	18
(*g*) Removal of tumours	21
(*h*) Tonsillotomy, by guillotine	20
(*i*) Tonsillectomy, by dissection (both including removal of adenoids)	125
(*j*) For quinzy	2
(*k*) Uvulotomy	7
(*l*) Laryngoscopy, bronchoscopy and œsophagoscopy	10
Others	—
11. Mouth and Neck:—	
(*a*) Extraction of teeth	3,630
(*b*) Upon jaws (including treatment of fractures)	26
(*c*) Upon tongue and lips (including removal of tumours, but excluding plastic operations)	22
(*d*) Excision or treatment of glands in neck	85
(*e*) Tracheotomy	4
(*f*) Thyroidectomy (including ligature of thyroid vessels)	22
(*g*) For thyro-glossal cysts	7
Others	1
12. Chest:—	
(*a*) Thoracotomy and pleural drainage	13
(*b*) Lobectomy	—
(*c*) Upon cardia	—
(*d*) Phrenic avulsion	23
(*e*) Artificial pneumothorax	4
(*f*) Paracentesis	51
Others	2
13. Mammary Glands:	
(*a*) Mastectomy	11
(*b*) Excision of tumour	17
(*c*) Incision of abscess	50
Others	1
14. Cranium:—	
(*a*) Decompression and treatment of fracture and hæmorrhage	37
(*b*) For intracranial tumour	4
(*c*) Drainage of intracranial abscess	4
Others	2

Nature of Operation	*Number performed*
15. Spinal Column:—	
(*a*) Laminectomy	5
(*b*) Bone graft	9
(*c*) Manipulation and/or external fixation (for tuberculosis, fracture and other conditions, including application of plaster jacket)	43
(*d*) Lumbar and cisternal puncture	221
(*e*) Spinal injection	13
Others	15
16. Bones:—	
(*a*) For fractures:	
(i) Open operations (including bone graft, application of plates and other mechanical aids)	78
(ii) Manual and instrumental reduction and/or application of splints and plaster	1,153
(*b*) For osteomyelitis, osteitis and periostitis:	
(i) Acute	54
(ii) Chronic (including sequestrectomy and/or application of plaster)	153
(*c*) Removal of tumours	39
Others	2
17. Joints:—	
(*a*) Arthrotomy:	
(i) For sepsis	13
(ii) For removal of loose or foreign bodies	9
(*b*) Excision of joint	13
(*c*) Reduction of dislocation	97
(*d*) Manipulation for other purposes	34
(*e*) External fixation (including application of plaster)	149
(*f*) Aspiration	82
Others	—
18. Amputations:—	
(*a*) Of fingers	215
(*b*) Of hand and forearm	14
(*c*) Of arm	18
(*d*) Of toes	62
(*e*) Of foot and leg	93
(*f*) Of thigh	27
Others	—
19. Arteries, Veins and Nerves:—	
(*a*) For aneurysm	1
(*b*) Ligature of vessels	30
(*c*) For angioma	—
(*d*) Injection of varicose veins	2
(*e*) Nerve suture and neurolysis	5
(*f*) Others upon nerves (including stretching and injection)	15
Others	—
20. Orthopædic and Plastic Operations:—	
(*a*) Osteotomy (for deformities)	12
(*b*) Other treatment of deformities and contractures (including manipulation and application of splints and plaster)	55
(*c*) For hare lip and cleft palate	3
(*d*) Upon ears, nose and lips	22
(*e*) For elephantiasis	43
(*f*) Skin graft	260
Others	—
21. Conditions Unclassified Regionally:—	
(*a*) For ulcers (excluding skin graft)	2,894
(*b*) For other septic conditions (including incision of abscesses and whitlows)	2,397
(*c*) Suture and treatment of wounds (including tendon suture)	1,482
(*d*) Excision of superficial tumours (including cysts)	333
(*e*) Extraction of foreign bodies	393
(*f*) Removal of glands	37
(*g*) For bursitis and ganglion	56
(*h*) Treatment of burns	165
(*i*) Removal of parasites	3
Others	6
22. Surgical Procedures Otherwise Unclassified:—	
Others	265

Eye Clinic, General Dispensary, Nairobi

The following are details of work done and cases seen at the Eye Clinic held at the General Dispensary, Nairobi, during 1948:—

	Europeans	*Asians*	*Africans*
Conjunctivitis	78	396	4,839
Trachoma	—	54	721
Tumours	—	—	1
Others	2	2	31
Total number of new cases	697	1,943	8,995
Total number of re-attendances	127	3,068	19,801
Number of males	403	1,776	7,335
Number of females	294	167	1,660
"Others" include diseases of:—			
Orbit—			
Neuralgia	1	6	54
Cellulitis	—	—	5
Tumour	—	1	3
Injury	—	—	16
Extrinsic Musculture—Lids and Surrounding Structures—			
Blepharitis	2	10	23
Hordeolum	2	27	148
Chalazion	4	28	196
Trichiasis, distichasis	—	4	12
Entropion	—	—	28
Ectropion	—	—	5
Injuries	—	2	27
Others	6	15	198
Lacrimal Apparatus—			
Lachrymal gland	1	—	3
Lachrymal sac	1	4	18
Conjunctivia (other than Conjunctivitis and Trachoma)—			
Xerosis	1	4	25
Pinguecula	2	1	1
Pterigium	12	10	38
Hæmorrhage	3	5	30
Tumour	2	1	14
Injuries	2	2	3
Foreign body	8	25	115
Others	—	—	—
Cornea—			
Foreign body	19	116	204
Opacities	—	13	101
Ulcer	2	29	204
Interstitial keratitis	—	2	60
Other forms of keratitis	—	—	16
Staphyloma	—	—	12
Injuries	—	5	49
Others	1	1	24
Lens and Vitreous—			
Cataract	1	7	100
Injuries	—	—	—
Others	—	—	—
Uveal Tract—			
Irido-cyclitis	—	—	35
Others	—	—	4
Retina—			
Detachment	—	—	1
Retinitis	—	—	1
Night Blindness	—	—	65
Others	—	—	—
Optic Nerve and Central Connexion—			
Papillœdema	—	—	—
Optic neuritis	—	—	—
Atrophy	—	—	15
Others	2	—	9
Glaucoma	1	2	15
Panophthalmitis	—	—	8
Contusion of Globe	2	5	119
Vision tests	21	809	604
Errors of refractions	429	262	422
Examination and report	90	92	134
Miscellaneous	—	—	—

Medical Work Carried Out by Missionary Societies

The number of hospital beds maintained by the missionary societies receiving medical grants from Government, the number of patients treated in these institutes and the amount of the grants given are shown in the following table:—

Mission	Place	No. of Beds	In-Patients	Out-Patients	Out-Dispensary Patients	Confinements	Amount of Grants £
C.S.M. ..	Kikuyu	85	2,343	14,487	—	467	900
,, ..	Chogoria ..	89	3,524	14,877	33,844	289	600
,, ..	Tumutumu ..	115	2,700	22,855	48,938	1,240	1,440
C.M.S. ..	Kaloleni ..	86	1,665	85,647	—	—	1,277
,, ..	Maseno	82	1,990	18,299	9,377	331	588
S.D.A. ..	Kendu	75	—	—	—	—	540
M.M.S. ..	Meru	56	—	—	—	—	360

C.S.M.—Church of Scotland Mission.

C.M.S.—Church Missionary Society.

S.D.A.—Seventh Day Adventists.

M.M.S.—Methodist Missionary Society.

Venereal Diseases Clinics

Treatment of venereal diseases is afforded for men and women at Government and Municipal Clinics in Nairobi and Mombasa, while special clinics for women are maintained by Government at Nanyuki and Gilgil. Treatment is also carried out both for in-patients and out-patients at all Government hospitals throughout the Colony. Figures of cases treated for the last three years are as follows:—

	1946	1947	1948
Syphilis	16,763	17,174	18,177
Gonorrhœa	15,178	13,466	20,183

Rising figures for cases treated must not be construed as indicating a general increase of venereal disease in the Colony. Rises have been noted against the treatment of all diseases in every phrase of activity of the Department. Rather must it be taken that these higher figures indicate a greater degree of confidence shown by the African in our treatment, and it should be a matter of congratulation that they should more readily present themselves for treatment.

Gonorrhœa.

For gonorrhœa penicillin in oil has been the mainstay of treatment. The advantage of the treatment is that one single dose only of penicillin need be given with results that are comparable with those given by four separate injections of aqueous penicillin. In the male excellent results have been achieved, but gonorrhœa in the female still presents a formidable problem in point of presenting for treatment, in diagnosis, and the attainment of therapeutic results comparable with those in the male. It is quite certain that chronic gonorrhœa in the female takes, with tuberculosis, the major share of blame for the apparently large amount of sterility that is experienced by African women.

Syphilis.

The intensive treatment of syphilis by arsphenoxide and bismuth was carried out at one centre with satisfactory results. It was not possible to determine whether a complete cure was achieved, but it was almost certain that patients were sent out of hospital in a non-infective state for the time being at least. The great advantage of intensive courses as in-patients for syphilis has been the reduction of the rate of failure to complete the course to negligible figures. This aspect is of the highest importance in the treatment of any class of persons who do not clearly recognize the insidiousness of this disease in the absence of overt symptoms.

Other Diseases.

There is little to report on the remaining venereal diseases which are present in small numbers in the Colony.

VIII—MEDICAL TRAINING OF AFRICANS

Although some minor improvements and additions to buildings were made the work of the Medical Training School, Nairobi, continued to be handicapped by insufficient accommodation. At the close of the year there were 112 students in residence and the following table gives the total distribution of the six categories in training.

The distribution by tribes and studies was as follows:—

Tribe	Health Inspectors	Hospital Assistants	Compounders	Masseurs	Laboratory Assistants	Learner Clerks	Total
Digo	1	—	—	—	—	—	1
Luo	5	16	6	3	6	—	36
Balunya	3	17	9	2	1	1	33
Kikuyu	7	7	5	3	5	—	27
Jibana	—	1	—	—	—	—	1
Rabai	—	—	—	—	1	—	1
Masai	—	—	—	—	1	—	1
Kamba	1	—	—	—	1	—	2
Kisii	1	1	1	—	—	—	3
Taita	1	1	—	—	3	2	7
Total ..	19	43	21	8	18	3	112

On the whole the results of training were satisfactory and details of the students' progress are listed below. There was no second year class for Hospital Assistants this year.

	1st January, 1948	Dismissed	Died	Resigned	Failed Examination	Results
Hospital Assistant Learners:						
4th year	11	1	—	1	1	8 qualified.
3rd year	15	2	1	—	—	12 to 4th year.
1st year	27	1	—	—	3	23 9 to 3rd year, 14 to 2nd year.
Masseurs Learners	9	1	—	—	—	8.
Compounders Learners:						
3rd year	5	1	—	—	—	4 qualified.
2nd year	8	3	—	—	—	5 to 3rd year.
1st year	13	—	—	1	—	12 to 2nd year.
Health Inspectors Learners:						
2nd year	10	—	—	2	—	8 to 3rd year.
1st year	12	—	—	1	—	11 to 2nd year.
Laboratory Asst. Learners:						
4th year	8	—	—	—	—	8 qualified.
3rd year	6	—	—	—	—	6 to 4th year.
2nd year	5	—	—	1	—	4 to 3rd year.
Learner Clerks	4	—	—	—	1	3 passed Arab and African Examination.
Total ..	133	9	1	6	5	112.

The total number of qualified staff in the Colony at the end of December, 1948, was:—

(1)	Hospital Assistants, Special Grade	12
	Hospital Assistants, Grade I	30
	Hospital Assistants, Grade II	122
		164
(2)	Compounders, Special Grade	2
	Compounders, Grade I	9
	Compounders, Grade II	17
		28

(3)	Laboratory Assistants, Special Grade	3
	Laboratory Assistants, Grade I	51
	Laboratory Assistants, Grade II	13
	Laboratory Assistants, Grade III	5
		72
(4)	Masseurs, Grade II	8
(5)	Instructors, Special Grade	1
	Instructors, Grade I	1
		2
	Total	266

IX—PRISONS AND ASYLUMS

Patients Treated.

The following are comparative figures for patients treated at the Prison Hospital, Nairobi, during the past five years:—

	1944	1945	1946	1947	1948
In-patients—Total	3,081	2,307	1,985	2,045	2,105
In-patients daily average	63·8	77	71·8	61·8	80
Out-patients new cases	4,875	5,585	4,786	3,131	2,753
Out patients daily average new cases	13·3	15·3	13·1	8·6	7·5
Deaths	47	22	35	16	18
Daily average in prison	1,002·88	1,053·99	1,090·01	1,122·90	1,144·81

To the daily average in the prison figure should be added approximately 430 convicts at the Quarry Camp, 120 at Ngong Camp, 150 at Kamiti Camp and about 150 at Ruiru Camp. In-patient figures include sick from these camps.

Diseases.

Most prevalent diseases treated were, in order of frequency, malaria (clinical), diarrhoea and dysentery, upper respiratory infections, syphilis, injuries, boils, abscesses and ulcers, gonorrhœa and sequelæ.

Notifiable and infectious diseases were as follows:—

Smallpox	2
Tuberculosis—Pulmonary	13
Tuberculosis—Peritonitis	3
Tuberculosis—Glands	23
Typhoid fever (Paratyphoid)	16
Dysentery—Bac.	102
Influenza	13
Pneumonia—Lobar	53
Measles	1
Chicken Pox	48
Mumps	63

Pulmonary tuberculosis and malaria for the past five years are as follows:—

	Pulmonary Tuberculosis	Malaria	Daily No. of Prisoners
1944	30	282	1,002·86
1945	36	232	1,052·99
1946	27	300	1,090·10
1947	33	213	1,122·90
1948	13	380	1,144·60

Mortality.

Eighteen deaths. The following were the causes:—

Pulmonary Tuberculosis	3
Tuberculosis Peritonitis	2
Lobar Pneumonia	6
Carcinoma of the Liver	1
Asphyxia due to suicide	1
Typhoid fever	1
Gener. Hepatitis	1
Cerebral Malaria	1
Paratyphoid fever	1
Diarrhoea	1

The mortality table for the past five years is as follows:—

	Deaths	Daily average in Prison
1944	47	1,002·86
1945	22	1,052·99
1946	35	1,090·10
1947	16	1,122·90
1948	18	1,144·81

Insanity.

Forty-six criminal lunatics and 196 civil lunatics were admitted during the year.

Health.

Overcrowding, inadequate water supply and flies constituted the principal threats to health during the year. Overcrowding of the whole prison already commented on in previous reports is more acute than ever, and this is reflected in the prison hospital, particularly with reference to the isolation of infectious diseases.

Flies.

Always a nuisance, these were dealt with in the early part of the year by D.D.T. spraying, but toward the latter part of the year were noticed to be returning in alarming numbers. It was found that the principal source of these flies was the municipal refuse dump near the prison site and vigorous representations were made toward the close of the year to have this breeding controlled. At the same time arrangements were made to have the whole prison sprayed with D.D.T. once more. Early in the new year positive results were obtained and at the time of writing this report the fly nuisance is negligible. Potential fly-breeding places in the prison grounds themselves were completely examined and found to be nominal. All refuse is thoroughly incinerated daily and disposal of night soil is adequately dealt with.

Water Supply.

This has been recognized as inadequate for some time, but arrangements are under way to have it improved. In spite of the shortage of water and rather meagre supplies of soap to inmates the general standard of cleanliness is good and little, if any, disease referable to uncleanliness has been noted.

Clothing and Blankets.

Washing of clothing has been improved and a steam cabinet for the treatment of blankets has been installed and brought into operation at the close of the year. This is not working particularly efficiently as yet, but blankets are at least receiving a steam bath at regular intervals and this, together with the subsequent airing in the sun required to dry them out afterward, is at least an improvement over previous arrangements.

Diet.

A new diet scale providing adequate balanced diets for Europeans, Asians, Somalis and Arabs and Africans was introduced toward the latter part of the year.

Conservancy.

Bucket latrines are still in use and the number of buckets is still inadequate due to overcrowding. Disposal is in trenches at an area about 500 yards from the prison compound. Night soil is covered with earth when dumped and the trenches were filled with earth finally. A very small amount of fly-breeding takes place here and flies from this area are not noticed to any extent in the prison.

Prison Camps.

Ngong River Prison Camp ("Quarry").—430 prisoners.

Two miles from the prison. A dresser is resident here and this camp is visited every day by either the Assistant Surgeon or the Hospital Assistant. Seven hundred and sixty-four cases were treated during the year.

Kamiti Camp.—150 prisoners.

Ruiru Camp.—150 prisoners.

Ngong Camp.—120 prisoners.

There is no medical personnel at these camps. Drugs and dressings are supplied from the prison hospital to the officers in charge who dispense them as required. All convicts are examined by the Assistant Surgeon before they are sent to the camps.

The Assistant Surgeon attempts to visit each of these camps at least once a month in the company of the Superintendent of the Prison. This arrangement does not always prove satisfactory and at times one of the camps may not be visited for two months on end.

Remand Home.

Six hundred and ninety-two cases were treated during the year.

Detention Camp.

Three hundred and fifty-five cases were treated during the year.

Kenya Police Training Depot.

A Grade II Dresser is posted here from the prison hospital staff and drugs and dressings are supplied from the prison hospital.

Warders.

During the year 691 patients were treated as out-patients from the warders' lines. This includes women and children. These included the following notifiable and infectious diseases:—

Mumps	1
Dysentery	13
Chicken-pox	3
Lobar pneumonia	3

X—THE MATHARI MENTAL HOSPITAL

Number of Patients Treated.

Seven hundred and fifty persons were treated as in-patients during the year, an increase of 21 per cent on the previous record of 1947. Of these 68 were Europeans, 62 were Asians and 620 Africans. The increase was almost entirely due to an increase of admissions, of which there were 106 more than in the previous year.

The average daily number per month is shown below and illustrates the steady increase that has been observed during the year:—

Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
387	386	388	394	400	398	407	419	421	434	435	442

It is probable that this steady increase is partly due to an actual increase of insanity, but is mainly due to the increasing use that is made of the mental hospital by people who used to look after their insane relations at home. Many in fact continue to follow the latter course, so there is no doubt that the trend shown by our figures will continue for several years.

Accommodation.

There was no increase of accommodation during 1948, so that overcrowding was inevitable, and in fact existed in various sections of the hospital for long periods. On the last day of the year there were 451 patients in residence, although the already fully stretched, authorized accommodation was only 411. Overcrowding, especially of European and Asian patients, was kept within reasonable limits on several occasions by refusing admission in cases where the patients could possibly be looked after at home or in other hospitals or nursing homes, and this at times must have caused hardship to relations.

Shortage of accommodation adversely affected the welfare of in-patients in a few instances. This was particularly noticed in the European male section where the close proximity of disturbed and convalescent cases was at times a source of profound irritation to the latter. However, a beginning has been made with a new European men's block which will to a large extent solve this problem.

In two recent instances, however, European patients who were not certifiable refused to leave the hospital, and since no suitable accommodation could be found for them elsewhere it would have been inhumane to coerce them to leave.

Military Patients.

Forty military patients were admitted, 25 more than in 1947. The great majority were admitted in the first five months for, with the appointment of a military psychiatrist and the provision of beds at the Military Hospital, it only became necessary to admit highly disturbed cases during the latter half of the year.

Of the 40 admissions there were nine Europeans, six Asians and 25 Africans, and the following table shows the number of military admissions since 1940:—

1940	1941	1942	1943	1944	1945	1946	1947	1948
18	66	52	46	53	25	4	15	40

Physical Health.

The health of the patients was in general good, but there was a notable increase in tuberculosis—the incidence in 1948 being 3.1 per cent as compared with 1.6 per cent in 1947. In the public mental hospitals of the United Kingdom the corresponding figures were 0.9 per cent and 0.7 per cent with an average over the last ten years of 0.8 per cent. In approximately half our cases the onset probably occurred before admission and appears to be part of a general increase in the incidence throughout the Colony. In other cases, however, the illness was undoubtedly contracted in the hospital and, although this is in some degree a constant experience in mental hospitals throughout the world, it is considered to be partly due to overcrowding. Phthisis is especially difficult to diagnose in insane persons since they often cannot or will not breathe or expectorate to order; moreover, several of our cases confirmed at autopsy were repeatedly and consistently sputum negative during life. We have now instituted a system of taking the temperatures of all admissions for at least ten days and X-raying the chests of all doubtful cases in the hope of diagnosing and segregating the cases as early as possible.

The following infectious diseases were notified during the year:—

Bacillary Dysentery	30
Tuberculosis	23
Malaria	21
Influenza	8
Enteric	3
C.S. Fever	3

There was a decrease in the death rate—8.8 per cent of the total number of patients treated, as compared with 9.2 per cent in 1947. The causes of death were certified as follows:—

Tuberculosis	18
Debility and Insanity	11
General Paralysis	6
Pneumonia	4
Dysentery	4
Pellagra	3
Uræmia	2
Gangrene of Lung	2
Meningitis	2
Epilepsy	2
Other conditions each causing one death only	12

The dietaries of patients received increased attention and there have been improvements in quality, variety and service of meals.

General Conduct of Patients

The following table shows the number of cases of injury and other special occurrences:—

	Male	Female	Total
Injuries:			
(*a*) Self-inflicted	2	4	6
(*b*) By others	37	36	73
(*c*) Accidental	34	50	84
(*d*) Injuries to staff	4	5	9
Restraint:			
(*a*) Times resorted to	18	3	21
(*b*) Patients subjected to.. ..	7	3	10
(*c*) Longest time (hours) ..	12	10	12
(*d*) Type used—Strong canvas jacket	—	—	—
Seclusion:			
(*a*) Times resorted to	—	3	3
(*b*) Patients subjected to.. ..	—	3	3
(*c*) Longest time (hours) ..	—	6	6
Absconded:			
Unsuccessfully	6	4	10
Suicidal attempts	1	2	3

All the injuries sustained by patients were of a minor nature with the exception of an African man who amputated one of his own fingers impulsively with a meat chopper whilst working in the kitchens.

The suicidal attempts were all attempts to hang themselves and made by night using clothing and bedding.

Of the patients who absconded one succeeded in remaining at large for three days, one for two days and one for four hours, and the rest were apprehended almost immediately by hospital staff in the vicinity of the hospital.

Patients' Occupation, Recreation and Welfare

Occupational therapy is now an accepted principle of mental treatment; it has been defined as "any work or recreational activity, mental or physical, definitely prescribed and guided, for the distinct purpose of contributing to and hastening recovery". Owing to limitations of staff, buildings and materials it cannot yet be said that occupational therapy at Mathari fulfils these requirements. Neverthless, every effort was made to keep all patients, of all races and both sexes, as actively employed as their mental condition permitted.

An average of 36 per cent of all patients were employed each day throughout the year. This represents a decrease from the average of 53 per cent employed in 1947, and is accounted for by the fact that attendants who were last year employed in supervising outside working parties had this year to reinforce the ward staffs on account of the great increase of admissions—many of whom are highly disturbed at the time of their admission.

Patients' recreations followed the same lines as in 1947. There was organized football on three evenings each week and all patients were encouraged to either play or witness games. A staff team secured third place in the Department football league and home matches were well supported.

The second annual sports meeting for staff and patients was again held on Christmas Day. Twenty-one events were competed for compared with 14 in 1947, and there were prizes for the first three in each event. Members of the Visiting Committee, the British Red Cross Society and the African Welfare Office contributed generously to provide everyone with a liberal issue of cigarettes, sweets, fruit, cakes and sugar cane. Over 300 patients were out on the field for the sports and they were served with tea by the Matron, assisted by the European staff. The behaviour of patients during the whole afternoon was exemplary. At the end of the day Mrs. Carothers presented the prizes.

Sunday morning church services, conducted in Swahili by the Church of Scotland Mission, commenced in April. European patients also attended. Since the inauguration service the attendance each week has averaged over a hundred.

Newspapers and periodicals of all kinds and also a few books continued to be received in adequate quantities from members of the committee, the British Red Cross and the East Africa Women's League.

African Staff—Training and Welfare

A small supply of St. John first-aid textbooks written in Swahili assisted greatly in the effort to train African staff. A series of lectures on mental nursing, followed by a St. John course, began in 1948 and is continuing. The policy is now to have a probationers' class continuously receiving lectures. Definite progress in first-aid and bedside nursing can be observed but it is slow, and it is only too clear that skill in mental nursing depends largely on prolonged practical experience and also on certain innate qualities which many of our African staff do not possess.

At intervals throughout the year English-speaking Africans on the staff met together under a European chairman and discussed the work and welfare of Africans—both staff and patients. These meetings have resulted in a number of useful suggestions and innovations for the betterment of these committees.

Therapeutics

Electro-convulsive treatment has been frequently used during 1948 and 30 patients altogether were subjected to this treatment. The patients were mostly European and Asian because it has been found in previous years that Africans treated in this way showed a tendency to develop lung abscesses thereafter wih alarming frequency, presumably due to inhalation of pus from their gums in the fit. About half the cases showed improvement in their mental state and in five cases the cure was dramatic and obviously saved the patients months of misery. It has in several cases moreover been used as a method of out-patient treatment and saved beds that were much needed for other patients.

Insulin cones treatment was used at the beginning of the year and four Africans received a course of such treatment. It was discontinued however because, unless a doctor can be continually within call, the procedure is frought with risk to life and it was found impossible for the Specialist Psychiatrist to be always at hand. Many schizophrenics are seen at Mathari, and since this is now regarded as the best treatment for these cases the procedure was discontinued with the deepest regret and it is hoped that as soon as another doctor is appointed to assist the Specialist Psychiatrist we shall be able to take it up again.

Penicillin treatment of neurosyphilis was continued throughout the year and 15 cases were dealt with in this way. Of these cases six died and nine are progressing well—a considerable improvement on results obtained in pre-penicillin days. It is not anticipated that the mortality will ever become very low since these cases are usually sent to Mathari at a very late stage of the disease.

Pre-frontal leucotomy was performed on four occasions—one patient died, one was not improved, the other two cases were improved and discharged.

General Statistics

A.—Types of Mental Disorder from which Patients Suffered and for which they were Treated

Manic Depression	85
Schizophrenia	242
Paranoia	23
Psychopathic	26
Neurosyphilis	26
Senile Dementia	29
Other Organic Reactions	78
Epilepsy	29
Terminal Dementia	14
Mental Defect	71
Neurosis	25
N.A.D.	6
Unclassified	96
	750

B.—Total Number of Patients Treated.

Male	512
Female	238
Total	750

C.—Admissions were from the Following Places:—

	Male	Female
Embu	2	7
Eldoret	6	2
Fort Hall	14	7
Garissa	1	—
Kiambu	12	10
Kajiado	—	1
Kericho	4	—
Kisumu	17	7
Kapsabet	1	—
Kakamega	3	—
Kilifi	2	—
Kisii	2	—
Kitui	1	3
Malindi	1	—
Mombasa	27	7
Meru	2	1
Nairobi	107	72
Nakuru	23	10
Nyeri	4	1
Narok	1	—
Machakos	6	2
Thika	1	—
Uganda	1	—
Voi	3	—
Total	241	130

D.—Percentage of Deaths to Total Treated.

Year	Total Treated	Number of Deaths	Percentage
1943	489	77	15·74
1944	522	48	8·43
1945	560	35	6·25
1946	579	43	7·42
1947	619	57	9·20
1948	750	66	8·80

E.—Admissions, Discharges and Deaths for Last Three Years.

	Admissions			Deaths			Discharges		
	1946	1947	1948	1946	1947	1948	1946	1947	1948
Males	163	177	241	28	30	54	127	127	156
Females	65	88	130	15	27	12	52	56	77
Total ..	228	265	371	43	57	66	179	183	233

F.—Total Number of Patient Days.

	1946	1947	1948
European Male ..	2,295	1,076	1,935
European Female ..	2,983	3,829	4,156
Asian Male ..	7,002	7 131	7,916
Asian Female ..	3,358	5,819	4,417
African Male ..	82,339	85,044	95,051
African Female ..	31,203	32 589	36,502
Total	129,180	133,488	149,977

G.—Average Daily Numbers.

1946	1947	1948
354	365	410

H.—Remaining at the End of the Year.

	1946	1947	1948
European Male ..	3	4	6
European Female ..	9	10	14
Asian Male ..	21	20	23
Asian Female ..	8	14	12
African Male ..	227	247	273
African Female ..	88	84	123
Total Males ..	251	271	302
Total Females ..	105	108	149
Total ..	356	379	451

I.—European Section.

Total number treated:—

Males	35
Females	33
Total	68

As follows:—

	Males	Females
Remaining 31–12–47	4	10
Admitted during 1948	31	23
Discharged during 1948	28	18
Died during 1948	1	1
Remaining 31–12–48	6	14

Total number of days resident:—

	Males	Females
By those discharged	1,521	1,657
By those who died	14	432
By those remaining	789	13,178
Total	2,324	15,267

J.—Asian Section.

	Males	Females
Total number treated	43	19

Total: 62

As follows:—

	Males	Females
Remaining 31–12–47	20	14
Admitted during 1948	23	5
Discharged during 1948	18	7
Died during 1948	2	—
Remaining 31–12–48	23	12

Total number of days resident:—

	Males	Females
By those discharged	1,439	1,238
By those died	120	—
By those remaining	31,576	21,171
Total	33,135	22,309

K.—African Section.

	Males	Females
Total number treated	434	186

Total: 620

As follows:—

	Males	Females
Remaining 31–12–47	247	84
Admitted in 1948	187	102
Discharged in 1948	110	52
Died in 1948	51	11
Remaining 31–12–48	273	123

Total number of days resident:—

	Males	Females
By those discharged	29,117	8,780
By those died	21,314	4,074
By those remaining	387,798	144,110
Total	438,229	156,964

TABLE III.—RETURN OF DISEASES—(IN-PATIENTS)

for the year 1948

DISEASES	European Officials					European General Population					Asiatic General Population (including Officials)					Native General Population (including Officials)				
	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948
I.—Epidemic, Endemic and Infectious Diseases																				
1. Enteric Group—																				
(*a*) Typhoid Fever	—	—	—	—	—	—	19	—	19	1	—	12	—	12	2	13	498	94	511	31
(*b*) Paratyphoid A	1	1	—	2	—	—	—	—	—	—	—	3	—	3	—	—	16	—	16	3
(*c*) Paratyphoid B	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	—	4	—	4	—
(*d*) Type not defined	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	2	11	3	13	—
2. Typhus	—	4	—	4	—	1	15	—	16	—	—	—	—	—	—	—	52	1	52	1
3. Relapsing Fever	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	5	483	14	488	14
4. Undulant Fever	—	2	—	2	—	—	3	—	3	—	—	—	—	—	—	2	77	2	79	5
5. Malaria—																				
(*a*) Tertian (Benign)	1	2	—	3	—	—	1	—	1	—	—	9	—	9	—	2	115	17	117	26
(*b*) Quartan	—	1	1	1	—	—	—	—	—	—	—	7	—	7	—	—	166	2	166	—
(*c*) Aestivo-autumnal (S.T.) ..	—	52	—	52	1	1	142	2	143	—	6	167	5	173	1	78	6,976	204	7,054	79
(*d*) Undifferentiated (Clinical)	—	79	—	79	—	2	123	—	125	—	15	737	3	752	12	109	9,669	129	9,778	109
(*e*) Cachexia	—	1	—	1	—	—	—	—	—	—	—	5	1	5	—	—	216	5	216	—
(*f*) Blackwater	—	—	—	—	—	—	—	—	—	—	—	4	2	4	—	—	11	5	11	—
(*g*) Cerebral	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29	11	29	—
6. Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29	—	29	—
Alastrim	—	—	—	—	—	—	—	—	—	—	4	1	—	5	—	—	—	—	—	—
7. Measles	—	20	—	20	—	3	60	—	63	—	—	14	—	14	—	29	2,027	32	2,056	26
8. Scarlet Fever	—	1	—	1	—	—	—	—	—	—	2	—	—	2	—	33	3	—	36	—
9. Whooping Cough	—	3	—	3	—	1	5	—	6	—	—	5	—	5	1	—	2,555	139	2,555	34
10. Diphtheria	—	6	—	6	—	—	17	—	17	—	—	2	—	2	—	1	54	14	55	—
11. Influenza	—	28	—	28	—	1	143	—	144	—	31	1,892	—	1,923	30	6	1,005	—	1,011	13
12. Miliary Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	1	—
13. Mumps	—	—	—	—	—	—	—	—	—	—	1	14	—	15	—	4	459	—	463	9
14. Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15. Epidemic diarrhoea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	134	2	134	1
16. Dysentery—																				
(*a*) Amœbic	—	33	—	33	2	1	96	—	97	—	—	40	—	40	—	25	1,215	16	1,240	29
(*b*) Bacillary	—	5	—	5	—	—	11	—	11	—	—	13	1	13	1	11	1,152	33	1,163	14
(*c*) Undefined or due to other causes	—	3	—	3	—	—	6	—	6	—	1	65	—	66	3	3	639	23	642	32

17. Plague—																					
(*a*) Bubonic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20	11	20	1
(*b*) Pneumonic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) Septicæmic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—
(*d*) Undefined	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18. Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19. Spirochætosis icterohæmorrhagica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20. Leprosy	—	—	—	—	—	—	—	—	—	—	2	2	—	4	1	25	105	2	130	20
21. Erysipelas	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	11	—	11	—
22. Acute Poliomyelitis	—	3	—	3	—	—	8	—	8	—	—	—	—	—	—	4	73	7	77	3
23. Encephalitis Lethargica	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24. Epidemic Cerebro-spinal Fever	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	5	166	86	171	7
25. Other Epidemic Diseases—																				
(*a*) Rubeola (German Measles)	—	—	—	—	—	—	7	—	7	—	—	—	—	—	—	—	48	—	48	2
(*b*) Varicella (Chicken-pox) ..	—	5	—	5	—	—	47	—	47	—	—	22	—	22	—	19	1,148	—	1,167	14
(*c*) Kala-azar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	3	12	1
(*d*) Phlebotomus Fever ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*e*) Dengue	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*f*) Epidemic Dropsy	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	—	42	—	42	—
(*g*) Yaws	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32	821	1	853	60
(*h*) Trypanosomiasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	24	6	27	2
(*i*) Cow Pox	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*j*) Glandular Fever	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26. Glanders	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27. Anthrax	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	7	627	39	634	28
28. Rabies	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35	3	35	2
29. Tetanus	—	—	—	—	—	—	—	—	—	—	—	5	3	5	—	5	138	53	143	4
30. Mycosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26	—	26	—
31. Tuberculosis, Pulmonary and Laryngeal	—	2	—	2	1	—	3	1	3	—	—	36	4	36	1	111	2,032	427	2,143	152
32. Tuberculosis of the Meninges or Central Nervous System ..	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	2	110	72	112	4
33. Tuberculosis of the Intestines or Peritoneum	—	—	—	—	—	—	1	—	1	—	—	3	—	3	—	—	65	21	65	1
34. Tuberculosis of the Vertebral Column	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	80	3	80	5
35. Tuberculosis of Bones and Joints	—	—	—	—	—	2	—	—	2	—	1	8	—	9	—	—	172	4	172	7
36. Tuberculosis of Other Organs—																				
(*a*) Skin or Subcutaneous Tissue (including Lupus) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—	10	1
(*b*) Bones	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	—	12	—
(*c*) Lymphatic System ..	—	—	—	—	—	—	—	—	—	—	—	5	—	5	—	38	300	10	338	14
(*d*) Genito-urinary	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	13	2	13	—
(*e*) Other Organs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	57	4	57	3
37. Tuberculosis Disseminated—																				
(*a*) Acute	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	9	9	—
(*b*) Chronic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	42	33	43	—
38. Syphilis—																				
(*a*) Primary	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	91	2,110	1	2,201	63
(*b*) Secondary	—	—	—	—	—	—	4	—	4	—	—	9	—	9	—	214	4,142	16	4,356	186
(*c*) Tertiary	—	—	—	—	—	—	—	—	—	—	1	3	—	4	—	29	401	16	430	8
(*d*) Hereditary	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	6	277	56	283	12
(*e*) Period not indicated ..	—	—	—	—	—	—	—	—	—	—	—	12	—	12	—	4	198	5	202	8

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population					Asiatic General Population (including Officials)					Native General Population (including Officials)				
	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at the end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948
I.—Epidemic, Endemic and Infectious Diseases—(*Contd.*)																				
39. Soft Chancre	—	—	—	—	—	—	4	—	4	—	—	—	—	—	—	6	379	—	385	9
40. A.—Gonorrhœa and its complications	—	—	—	—	—	—	7	—	7	—	—	13	—	13	—	172	9,878	10	10,050	206
B.—Gonorrhœal Ophthalmia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94	1	94	—
C.—Gonorrhœal Arthritis	—	—	—	—	—	—	1	—	1	—	—	1	—	1	—	—	129	2	129	2
D.—Granuloma Venereum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	22	—	23	—
41. Septicæmia	—	3	—	3	—	—	6	—	6	—	—	3	3	3	—	—	64	44	64	1
42. Other Infectious Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	2	—
II.—General Diseases not Mentioned Above																				
43. Cancer or other Malignant Tumours of the Buccal Cavity	—	—	—	—	—	—	7	2	7	—	—	1	2	1	—	—	12	5	12	—
44. Cancer or other Malignant Tumours of the Stomach or Liver	—	2	—	2	—	—	3	1	3	—	—	2	1	2	—	—	66	28	66	1
45. Cancer or other Malignant Tumours of the Peritoneum, Intestines, and Rectum	—	1	—	1	—	1	3	—	4	—	—	4	3	4	—	—	18	9	18	—
46. Cancer or other Malignant Tumours of the Female Genital Organs	—	1	—	1	—	—	4	—	4	—	—	2	—	2	—	3	53	8	56	3
47. Cancer or other Malignant Tumours of the Breast	—	1	—	1	—	1	2	—	3	—	—	—	—	—	—	—	25	—	25	2
48. Cancer or other Malignant Tumours of the Skin	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	42	3	42	5
49. Cancer or other Malignant Tumours of Organs not Specified	—	—	—	—	—	—	4	—	4	1	—	6	—	6	1	—	162	30	162	9
50. Tumours, Non-Malignant	—	4	—	4	—	—	16	—	16	—	—	12	1	12	—	6	439	6	445	10
51. Acute Rheumatism	—	—	—	—	—	—	—	—	—	—	—	42	—	42	1	4	283	2	287	8
52. Chronic Rheumatism	1	4	—	5	—	—	12	—	12	—	2	401	—	403	1	—	718	—	718	9
53. Scurvy (including Barlow's Disease)	—	—	—	—	—	—	1	—	1	—	—	1	—	1	—	1	9	1	10	—
54. (*a*) Pellagra	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	166	23	168	8
(*b*) Kwashiorkor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30	326	59	356	10
55. (*a*) Rickets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	1	6	—
(*b*) Beri-beri	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	7	1	7	1
56. Malnutrition (unclassified)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	241	89	243	2

57. Diabetes (not including Insipidus)	—	1	—	1	—	—	1	—	1	—	1	35	1	26	—	—	65	5	65	1
58. Anæmia—																				
(*a*) Pernicious	—	1	—	1	—	—	1	—	1	—	—	—	4	—	—	—	—	—	—	—
(*b*) Other Anæmias and Chlorosis	—	—	—	—	—	—	2	—	2	—	—	21	—	21	—	30	695	54	725	57
59. Diseases of the Pituitary Body ..	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2	1	2	—
60. Diseases of the Thyroid Gland—																	3	—	3	
(*a*) Exophthalmic Goitre ..	—	—	—	—	—	—	6	—	6	—	—	—	—	—	—	—	20	2	20	—
(*b*) Other Diseases of the Thyroid Gland, Myxœdema	—	2	—	2	—	—	8	—	8	—	—	3	—	3	—	1	43	—	44	2
61. Diseases of the Para-Thyroid Glands	—	—	—	—	—	—	—	—	—	—	—	3	—	3	—	—	7	—	7	—
62. Diseases of the Thymus ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
63. Diseases of the Supra-Renal Glands	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—
64. Diseases of the Spleen	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	—	103	5	103	—
65. Leukæmia—																				
(*a*) Leukæmia	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	5	2	5	2
(*b*) Hodgkin's Disease ..	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	4	—	4	1
66. Alcoholism	—	—	—	—	—	—	6	—	6	—	—	1	—	1	—	—	70	4	70	—
67. Chronic poisoning by Mineral Substances (Lead, Mercury, etc.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33	—	33	—
68. Chronic Poisoning by Organic Substances (Morphia, Cocaine, etc.)	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	2	—	2	—
69. Other General Diseases—																				
Auto-intoxication	—	1	—	1	—	—	—	—	—	—	—	2	1	2	—	—	1	—	1	—
Purpura Hæmorrhagica ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	2	4	—
Hæmophilia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diabetes Insipidus	—	—	—	—	—	—	2	—	2	—	—	1	—	1	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—
III.—Affections of the Nervous System and Organs of the Senses																				
70. Encephalitis (not including Encephalitis Lethargica) ..	—	2	—	2	—	—	1	—	1	—	—	2	1	2	—	—	24	21	24	1
71. Meningitis (not including Tuberculous Meningitis or Cerebro-spinal Meningitis)	—	—	—	—	—	—	3	—	3	—	—	9	3	9	—	7	200	128	207	—
72. Locomotor Ataxia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
73. Other Affections of the Spinal Cord	—	3	—	3	—	—	1	—	1	—	—	1	1	1	—	—	11	2	11	1
74. Apoplexy—																				
(*a*) Hæmorrhage	—	—	—	—	—	—	4	3	4	—	—	3	—	3	—	—	34	20	34	—
(*b*) Embolism	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	2	1	10	—
(*c*) Thrombosis	—	1	—	1	—	1	2	—	3	—	—	2	—	2	—	—	17	7	17	—
75. Paralysis—																				
(*a*) Hemiplegia	—	—	—	—	—	—	1	—	1	—	—	5	2	5	—	8	59	1	67	5
(*b*) Other Paralyses	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	115	2	115	5
76. General Paralysis of the Insane ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	4	—
77. Other Forms of Mental Alienation	—	3	—	3	—	—	1	—	1	—	—	8	—	8	—	—	355	8	355	8
78. Epilepsy	—	—	—	—	—	—	1	1	1	—	—	3	—	3	—	—	117	10	117	—

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population					Asiatic General Population (including Officials)					Native General Population (including Officials)				
	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948
III.—Affections of the Nervous System and Organs of the Senses—(*Contd.*)																				
79. Eclampsia Convulsions (Non-Puerperal) Five Years or Over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—
80. Infantile Convulsions	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	24	3	24	—
81. Chorea	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	17	—	17	—
82. A.—Hysteria	—	1	—	1	—	—	—	—	—	—	—	13	—	13	—	—	100	1	100	1
B.—Neuritis	—	5	—	5	—	—	8	—	8	—	—	27	—	27	4	10	112	1	122	—
C.—Neurasthenia	—	5	—	5	—	—	3	—	3	—	1	31	—	32	2	—	50	—	50	2
D.—Neuralgia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51	—	51	—
83. Cerebral Softening	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	2	1	2	2
84. Other Affections of the Nervous System, such as Paralysis Agitans	—	3	—	3	—	1	8	—	9	—	—	1	—	1	—	—	33	1	33	6
85. Affections of the Organs of Vision—																				
(*a*) Conjunctivitis	—	—	—	—	—	—	6	—	6	—	—	26	—	26	—	30	1,887	—	1,907	37
(*b*) Trachoma	—	—	—	—	—	—	—	—	—	—	—	3	—	3	—	—	369	—	369	10
(*c*) Tumours of the Eye ..	—	3	—	3	—	—	—	—	—	—	—	43	—	43	—	—	39	1	39	9
(*d*) Other Affections of the Eye	—	1	—	1	—	—	10	—	10	—	—	5	—	5	—	34	949	1	983	36
86. Affections of the Ear or Mastoid Sinus	—	14	—	14	—	—	37	—	37	—	—	22	—	22	—	12	643	2	655	11
(*a*) Otis Media	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	3
IV.—Affections of the Circulatory System																				
87. Pericarditis	—	—	—	—	—	—	—	—	—	—	—	9	—	9	—	—	40	12	40	—
88. Acute Endocarditis or Myocarditis	—	1	—	1	—	—	2	—	2	—	—	7	1	7	—	—	38	10	38	—
89. Angina Pectoris	—	1	—	1	—	—	—	—	—	—	—	1	—	1	—	—	10	—	10	—
90. Other Diseases of the Heart ..	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	12	7	12	—
(*a*) Valvular:—	—	1	—	1	—	—	—	—	—	—	—	11	6	11	—	—	5	3	5	—
Mitral	—	—	—	—	—	—	1	—	1	—	—	4	—	4	—	6	145	27	151	7
Aortic	—	—	—	—	—	—	—	—	—	—	—	1	—	1	1	—	26	9	26	—
Tricuspid	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	12	9	12	—
(*b*) Myocarditis	—	2	—	2	—	—	2	—	2	—	1	10	3	11	—	—	59	18	59	2
(*c*) Unclassified	—	9	—	9	—	—	13	—	13	—	—	8	—	8	—	—	91	39	91	—
91. Diseases of the Arteries—																				
(*a*) Aneurism	—	—	—	—	—	—	1	—	1	—	—	1	—	1	—	—	3	2	3	—
(*b*) Arterio-Sclerosis	—	1	—	1	—	—	1	—	1	—	—	—	1	—	—	—	5	—	5	—
(*c*) Other Diseases	—	2	1	2	—	—	8	1	8	—	—	—	—	—	—	—	—	—	—	—
92. Embolism or Thrombosis (Non-Cerebral)	—	7	1	7	—	—	7	2	7	—	1	5	1	6	—	—	6	2	6	—

93. Diseases of the Veins—																					
Hæmorrhoids	—	11	—	11	—	—	16	—	16	—	1	51	—	52	1	2	57	1	59	1
Varicose Veins	—	1	—	1	—	—	9	—	9	—	—	4	—	4	—	—	52	1	52	1
Phlebitis	—	—	—	—	—	—	6	—	6	—	—	3	—	3	—	—	8	—	8	—
94. Diseases of the Lymphatic System—																					
Lymphangitis	—	7	—	7	—	—	6	—	6	—	—	10	—	10	—	—	87	—	87	4
Lymphadenitis, Bubo (Non-Specific)	—	1	—	1	—	—	8	—	8	—	—	14	—	14	—	20	486	2	506	7
95. Hæmorrhage of Undetermined Cause	—	2	—	2	—	—	4	—	4	—	—	4	1	4	—	—	17	4	17	—
96. Other Affections of the Circulatory System	—	—	—	—	—	1	3	2	4	—	—	3	—	3	—	—	27	5	27	—
V.—Affections of the Respiratory System																					
97. Diseases of the Nasal Passages—																					
Adenoids	—	1	—	1	—	—	2	—	2	—	—	5	—	5	—	—	22	—	22	2
Polypus	—	1	—	1	—	—	2	—	2	—	—	—	—	—	—	—	5	—	5	—
Rhinitis	—	—	—	—	—	—	8	—	8	—	—	32	1	32	—	—	40	—	40	—
Coryza	—	31	—	31	1	—	113	—	113	—	¼	35	—	35	—	13	963	—	976	12
98. Affections of the Larynx—																					
Laryngitis	—	1	—	1	—	—	4	—	4	—	—	11	—	11	—	—	258	8	258	—
99. Bronchitis—																					
(*a*) Acute	—	3	—	3	1	—	12	—	12	—	2	96	—	98	—	56	5,946	16	6,002	103
(*b*) Chronic	—	—	—	—	—	—	3	—	3	—	1	41	—	42	—	22	911	8	933	13
(*c*) Unclassified	—	3	—	3	—	—	12	—	12	—	3	80	—	83	—	—	880	11	880	12
100. Broncho-Pneumonia	—	—	—	—	—	—	6	—	6	—	—	70	5	70	2	88	6,015	947	6,103	104
101. Pneumonia—																					
(*a*) Lobar	—	9	—	9	—	—	20	—	20	—	1	94	6	95	—	127	6,477	373	6,604	163
(*b*) Unclassified	—	1	—	1	—	—	9	1	9	—	2	12	—	14	1	15	1,046	56	1,061	21
102. Pleurisy, Empyema	—	10	—	10	1	—	8	—	8	—	—	26	—	26	—	9	284	18	293	10
103. Congestion of the Lungs	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	—	28	3	28	1
104. Gangrene of the Lungs	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	21	1	21	—
105. Asthma	—	2	—	2	—	2	16	1	18	—	—	69	2	69	—	6	484	3	490	4
106. Pulmonary Emphysema	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—
107. (a) Other Affections of the Lungs	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	38	4	38	2
Pulmonary Spirochætosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	1	5	—
Unclassified	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	14	2	14	—
VI.—Diseases of the Digestive System																					
108. A.—Diseases of Teeth or Gums—																					
Caries	1	11	—	12	—	—	14	—	14	—	—	45	1	45	—	—	170	1	170	—
Pyorrhœa	—	1	—	1	—	—	—	—	—	—	—	11	—	11	—	—	61	—	61	1
B.—Other Affections of the Mouth—																					
Stomatitis	—	—	—	—	—	—	5	—	5	—	—	10	—	10	—	—	235	5	235	9
Glossitis, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22	—	22	—
Unclassified	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	28	3	28	—

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population					Asiatic General Population (including Officials)					Native General Population (including Officials)				
	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948
VI.—Diseases of the Digestive System—(*Contd.*)																				
109. Affections of the Pharynx or Tonsils—																				
Tonsilitis	1	37	—	38	—	1	162	—	163	—	5	400	3	405	3	17	1,145	6	1,162	15
Pharyngitis	—	14	—	14	—	—	11	—	11	—	1	27	—	28	—	—	182	—	182	2
Unclassified	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1	14	2	* 15	—
110. Affections of the Oesophagus	—	2	1	2	—	—	—	—	—	—	—	4	1	4	—	—	19	2	19	—
111. A.—Ulcer of the Stomach	—	4	1	4	—	—	3	1	3	—	—	9	1	9	—	—	3	1	3	—
B.—Ulcer of the Duodenum	1	14	—	15	1	1	20	1	21	—	1	10	1	11	—	—	58	3	58	—
112. Other Affections of the Stomach—																				
Gastritis	—	12	—	12	—	—	22	—	22	—	3	46	—	49	2	4	570	9	574	2
Dyspepsia	—	11	—	11	—	—	14	—	14	—	—	119	—	119	3	1	509	7	510	11
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11	35	11	—
113. Diarrhoea and Enteritis—																				
Under Two Years	—	—	—	—	—	—	24	—	24	—	1	39	—	40	3	12	2,596	276	2,608	39
114. Diarrhoea and Enteritis—																				
Two Years and Over	—	15	—	15	—	1	42	1	43	—	2	210	—	212	1	28	1,681	82	1,709	30
Colitis	—	7	—	7	—	2	5	—	7	—	—	5	—	5	—	—	108	1	108	3
114A. Sprue	—	—	—	—	—	1	—	—	1	—	—	1	—	1	—	—	1	1	1	—
B. Diverticulitis	—	—	—	—	—	—	5	—	5	—	—	16	—	16	—	—	—	—	—	—
115. Ankylostomiasis	—	3	—	3	—	—	1	—	1	—	—	—	—	—	—	12	835	1	847	16
116. Diseases due to Intestinal Parasites—																				
(*a*) Cestoda (Tænia)	—	3	—	3	—	—	5	—	5	—	—	6	—	6	—	16	1,247	1	1,263	11
(*b*) Trematoda (Flukes)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	174	1	174	—
(*c*) Nematoda (other than Ankylostoma)	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	75	—	75	—
Ascaris	—	2	—	2	—	—	—	—	—	—	—	3	—	3	—	11	693	3	704	13
Trichocephalus dispar.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Trichina	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—
Dracunculus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strongylus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	3	—
Oxyuris	—	1	—	1	—	—	2	—	2	—	—	—	—	—	—	—	4	—	4	—
(*d*) Coccidia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*e*) Other Parasites	—	—	—	—	—	—	—	—	—	—	—	3	—	3	—	—	38	—	38	4
(*f*) Unclassified	—	—	—	—	—	—	—	—	—	—	—	3	—	3	—	—	43	1	43	—
117. Appendicitis	1	28	—	29	—	3	115	—	118	—	2	199	1	201	10	—	85	10	85	3
118. Hernia	—	15	—	15	—	—	30	—	30	—	—	69	—	69	1	34	628	15	662	20

119. A.—Affections of the Anus, Fistula, etc.	—	3	—	3	—	—	9	1	9	—	—	22	—	22	1	6	106	10	112	5
B.—Other Affections of the Intestines	1	—	—	1		—	5	—	5	—	1	18	3	19	1	—	103	41	106	—
Enteroptosis	—	1	—	1	—	—	2	—	2	—	—	—	—	—	—	—	4	2	4	—
Constipation	—	2	—	2	—	—	5	—	5	—		21	—	21	—	9	1,032	—	1,041	3
120. Acute Yellow Atrophy of the Liver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5	5	—
121. Hydatid of the Liver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13	—	13	1
122. Cirrhosis of the Liver—																				
(*a*) Alcoholic	—	2	—	2	—	—	—	—	—	—	—	1	3	1	—	—	9	7	9	—
(*b*) Other Forms	—	—	—	—	—		3	—	3	—	—	5	—	5	—	3	80	38	83	7
123. Biliary Calculus	—	1	—	1	—	—	5	—	5	—	—	1	—	1	—	—	—	—	—	—
124. Other Affections of the Liver—																				
Abscess	—	1	—	1	—	—	—	—	—	—	1	1	—	2	—	2	44	6	46	1
Hepatitis	—	7	—	7	1	—	17	—	17	—	1	40	2	41	1	7	300	22	307	6
Cholecystitis	—	4	—	4	—	1	4	—	5	—	—	5	—	5	—	—	9	1	9	—
Jaundice	—	2	—	2	1	—	7	—	7	—	1	5	—	6	—	—	167	9	167	3
Unclassified	—	1	—	1	1	—	—	—	—	—	—	—	—	—	—	—	23	3	23	—
125. Diseases of the Pacreas	—	—	—	—	—	—	1	—	1	—	2	—	—	2	—	—	1	—	1	—
126. Peritonitis (of Unknown Cause)	—	1	—	1	—	—	2	—	2	—	—	3	—	3	—	9	111	37	120	10
127. Other Affections of the Digestive System	—	1	—	1	—	—	10	1	10	—	—	2	—	2	—	4	31	4	35	1
VII.—Diseases of the Genito-urinary System (Non-Venereal)																				
128. Acute Nephritis	—	—	—	—	—	—	3	1	3	—	—	4	1	4	—	—	124	20	124	4
129. Chronic Nephritis	—	4	1	4	—	1	4	—	5	—	—	13	4	13	—	—	93	38	93	5
130. A.—Chyluria	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	3	—	3	—
B.—Schistosomiasis	—	5	—	5	—	—	2	—	2	—	—	7	—	7	—	28	1,599	8	1,627	61
131. Other Affections of the Kidneys—																				
Pyelitis	—	3	—	3	—	—	17	—	17	—	—	9	—	9	—	—	145	3	145	2
Unclassified	—	5	—	5	—	—	10	—	10	—	—	1	—	1	—	1	10	1	11	—
132. Urinary Calculus	—	7	—	7	—	—	5	2	5	—		10	—	10	—	—	9	1	9	—
133. Diseases of the Bladder—																				
Cystitis	—	6	—	6	—		15	—	15	—	1	12	—	13	—	—	186	1	186	4
Unclassified	—	5	—	5	—	—	14	—	14	—	1	25	1	26	—	—	—	—	—	—
134. Diseases of the Urethra—																				
(*a*) Stricture	—	1	—	1	—	—	4	—	4	—	—	14	—	14	—	—	126	2	126	6
(*b*) Other	—	—	—	—	—	—	5	—	5	—	—	13	—	13	—	—	224	2	224	2
135. Diseases of the Prostate—																				
Hypertrophy	—	1	—	1	—	—	1	—	1	—	—	5	1	5	—	—	16	3	16	—
Prostatitis	—	2	—	2	—	—	8	—	8	—	1	6	—	7	—	1	20	—	21	—
Unclassified	—	1	—	1	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—
136. Diseases (Non-Venereal) of the Genital Organs of Man— ..																				
Unclassified	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	5	221	—	226	8
Epididymitis	—	—	—	—	—	—	3	—	3	—	—	2	—	2	—	2	56	—	58	2
Orchitis	—	1	—	1	—	—	—	—	—	—	—	24	—	24	—	11	187	1	198	3
Hydrocele	—	1	—	1	—	—	—	—	—	—	—	14	—	14	—	—	166	—	166	8
Ulcer of Penis	—	—	—	—	—	—	2	—	2	—	—	3	—	3	—	—	57	—	57	2
137. Cysts or other Non-Malignant Tumours of the Ovaries ..	—	7	—	7	—	1	22	—	23	—	1	4	—	5	—	2	131	3	133	4

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population					Asiatic General Population (including Officials)					Native General Population (including Officials)				
	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948
VII.—Diseases of the Genito-urinary System (Non-Venereal)—(*Contd.*)																				
138. Salpingitis	—	—	—	—	—	—	7	—	7	—	1	22	—	23	—	—	801	2	801	12
Abscess of the Pelvis	—	2	—	2	—	—	—	—	—	—	—	13	—	13	—	12	44	2	56	1
139. Uterine Tumours (Non-Malignant)	—	—	—	—	—	—	16	—	16	—	—	8	—	8	—	—	116	—	116	3
140. Uterine Hæmorrhage (Non-Puerperal)	—	2	—	2	—	—	8	—	8	—	—	1	—	1	—	—	78	2	78	1
141. A.—Metritis	—	7	—	7	—	—	10	—	10	—	—	3	—	3	—	—	111	1	111	1
B.—Other Affections of the Female Genital Organs (unclassified)—	—	6	—	6	—	—	21	—	21	—	—	6	—	6	—	—	286	2	286	4
Displacement of Uterus	—	1	—	1	—	1	14	—	15	—	—	8	—	8	—	—	238	2	238	1
Amenorrhœa	—	1	—	1	—	—	2	—	2	—	—	2	—	2	—	—	44	—	44	—
Dysmenorrhœa	—	1	—	1	—	—	2	—	2	—	1	11	—	12	—	9	333	—	342	3
Leucorrhœa	—	—	—	—	—	—	2	—	2	—	—	—	—	—	—	—	23	—	23	—
142. Diseases of the Breast (Non-Puerperal)—																				
Mastitis	—	—	—	—	—	—	6	—	6	—	—	2	—	2	—	4	131	—	135	—
Abscess of Breast	—	—	—	—	—	—	1	—	1	—	—	1	—	1	—	—	138	1	138	1
Unclassified	—	4	—	4	—	—	1	—	1	—	—	—	—	—	—	—	25	—	25	—
VIII.—Pregnancy and Peurperal State																				
143. A.—Ante-Natal	—	1	—	1	—	—	1	—	1	—	—	7	—	7	—	159	1,139	—	1,298	52
B.—Normal Labour	—	1	—	1	—	—	23	—	23	—	—	62	—	62	—	—	7,470	—	7,470	118
C.—Abnormal Labour (unclassified)	—	—	—	—	—	—	—	—	—	—	—	10	—	10	—	—	349	18	349	4
(*a*) Abortion	—	8	—	8	—	1	26	—	27	—	1	28	—	29	—	—	1,309	6	1,309	18
(*b*) Ectopic Gestation	—	—	—	—	—	—	2	—	2	—	—	5	—	5	—	—	56	2	56	—
(*c*) Other Accidents of Pregnancy	—	—	—	—	—	—	14	—	14	—	—	10	—	10	1	66	496	26	562	37
144. Puerperal Hæmorrhage	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	157	13	157	6
145. Other Accidents of Parturition	—	—	—	—	—	—	22	—	22	—	—	4	—	4	—	—	210	29	210	2
146. Puerperal Septicæmia	—	—	—	—	—	—	—	—	—	—	—	5	—	5	1	2	99	11	101	1
147. Phlegmasia Dolens	—	—	—	—	—	—	—	—	—	—	—	1	—	1	1	—	—	—	—	—
148. Puerperal Eclampsia	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	—	9	3	9	1
149. Sequelæ of Labour	—	—	—	—	—	1	3	—	4	—	—	—	—	—	—	—	214	12	214	8
150. Puerperal Affections of the Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sterility	—	—	—	—	—	—	3	—	3	—	—	3	—	3	—	—	—	—	—	—

IX.—Affections of the Skin and Cellular Tissues																					
151. Gangrene	—	4	—	4	—	—	—	—	—	—	1	1	—	2	—	—	45	—	45	1
152. Boil	—	8	—	8	—	—	20	—	20	—	2	92	—	94	—	—	229	5	229	1
Carbuncle	—	1	—	1	—	—	9	—	9	—	—	—	—	—	1	—	36	2	36	2
153. Abscess	—	14	—	14	—	2	31	—	33	—	2	130	—	132	5	133	2,436	15	2,569	65
Whitlow	—	1	—	1	—	—	4	—	4	—	—	25	—	25	—	—	114	2	114	2
Cellulitis	—	20	—	20	—	1	48	—	49	—	2	43	1	45	1	45	1,416	6	1,461	33
Ulcers	—	9	—	9	—	1	15	—	16	—	—	88	—	88	—	211	7,413	20	7,624	276
154. A.—Tinea	—	—	—	—	—	—	2	—	2	—	—	1	—	1	—	—	28	—	28	43
B.—Scabies	—	—	—	—	—	—	—	—	—	—	—	14	—	14	—	17	449	—	466	15
155. Other Diseases of the Skin—																				
Erythema	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	1	—	1	—
Urticaria	—	19	—	19	—	—	12	—	12	—	2	54	—	56	—	—	122	1	122	1
Eczema	—	4	—	4	—	—	7	—	7	—	—	20	—	20	1	13	280	—	293	2
Herpes (Simplex)	—	—	—	—	—	—	2	—	2	—	—	3	—	3	1	2	82	—	84	—
Psoriasis	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	20	—	20	1
Elephantiasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	93	2	95	7
Myiasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—	10	—
Chigoes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	49	1	49	1
Cutaneous Leishmaniasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dermatitis	1	4	—	5	—	—	12	—	12	—	1	17	—	18	1	10	260	2	270	9
Unclassified	—	4	—	4	—	—	6	—	6	—	—	6	—	6	—	—	194	4	194	20
X.—Diseases of Bones and Organs of Locomotion (Other than Tuberculous)																				
156. Diseases of Bones—																				
Osteomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18	141	—	159	9
Osteitis	—	5	—	5	—	—	1	—	1	—	3	2	—	5	—	—	332	3	332	10
157. Diseases of Joints—																				
Arthritis	—	9	—	9	—	1	4	—	5	—	—	68	—	68	1	27	673	2	700	18
Synovitis	—	—	—	—	—	—	8	—	8	—	1	24	—	25	—	9	353	—	362	6
158. Other Diseases of Bones or Organs of Locomotion	—	21	—	21	—	—	29	—	29	—	1	45	—	46	—	10	283	3	293	18
XI.—Malformations																				
159. Malformations—																				
Unclassified	—	—	—	—	—	—	—	1	—	—	—	1	—	1	—	—	15	3	15	1
Hydrocephalus	—	—	—	—	—	—	3	—	3	—	—	—	1	—	—	—	30	2	30	—
Spina Bifida	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	4	—
Hypospadias	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	—	7	—
XII.—Diseases of Infancy																				
160. Congenital Debility	—	—	—	—	—	—	—	—	—	—	—	3	—	3	—	—	63	10	63	—
161. Premature Birth	—	—	—	—	—	—	—	—	—	—	—	2	1	2	—	3	125	49	128	2
162. Other Affections of Infancy	—	—	—	—	—	—	1	—	1	—	—	6	2	6	—	—	150	22	150	4
Stillbirth	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—	—
Marasmus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	4	9	1
163. Infant Neglect—																				
(*a*) Infants of Three Months and over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	17	5	21	—
(*b*) Infants under Three Months	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	16	—	18	—

RETURN OF DISEASES—IN-PATIENTS—(*Contd.*)

DISEASES	European Officials					European General Population					Asiatic General Population (including Officials)					Native General Population (including Officials)				
	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948	Cases remaining in Hospital from previous year 1947	Total Admissions	Total Deaths	Total Cases Treated	Remaining in Hospital at end of year 1948
XIII.—Affections of Old Age																				
164. Senility—																				
Senile Dementia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15	4	15	—
Unclassified	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	46	33	46	2
XIV.—Affections Produced by External Causes																				
165. Suicide by Poisoning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
166. Corrosive Poisoning (Intentional)	—	—	—	—	—	—	—	—	—	—	—	2	1	2	—	—	—	—	—	—
167. Suicide by Gas Poisoning ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—
168. Suicide by Hanging or Strangulation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—
169. Suicide by Drowning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
170. Suicide by Firearms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
171. Suicide by Jumping from a Height	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
172. Suicide by Cutting or Stabbing Instruments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	—
173. Suicide by Crushing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
174. Other Suicides	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
175. Food Poisoning	—	—	—	—	—	—	1	—	1	—	—	2	—	2	—	—	121	1	121	—
Botulism	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	3	—
176. Attacks of Poisonous Creatures—																				
(*a*) Snake Bite	—	—	—	—	—	—	2	—	2	1	—	2	—	2	—	—	326	5	326	2
(*b*) Insect Bite	—	1	—	1	—	—	—	—	—	—	—	3	—	3	—	12	71	1	83	1
(*c*) Others	—	1	—	1	—	—	4	—	4	—	—	—	—	—	—	—	98	2	98	4
177. Other Accidental Poisonings ..	—	—	—	—	—	—	3	—	3	—	—	3	—	3	—	—	50	6	50	—
178. Burns (by Fire)	—	5	—	5	—	—	6	1	6	—	—	77	4	77	1	54	1,490	119	1,544	45
179. Burns (other than by Fire) ..	—	4	—	4	—	—	4	—	4	—	—	10	—	10	—	—	308	18	308	21
180. Suffocation (Accidental) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	—
181. Poisoning by Gas (Accidental) ..	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	9	—	9	—
182. Drowning (Accidental)	—	—	—	—	—	—	3	—	3	—	—	1	—	1	—	—	3	1	3	—
183. Wounds (by Firearms, War excepted)	—	1	—	1	—	—	12	—	12	—	—	2	—	21	2	3	68	6	71	—
184. Wounds (by Cutting or Stabbing Instruments)	—	3	—	3	—	—	3	—	3	—	1	54	—	55	—	82	3,291	29	3,373	1
185. Wounds (by Fall)	1	1	1	2	—	—	—	—	—	—	1	3	—	4	1	—	856	25	856	95
186. Wounds (in Mines or Quarries)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	—	19	25
187. Wounds (by Machinery) ..	—	—	—	—	—	—	—	—	—	—	—	8	—	8	—	—	191	2	191	3
188. Wounds (Crushing, e.g. Railway Accidents, etc.)	—	3	—	3	—	1	6	—	7	—	—	1	1	1	—	—	199	11	199	2

189. Injuries Inflicted by Creatures, Bites, Kicks, etc.	—	1	—	1	—	—	2	—	2	—	—	1	—	1	—	26	388	7	414	8
190. Wounds Inflicted on Active Service	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	—	55	—	55	21
191. Executions of Civilians by Belligerents	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—
192. A.—Over-fatigue	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—	5	—
B.—Hunger or Thirst	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	16	—	16	—
193. Exposure to Cold, Frost-bite, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
194. Exposure to Heat—																				
Heatstroke	—	—	—	—	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—
Sunstroke	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	3	—
195. Lightning Stroke	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	1	7	—
196. Electric Shock	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	5	—	5	—
197. Murder by Firearms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—
198. Murder by Cutting or Stabbing Instruments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5	5	—
199. Murder by Other Means	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
200. Infanticide (Murder of an Infant under One Year)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
201. A.—Dislocation	—	2	—	2	—	—	6	—	6	—	1	14	1	15	—	8	248	—	256	8
B.—Sprain	—	3	—	3	—	—	5	—	5	—	—	97	—	97	—	—	436	53	436	7
C.—Fracture	—	27	—	27	—	—	73	—	73	—	10	149	5	159	—	135	2,184	18	2,319	124
202. Other External Injuries	—	28	—	28	—	2	74	4	76	—	8	466	4	474	5	119	4,480	—	4,599	69
203. Deaths by Violence of Unknown Cause	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
204. Sudden Death (Cause Unknown)	—	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	10	10	10	—
205. A.—Diseases not already Specified or Ill-defined)—																				
Ascites	—	1	—	1	—	—	3	—	3	1	—	11	—	11	—	5	128	12	133	7
Oedema	—	—	—	—	—	—	1	—	1	—	—	2	—	2	—	—	95	10	95	—
Asthenia	—	—	—	—	—	—	1	—	1	—	—	1	—	1	—	—	41	4	41	—
Shock	—	—	—	—	—	—	4	—	4	—	—	—	—	—	—	—	6	3	6	—
Hyperpyrexia	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	13	1	13	—
Pyrexia of Unknown Origin	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	646	8	646	7
Others	—	62	—	62	1	7	69	—	76	—	13	1,155	3	1,168	1	289	25,374	11	25,663	343
Lumbago	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	91	—	91	—
Myalgia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	71	—	71	1
Sciatica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	—	12	1
B.—Malingering	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
XVI.—Diseases, the Total of which have not Caused Ten Deaths	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Grand Total	11	889	9	1,000	12	50	2,555	27	2,600	6	162	9,064	120	9,216	118	3,365	172,493	5,303	175,858	3,958

TABLE IV.—RETURN OF DISEASES (OUT-PATIENTS)

Numbers Treated during the year 1948

DISEASES	European Officials			European General Population			Asian Officials			Asian General Population			Native General Population (including Officials)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
I.—Epidemic, Endemic and Infectious Diseases															
1. Enteric Group—															
(*a*) Typhoid Fever	—	—	—	—	—	—	—	—	—	—	1	1	1	4	5
(*b*) Paratyphoid A.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) Paratyphoid B.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*d*) Type not defined	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Typhus	1	1	2	4	2	6	—	—	—	—	—	—	16	5	21
3. Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Undulant Fever	—	3	3	—	—	—	—	—	—	—	—	—	12	6	18
5. Malaria—													28	11	39
(*a*) Tertian (Benign)	—	—	—	—	—	—	23	—	23	18	9	27	715	676	1,391
(*b*) Quartan	—	—	—	1	—	1	—	—	—	—	—	—	189	225	414
(*c*) Aestivo-autumnal (S.T.)	22	—	22	5	6	11	84	6	90	39	22	61	5,026	4,221	9,247
(*d*) Clinical—(Undifferentiated)	80	4	84	30	27	57	868	10	878	669	542	1,211	41,235	21,259	62,494
(*e*) Cachexia	—	—	—	—	—	—	—	—	—	—	—	—	421	716	1,137
(*f*) Blackwater	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*g*) Cerebral	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alastrim	—	—	—	—	—	—	—	—	—	7	5	12	—	1	1
7. Measles	1	—	1	5	2	7	—	—	—	23	26	49	1,140	1,207	2,369
8. Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	1	145
9. Whooping Cough	—	—	—	11	12	23	—	1	1	42	56	98	4,848	5,208	9,912
10. Diphtheria	—	—	—	—	—	—	—	—	—	6	17	23	—	—	—
11. Influenza	51	5	56	16	15	31	621	—	621	289	633	922	10,319	4,030	14,349
12. Miliary Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13. Mumps	—	—	—	1	—	1	—	—	—	26	31	57	638	513	1,151
14. Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15. Epidemic Diarrhoea	—	—	—	—	—	—	—	—	—	—	—	—	258	87	322
16. Dysentery—															
(*a*) Amœbic	15	6	21	9	10	19	19	—	19	13	11	24	743	511	1,254
(*b*) Bacillary	3	1	4	2	2	4	1	—	1	6	14	20	866	532	1,398
(*c*) Undefined or Due to Other Causes	4	—	4	—	—	—	39	—	39	14	25	39	1,597	520	1,917
17. Plague—															
(*a*) Bubonic	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
(*b*) Pneumonic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) Septicæmic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*d*) Undefined	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18. Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19. Spirochætosis icterohæmorrhagica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

20. Leprosy	—	—	—	—	—	—	—	—	—	—	—	—	—	118	54	172
21. Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22. Acute Poliomyelitis	—	—	—	1	—	1	—	—	—	—	—	—	—	1	1	2
23. Encephalitis Lethargica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24. Epidemic Cerebro-Spinal Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25. Other Epidemic Diseases—																
(*a*) Rubeola (German Measles)	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—
(*b*) Varicella (Chicken-pox)	—	—	—	4	3	7	—	—	—	6	2	8	330	138	468	
(*c*) Kala-azar	—	—	—	—	—	—	—	—	—	—	—	—	7	1	8	
(*d*) Phlebotomus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
(*e*) Dengue	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
(*f*) Epidemic Dropsy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
(*g*) Yaws	—	—	—	—	—	—	—	—	—	—	—	—	4,278	3,662	7,940	
(*h*) Trypanosomiasis	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	
26. Glanders	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
27. Anthrax	—	—	—	—	—	—	—	—	—	—	—	—	134	69	203	
28. (*a*) Rabies	—	—	—	—	—	—	—	—	—	—	—	—	113	49	162	
(*b*) Rabies Prophylactic	—	—	—	1	—	1	—	—	—	—	—	—	71	28	99	
29. Tetanus	—	—	—	—	—	—	—	—	—	—	—	—	6	—	6	
30. Mycosis	—	—	—	—	—	—	—	—	—	—	—	—	2	26	28	
31. Tuberculosis, Pulmonary and Laryngeal	2	—	2	3	3	6	1	—	1	1	1	2	334	162	496	
32. Tuberculosis of the Meninges or Central Nervous System	—	—	—	—	—	—	—	—	—	—	—	—	19	10	29	
33. Tuberculosis of the Intestines or Peritoneum	—	—	—	—	—	—	—	—	—	—	—	—	2	3	5	
34. Tuberculosis of the Vertebral Column	—	—	—	—	—	—	—	—	—	—	—	—	22	11	33	
35. Tuberculosis of Bones and Joints	—	—	—	—	—	—	—	—	—	—	—	—	34	19	53	
36. Tuberculosis of Other Organs—																
(*a*) Skin or Subcutaneous Tissue (Lupus)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
(*b*) Bones	—	—	—	—	—	—	—	—	—	—	—	—	19	16	35	
(*c*) Lymphatic System	—	—	—	—	—	—	—	—	—	1	—	1	244	106	350	
(*d*) Genito-Urinary	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	
(*e*) Other Organs	—	—	—	—	—	—	—	—	—	—	—	—	10	3	13	
37. Tuberculosis Disseminated—																
(*a*) Acute	—	—	—	—	—	—	—	—	—	—	—	—	7	—	7	
(*b*) Chronic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
38. Syphilis—																
(*a*) Primary	—	—	—	—	—	—	—	—	—	1	1	2	2,481	1,390	3,871	
(*b*) Secondary	—	—	—	—	—	—	—	—	—	1	—	1	2,309	1,524	3,833	
(*c*) Tertiary	—	—	—	—	—	—	—	—	—	—	—	—	1,184	826	2,010	
(*d*) Hereditary	—	—	—	—	—	—	—	—	—	—	—	—	157	299	456	
(*e*) Period not indicated	—	—	—	—	—	—	—	—	—	—	—	—	387	124	561	
39. Soft Chancre	—	—	—	—	—	—	—	—	—	1	—	1	231	—	231	
40. A.—Gonorrhœa and its Complications	—	—	—	—	—	—	1	—	1	6	—	6	7,035	2,455	9,490	
B.—Gonorrhœal Ophthalmia	—	—	—	—	—	—	—	—	—	—	—	—	61	87	148	
C.—Gonorrhœal Arthritis	—	—	—	—	—	—	—	—	—	—	—	—	77	43	120	
D.—Granuloma Venereum	—	—	—	—	—	—	—	—	—	—	—	—	29	2	31	
41. Septicæmia	13	9	22	5	11	16	—	—	—	3	1	4	1	—	1	
42. Other Infectious Diseases	—	—	—	—	—	—	—	—	—	—	—	—	4	1	5	

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population			Asian Officials			Asian General Population			Native General Population (including Officials)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
II.—General Diseases not Mentioned Above															
43. Cancer or other Malignant Tumours of the Buccal Cavity	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
44. Cancer or other Malignant Tumours of the Stomach or Liver	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
45. Cancer or other Malignant Tumours of the Peritoneum Intestines, Rectum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
46. Cancer or other Malignant Tumours of the Female Genital Organs	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
47. Cancer or other Malignant Tumours of the Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
48. Cancer or other Malignant Tumours of the Skin	—	—	—	2	1	3	—	—	—	—	—	—	—	—	—
49. Cancer or other Malignant Tumours of Organs not Specified	—	—	—	—	1	1	—	—	—	—	—	—	2	1	3
50. Tumours, Non-Malignant	11	11	22	2	3	5	—	—	—	—	1	1	332	177	509
51. Acute Rheumatism	7	—	7	2	4	6	26	—	26	43	47	90	1,565	953	2 518
52. Chronic Rheumatism	40	21	61	—	23	23	200	—	200	22	82	104	9,620	4,935	14,555
53. Scurvy (including Barlow's Disease)	—	—	—	—	—	—	—	—	—	—	—	—	16	—	16
54. (*a*) Pellagra	—	—	—	—	—	—	—	—	—	—	1	1	71	52	123
(*b*) Kwashiorkor	—	—	—	—	—	—	—	—	—	—	—	—	16	15	31
55. Beri-beri	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
56. (*a*) Rickets	—	—	—	—	—	—	—	—	—	1	—	1	42	27	69
(*b*) Malnutrition (unclassified)	—	—	—	—	—	—	—	—	—	—	—	—	23	18	41
57. Diabetes (not including Insipidus)	—	—	—	—	—	—	6	—	6	—	4	4	38	33	71
58. Anæmia—															
(*a*) Pernicious	6	9	15	1	3	4	1	—	1	1	5	6	71	26	97
(*b*) Other Anæmias and Chlorosis	10	4	14	—	14	14	8	1	9	34	114	148	481	500	982
59. Diseases of the Pituitary Body	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—
60. Diseases of the Thyroid Gland—															
(*a*) Exophthalmic Goitre	1	1	2	—	2	2	—	—	—	—	1	1	—	2	2
(*b*) Other Diseases of the Thyroid Gland, Myxœdema	—	8	8	—	1	1	—	—	—	—	—	—	53	133	186
61. Diseases of the Para-Thyroid Glands	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
62. Diseases of the Thymus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
63. Diseases of the Supra-Renal Glands	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
64. Diseases of the Spleen	—	—	—	—	—	—	3	—	3	3	1	4	811	354	1,165
65. Leukæmia—															
(*a*) Leukæmia	—	—	—	—	—	—	—	—	—	—	—	—	19	21	40
(*b*) Hodgkin's Disease	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2
66. Alcoholism	1	—	1	—	—	—	—	—	—	—	—	—	4	1	5
67. Chronic Poisoning by Mineral Substances (Lead, Mercury, etc.)	—	—	—	—	—	—	—	—	—	—	—	—	4	—	4

68. Chronic Poisoning by Organic Substances (Morphia, Cocaine, etc.) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
69. Other General Diseases—																
Auto-Intoxication	—	—	—	—	—	—	—	—	—	—	—	—	—	10	1	11
Purpura Hæmorrhagica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hæmophilia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diabetes Insipidus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
III.—Affections of the Nervous System and Organs of the Senses																
70. Encephalitis (not including Encephalitis Lethargica)	—	—	—	—			—	—	—	—	—	—	—	1	—	1
71. Meningitis (not including Tuberculous Meningitis or Cerebro-spinal Meningitis)	—	—	—	—			—	—	—	—	—	—	—	2	5	7
72. Locomotor Ataxia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
73. Other Affections of the Spinal Cord ..	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1	1
74. Apoplexy—																
(*a*) Hæmorrhage	—	—	—	—	—	—	—	—	—	—	—	—	—	5	1	6
(*b*) Embolism	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) Thrombosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
75. Paralysis—																
(*a*) Hemiplegia	—	—	—	—	—	—	1	—	1	—	1	1	—	—	—	—
(*b*) Other Paralyses	1	—	1	—	—	—	—	—	—	—	—	—	—	50	49	99
76. General Paralysis of the Insane ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
77. Other Forms of Mental Alienation ..	—	—	—	2	—	2	10	—	10	1	1	2	516	91	607	
78. Epilepsy	—	—	—	1	—	1	—	—	—	4	4	8	139	80	219	
79. Eclampsia Convulsions (Non-Puerperal) Five Years or over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
80. Infantile Convulsions	—	—	—	1	—	1	—	—	—	—	—	—	15	14	29	
81. Chorea	—	—	—	—	2	2	—	—	—	—	—	—	4	7	11	
82. A.—Hysteria	3	3	6	3	6	9	—	—	—	1	15	16	6	12	18	
B.—Neuritis	17	4	21	—	7	7	24	—	24	23	40	63	1,381	747	2,128	
C.—Neurasthenia	13	2	15	—	—	—	25	—	25	5	3	8	475	218	693	
D.—Neuralgia	—	—	—	—	—	—	7	—	7	1	—	1	494	1,415	1,909	
83. Cerebral Softening	—	—	—	—	—	—	—	—	—	—	—	—	6	2	8	
84. Other Affections of the Nervous System, such as Paralysis Agitans ..	11	8	19	3	20	23	1	—	1	2	1	3	47	11	58	
85. Affections of the Organs of Vision—																
(*a*) Conjunctivitis	12	—	12	14	11	25	173	5	178	177	260	437	760	639	1,399	
(*b*) Trachoma	—	—	—	—	—	—	19	2	21	9	24	33	5,759	2,977	8,736	
(*c*) Tumours of the Eye	3	—	3	1	4	5	22	—	22	—	—	—	123	16	139	
(*d*) Other Affections of the Eye ..	30	7	37	14	7	21	115	1	116	91	81	172	21,786	15,334	37,126	
86. Affections of the Ear or Mastoid Sinus	132	23	155	34	46	80	163	1	164	237	342	579	359	324	683	
Otis Media	—	—	—	4	—	4	1	—	1	1	—	1	—	—	—	
IV.—Affections of the Circulatory System																
87. Pericarditis	—	—	—	—	—	—	—	—	—	—	—	—	2	—	2	
88. Acute Endocarditis or Myocarditis ..	—	—	—	—	—	—	—	—	—	—	—	—	29	14	43	
89. Angina Pectoris	1	—	1	—	—	—	—	—	—	—	1	1	19	9	28	

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population			Asian Officials			Asian General Population			Native General Population (including Officials)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
IV.—Affections of the Circulatory System—(*Contd.*)															
90. Other Diseases of the Heart—															
(*a*) Valvular—															
Mitral	—	2	2	1	—	1	—	—	—	1	1	2	9	3	12
Aortic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tricuspid	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(*b*) Myocarditis	1	2	3	1	—	1	—	—	—	—	—	—	4	2	6
(*c*) Unclassified	10	2	12	2	2	4	—	—	—	1	6	7	8	20	28
91. Diseases of the Arteries—															
(*a*) Aneurism	—	—	—	—	—	—	—	—	—	1	1	2	—	—	—
(*b*) Arterio-Sclerosis	4	—	4	2	—	2	—	—	—	—	1	1	—	—	—
(*c*) Other Diseases	6	3	9	1	4	5	—	—	—	—	—	—	3	9	12
92. Embolism or Thrombosis (Non-Cerebral)	5	2	7	—	—	—	—	—	—	—	—	—	—	—	—
93. Diseases of the Veins—															
Hæmorrhoids	15	5	20	3	2	5	25	—	25	3	4	7	38	—	38
Varicose Veins	5	6	11	2	3	5	1	—	1	1	—	1	44	17	61
Phlebitis	3	1	4	2	1	3	—	—	—	—	—	—	6	2	8
Unclassified	—	—	—	1	—	1	1	—	1	—	—	—	4	1	5
94. Diseases of the Lymphatic System—															
Lymphangitis	3	—	3	—	—	—	4	—	4	3	4	7	49	24	73
Lymphadenitis, Bubo (Non-Specific)	8	1	9	3	—	3	5	—	5	20	30	50	1,332	691	2,023
95. Hæmorrhage of Undetermined Cause	1	2	3	—	1	1	—	—	—	1	—	1	7	3	10
96. Other Affections of the Circulatory System	—	1	1	—	3	3	4	—	4	—	—	—	16	5	21
V.—Affections of the Respiratory System															
97. Diseases of the Nasal Passages—															
Adenoids	2	—	2	—	4	4	1	—	1	1	1	2	15	7	22
Polypus	2	1	3	—	—	—	—	—	—	5	3	8	11	5	16
Rhinitis	5	1	6	6	2	8	22	—	22	38	45	83	179	108	287
Coryza	79	18	97	19	21	40	745	4	749	538	715	1,253	38,564	17,592	56,156
98. Affections of the Larynx—															
Laryngitis	5	4	9	1	—	1	51	1	52	5	8	13	1,605	866	2,273
99. Bronchitis—															
(*a*) Acute	8	1	9	8	5	13	123	4	127	686	628	1,314	35,322	29,108	64,430
(*b*) Chronic	10	7	17	20	12	32	223	5	228	27	488	515	6,304	2,589	8,893
(*c*) Unclassified	10	—	10	6	10	16	30	5	35	6	2	8	9,046	6,138	15,186
100. Broncho-Pneumonia	3	—	3	1	3	4	—	—	—	8	4	12	1,562	893	2,455
101. Pneumonia—															
(*a*) Lobar	2	—	2	2	—	2	1	—	1	1	3	4	258	98	356
(*b*) Unclassified	3	1	4	1	1	2	—	—	—	11	15	26	613	385	998

102. Pleurisy, Empyema	3	1	4	3	2	5	21	—	21	6	5	11	89	16	105
103. Congestion of the Lungs	—	—	—	—	—	—	—	—	—	—	—	—	211	—	211
104. Gangrene of the Lungs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
105. Asthma	7	9	16	1	4	5	111	—	111	52	143	195	1,573	470	2,043
106. Pulmonary Emphysema	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
107. Other Affections of the Lungs	1	—	1	—	—	—	—	—	—	—	—	—	100	44	144
Pulmonary Spirochætosis	—	—	—	—	3	3	—	—	—	—	—	—	2	2	4
Unclassified	—	—	—	1	—	1	—	—	—	—	—	—	6	—	6
VI.—Diseases of the Digestive System															
108. A.—Diseases of Teeth or Gums—															
Caries	10	1	11	7	8	15	119	—	119	72	77	149	15,370	9,886	25,256
Pyorrhœa	1	—	1	1	2	3	36	1	36	81	89	170	587	299	886
B.—Other Affections of the Mouth—															
Stomatitis	2	1	3	1	2	3	39	1	40	51	100	151	1,235	773	2,008
Glossitis, etc.	—	—	—	—	—	—	1	—	1	3	6	9	135	88	223
C.—Unclassified	4	4	8	—	—	—	—	—	—	—	—	—	162	111	273
109. Affections of the Pharynx or Tonsils—															
Tonsilitis	61	9	70	40	47	87	206	2	208	480	586	1,066	8,979	4,643	13,622
Pharyngitis	47	16	63	15	13	28	257	1	258	223	268	491	14	7	21
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
110. Affections of the Oesophagus	—	—	—	—	—	—	—	—	—	—	—	—	63	44	107
111. A.—Ulcer of the Stomach	1	—	1	—	—	—	—	—	—	—	—	—	8	14	22
B.—Ulcer of the Duodenum	15	1	16	2	4	6	—	—	—	1	—	1	—	—	—
112. Other Affections of the Stomach—															
Gastritis	8	6	14	6	6	12	91	—	91	43	66	109	7,961	5,426	13,387
Dyspepsia	35	6	41	7	15	22	438	1	439	180	294	474	2,647	1,480	4,127
Unclassified	21	5	27	1	13	14	—	—	—	1	2	3	2,258	2,362	4,620
113. Diarrhoea and Enteritis—															
Under two years	46	24	70	23	37	60	24	8	32	103	289	392	6,396	5,866	12,262
114. Diarrhoea and Enteritis—															
Two years and over	44	2	47	6	19	25	176	1	177	158	135	293	8,880	6,252	15,132
Colitis	2	—	2	—	—	—	15	—	15	46	53	99	—	—	—
Ulceration	—	—	—	—	—	—	11	—	11	—	—	—	—	—	—
114A. Sprue	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
114B. Diverticulitis	—	—	—	—	—	—	—	—	—	—	—	—	28	31	59
115. Ankylostomiasis	1	—	1	—	1	1	4	—	4	—	—	—	2	3	5
116. Diseases due to Intestinal Parasites—															
(*a*) Cestoda (Tænia)	5	—	5	4	7	11	—	1	1	4	1	5	257	143	400
(*b*) Trematoda (Flukes)	—	—	—	—	—	—	—	—	—	—	—	—	26	38	64
(*c*) Nematoda (other than Ankylostoma)—															
Ascaris	—	—	—	—	1	1	12	—	12	29	39	68	—	—	—
Trichocephalus dispar.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Trichina	—	—	—	—	—	—	—	—	—	—	—	—	22	7	29
Dracunculus	—	—	—	—	—	—	—	—	—	—	—	—	5	7	12
Strongylus	—	—	—	—	—	—	—	—	—	—	—	—	65	77	142
Oxyuris	9	—	9	1	7	8	—	—	—	3	3	6	—	—	—
(*d*) Coccidia	—	—	—	—	—	—	—	—	—	—	—	—	139	81	220
(*e*) Other Parasites	4	—	4	—	2	2	6	—	6	—	—	—	555	263	818
(*f*) Unclassified	3	—	3	—	5	5	—	—	—	—	2	2	19,367	12,001	31,668
117. Appendicitis	10	6	16	4	12	16	2	—	2	1	4	5	208	11	219
118. Hernia	4	3	7	3	2	5	3	—	3	—	—	—	46	20	66

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population			Asian Officials			Asian General Population			Native General Population (including Officials)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
VI.—Diseases of the Digestive System—(*Contd.*)															
119. A.—Affections of the Anus Fistula, etc.	1	—	1	1	1	2	5	—	5	3	—	3	471	95	566
B.—Other Affections of the Intestines	—	—	—	—	—	—	—	—	—	1	3	4	847	552	1,399
Enteroptosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Constipation	13	4	17	2	22	24	304	11	315	170	235	405	25,106	20,334	45,440
120. Acute Yellow Atrophy of the Liver	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2
121. Hydatid of the Liver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
122. Cirrhosis of the Liver—															
(*a*) Alcoholic	1	—	1	—	—	—	—	—	—	—	—	—	2	—	2
(*b*) Other Forms	—	—	—	—	—	—	—	—	—	1	—	1	6	4	10
123. Biliary Calculus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
124. Other Affections of the Liver—															
Abscess	1	1	2	—	—	—	—	—	—	—	—	—	25	30	55
Hepatitis	4	—	4	3	2	5	18	—	18	8	19	27	496	177	673
Cholecystitis	4	3	7	—	2	2	5	—	5	—	4	4	—	1	1
Jaundice	1	1	2	1	—	1	2	—	2	6	10	16	94	111	205
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—	24	5	29
125. Diseases of the Pancreas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
126. Peritonitis (of Unknown Cause)	—	—	—	—	—	—	—	—	—	—	—	—	98	48	146
127. Other Affections of the Digestive System	3	1	4	—	3	3	—	—	—	3	10	13	140	74	214
VII.—Diseases of the Genito-Urinary System (Non-Venereal)															
128. Acute Nephritis	—	—	—	2	—	2	—	—	—	1	—	1	37	14	51
129. Chronic Nephritis	—	—	—	4	—	4	—	—	—	—	2	2	38	18	56
130. A.—Chyluria	—	—	—	—	—	—	—	—	—	—	—	—	3	—	3
B.—Schistosomiasis	6	1	7	1	—	1	1	—	1	—	—	—	1,557	574	2,131
131. Other Affections of the Kidneys—															
Pyelitis	3	1	4	1	3	4	—	—	—	2	17	19	91	153	244
Unclassified	2	—	2	—	2	2	2	—	2	—	1	1	112	—	112
132. Urinary Calculus	—	—	—	—	—	—	6	—	6	—	1	1	—	3	3
133. Diseases of the Bladder—															
Cystitis	3	8	11	3	14	17	13	2	15	—	—	—	266	105	371
Unclassified	3	1	4	—	1	1	—	—	—	7	13	20	1	—	1
134. Diseases of the Urethra—															
(*a*) Stricture	—	—	—	—	—	—	—	—	—	—	—	—	70	5	75
(*b*) Other	4	—	4	1	1	2	3	—	3	3	6	9	564	36	600
135. Diseases of the Prostate—															
Hypertrophy	—	—	—		—		—	—	—	—	—	—	2	—	2
Prostatitis	3	—	3	—	—	—	—	—	—	—	—	—	3	—	3
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—	21	1	22

136. Diseases (Non-Venereal) of the Genital Organs of Man—															
Unclassified	5	—	5	8	—	8	—	—	—	—	—	—	66	—	66
Epididymitis	—	—	—	1	—	1	—	—	—	1	—	1	120	—	120
Orchitis	3	—	3	—	—	—	1	—	1	1	—	1	480	—	480
Hydrocele	1	—	1	—	—	—	1	—	1	1	—	1	133	—	133
Ulcer of Penis	—	—	—	1	—	1	1	—	1	—	—	—	220	—	220
137. Cysts or other Non-Malignant Tumours of the Ovaries	—	—	—	—	—	—	—	—	—	—	—	—	—	40	40
138. Salpingitis	—	1	1	—	2	2	—	—	—	—	6	6	—	789	789
Abscess of the Pelvis	—	—	—	—	—	—	—	—	—	—	—	—	—	8	8
139. Uterine Tumours (Non-Malignant)	—	4	4	—	2	2	—	—	—	—	1	1	—	36	36
140. Uterine Hæmorrhage (Non-Puerperal)	—	—	—	—	1	1	—	—	—	—	12	12	—	45	45
141. A.—Metritis	—	—	—	—	—	—	—	—	—	—	—	—	—	28	28
B.—Other Affections of the Female Genital Organs	—	2	2	—	—	—	—	—	—	—	3	3	—	41	41
Displacement of Uterus	—	—	—	—	8	8	—	—	—	—	4	4	—	5	5
Amenorrhœa	—	5	5	—	11	11	—	2	2	—	8	8	—	113	113
Dysmenorrhœa	—	1	1	—	11	11	—	2	2	—	65	65	—	903	903
Leucorrhœa	—	—	—	—	1	1	—	—	—	—	4	4	—	111	111
142. Diseases of the Breast (Non-Puerperal)															
Mastitis	—	5	5	—	6	6	—	—	—	—	6	6	44	625	669
Abscess of Breast	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—
Unclassified	—	8	8	—	4	4	—	—	—	—	—	—	—	182	182
VIII.—Peurperal State															
143. A.—Ante-natal	—	6	6	—	120	120	—	—	—	—	45	45	—	9,764	9,764
B.—Normal Labour	—	1	1	—	2	2	—	—	—	—	14	14	—	1,806	1,806
C.—Accidents of Pregnancy—															
Abnormal Labour	—	—	—	—	1	1	—	—	—	—	3	3	—	17	17
(*a*) Abortion	—	3	3	—	3	3	—	—	—	—	21	21	—	468	468
(*b*) Ectopic Gestation	—	—	—	—	—	—	—	—	—	—	2	2	—	18	18
(*c*) Other Accidents of Pregnancy	—	1	1	—	6	6	—	—	—	—	5	5	—	262	262
144. Puerperal Hæmorrhage	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
145. Other Accidents of Parturition	—	—	—	—	—	—	—	—	—	—	—	—	—	16	16
146. Puerperal Septicæmia	—	—	—	—	—	—	—	—	—	—	1	1	—	6	6
147. Phlegmasia Dolens	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
148. Puerperal Eclampsia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
149. Sequelæ of Labour	—	—	—	—	—	—	—	—	—	—	—	—	—	17	17
150. Puerperal Affections of the Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	15	15
IX.—Affections of the Skin and Cellular Tissues															
151. Gangrene	7	—	7	—	—	—	—	—	—	—	—	—	82	86	168
152. Boil	18	3	21	16	15	31	202	—	202	278	309	587	3,787	1,149	4,936
Carbuncle	8	1	9	1	—	1	—	—	—	1	—	1	222	28	250
153. Abscess	29	3	32	16	16	32	101	—	101	67	66	133	4,312	1,913	6,225
Whitlow	5	1	6	2	—	2	21	—	21	47	61	108	1,351	558	1,909
Cellulitis	11	5	16	9	1	10	44	1	45	57	59	116	5,588	1,955	7,543
Ulcers	32	2	34	16	13	29	22	—	22	408	385	793	38,300	20,049	58,349
154. A.—Tinea	25	8	33	6	8	14	56	—	56	81	88	169	782	471	1,253
B.—Scabies	—	—	—	—	—	—	91	6	97	98	122	220	11,240	6,927	18,167

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population			Asian Officials			Asian General Population			Native General Population (including Officials)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
IX.—Affections of the Skin and Cellular Tissues—(*Contd.*)															
155. Other Diseases of the Skin—															
Erythema	—	—	—	—	3	3	—	—	—	3	8	11	105	84	189
Urticaria	12	1	13	6	14	20	54	—	54	87	150	237	2,153	1,157	3,310
Eczema	10	1	11	2	6	8	87	—	87	79	115	194	1,833	1,224	3,057
Herpes (Simplex)	2	—	2	—	1	1	5	—	5	20	40	60	674	377	1,051
Psoriasis	—	1	1	—	1	1	1	—	1	7	1	8	1,513	681	2,194
Elephantiasis	—	—	—	—	—	—	—	—	—	—	—	—	141	77	218
Myiasis	—	—	—	—	—	—	5	—	5	—	—	—	524	323	847
Chigoes	—	—	—	1	1	2	—	—	—	12	2	14	1,078	548	1,626
Cutaneous Lieshmaniasis	—	—	—	—	—	—	—	—	—	2	—	2	124	7	131
Dermatitis	30	3	33	9	15	24	19	—	19	33	71	104	2,345	1,603	3,948
Unclassified	45	19	64	19	14	33	48	—	48	1	3	4	992	789	1,881
X.—Diseases of Bones and Organs of Locomotion (Other than Tuberculous)															
156. Diseases of Bones—															
Osteitis	3	—	3	1	—	1	—	—	—	1	2	3	168	56	224
Osteomyelitis	1	—	1	1	—	1	—	—	—	—	—	—	20	15	35
157. Diseases of Joints—															
Arthritis	21	21	42	8	14	22	92	1	93	27	98	116	2,205	917	3,122
Synovitis	5	3	8	3	1	4	25	—	25	8	15	23	5,271	2,271	7,542
158. Other Diseases of Bones or Organs of Locomotion	30	3	33	4	6	10	5	—	5	37	28	65	1,536	75	1,611
XI.—Malformations															
159. Malformations—															
Unclassified	—	1	1	3	—	3	—	—	—	1	—	1	2	4	6
Hydrocephalus	—	—	—	—	—	—	—	—	—	—	—	—	1	2	3
Hypospadias	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Spina Bifida	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
XII.—Diseases of Infancy															
160. Congenital Debility	—	—	—	—	—	—	—	—	—	1	6	7	211	96	307
161. Premature Birth	—	—	—	—	—	—	—	—	—	—	1	1	11	3	14
162. Other Affections of Infancy	—	—	—	8	3	11	—	—	—	—	—	—	38	59	97
Stillborn	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—
Marasmus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
163. Infant Neglect—															
(*a*) Infants, Three Months and over	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
(*b*) Infants, under Three Months	—	—	—	—	—	—	—	—	—	—	—	—	13	7	20

XIII.—Affections of Old Age																
164. Senility—																
Senile Dementia	—	—	—	—	—	—	—	—	—	—	—	—	12	—	12
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—	52	18	70
XIV.—Affections Produced by External Causes																
165. Suicide by Poisoning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
166. Corrosive Poisoning (Intentional) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
167. Suicide by Gas Poisoning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
168. Suicide by Hanging or Strangulation ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
169. Suicide by Drowning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
170. Suicide by Firearms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
171. Suicide by Jumping from a Height ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
173. Suicide by Crushing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
174. Other Suicides	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
175. Food Poisoning—	—	—	—	—	—	—	—	—	—	2	—	2	11	—	11
Botulism	—	—	—	—	—	—	—	—	—	—	—	—	111	83	194
176. Attacks of Poisonous Creatures—															
(*a*) Snake Bite	—	—	—	2	8	10	—	—	—	—	—	—	157	67	224
(*b*) Insect Bite	9	—	9	5	1	6	10	—	10	23	29	52	433	182	615
(*c*) Others	1	2	3	—	—	—	—	—	—	—	—	—	328	155	483
177. Other Accidental Poisonings	—	—	—	—	—	—	—	—	—	1	—	1	55	40	95
178. Burns (by Fire)	6	1	7	6	2	8	100	—	100	1	1	2	3,807	2,503	6,310
179. Burns (other than by Fire)	—	—	—	—	—	—	10	—	10	94	137	231	1,942	520	2,462
180. Suffocation (Accidental)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
181. Poisoning by Gas (Accidental) ..	—	—	—	—	—	—	—	—	—	—	—	—	8	—	8
182. Drowning (Accidental)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
183. Wounds (by Firearms, War Excepted)	2	—	2	—	—	—	—	—	—	—	—	—	3	1	4
184. Wounds (by Cutting or Stabbing Instruments)	13	—	13	—	—	—	5	—	5	35	26	61	9,953	3,280	13,233
185. Wounds (by Fall)	1	—	1	4	1	5	6	—	6	89	63	152	2,457	872	3,329
186. Wounds (in Mines or Quarries) ..	—	—	—	1	2	3	—	—	—	—	—	—	4	—	4
187. Wounds (by Machinery)	—	—	—	—	—	—	71	—	71	—	—	—	2,180	20	2,200
188. Wounds (Crushing, e.g. Railway Accidents, etc.)	1	—	1	—	—	—	—	—	—	—	1	1	555	16	571
189. Injuries Inflicted by Creatures, Bites, Kicks, etc.	4	2	6	1	2	3	13	—	13	10	9	19	6,914	1,220	8,134
190. Wounds Inflicted on Active Service ..	—	—	—	—	—	—	—	—	—	—	—	—	7	—	7
191. Executions of Civilians by Belligerents	—	—	—	—	—	—	—	—	—	—	—	—	19	2	21
192. A.—Over-fatigue	—	—	—	—	—	—	—	—	—	—	—	—	310	48	358
B.—Hunger or Thirst	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
193. Exposure to Cold, Frost-bite, etc. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
194. Exposure to Heat—															
Heatstroke	—	—	—	1	—	1	—	—	—	—	—	—	1	—	1
Sunstroke	1	—	1	—	—	—	—	—	—	—	—	—	11	1	12
195. Lightning Stroke	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
196. Electric Shock	—	—	—	—	—	—	—	—	—	—	—	—	10	—	10
197. Murder by Firearms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

RETURN OF DISEASES—OUT-PATIENTS—(*Contd.*)

DISEASES	European Officials			European General Population			Asian Officials			Asian General Population			Native General Population (including Officials)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
XIV.—Affections Produced by External Causes—(*Contd.*)															
198. Murder by Cutting or Stabbing Instruments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
199. Murder by other Means	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
200. Infanticide (Murder of an Infant under One Year)	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
201. A.—Dislocation	—	—	—	3	—	3	1	—	1	2	3	5	227	69	296
B.—Sprain	38	9	47	15	14	29	66	—	66	19	12	31	4,338	1,026	5,364
C.—Fracture	49	11	60	23	8	31	37	—	37	5	2	7	448	162	610
202. Other External Injuries	127	21	148	76	41	117	735	—	735	986	1,178	2,164	37,241	11,742	48,983
203. Deaths by Violence of Unknown Cause	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
XV.—Ill-Defined Diseases															
204. Sudden Death (Cause Unknown)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
205. A.—Diseases not Already Specified or Ill-defined—															
Ascites	—	—	—	—	—	—	—	—	—	—	1	1	52	26	78
Oedema	—	—	—	—	—	—	—	—	—	—	1	1	328	176	504
Asthenia	6	—	6	—	—	—	—	—	—	—	1	1	50	17	67
Shock	—	—	—	—	3	3	—	—	—	—	—	—	—	6	6
Hyperpyrexia	—	—	—	—	—	—	2	—	2	—	—	—	278	718	996
Pyrexia of unknown Origin	16	2	18	9	7	16	340	—	340	128	158	286	3,664	1,046	4,710
Others	164	27	191	105	126	231	135	—	135	6	5	11	4,062	1,318	5,380
Lumbago	—	—	—	1	—	1	—	—	—	—	—	—	721	453	1,174
Myalgia	1	—	1	—	—	—	63	—	63	2	3	5	2,397	1,924	4,321
Sciatica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
B.—Malingering	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
XVI.—Diseases, the Total of Which have not Caused Ten Deaths	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Grand Total	1,821	496	2,317	803	1,113	1,916	8,104	87	8,191	7,691	10,318	18,109	506,703	297,842	831,585

ANNUAL REPORT OF THE MEDICAL RESEARCH LABORATORY, 1948

Staff

Assistant Director of Laboratory Services	1
Pathologists	3 (1 vacancy)
Biochemist	1
Laboratory Superintendent	1
Senior Laboratory Technician	1
Laboratory Technicians	8 (2 vacancies)
Junior Laboratory Technician	1 (vacant)
Laboratory Technician (Learner) (Seconded to H.M. Forces)	1
Laboratory Assistants (Asian)	4
Laboratory Assistants (African)	72
Laboratory Assistants (Learners)	28
Laboratory Attendants	49
Clerk (K.E.C.S.)	1
Storekeeper (Asian)	1
Clerks (African)	3
Telephone Operator (African)	1

A—ADMINISTRATION

(1) Principal Changes and Leaves

Brigadier R. P. Cormack was appointed to the Laboratory as Temporary Pathologist with effect from 8th July, 1948.

Dr. E. R. N. Cooke was transferred as Pathologist to the Laboratory Division of the Medical Department as from 1st June, 1948.

Dr. Harvey, Biochemist, proceeded on vacation leave to the United Kingdom on 5th June, 1948.

Mr. R. Caldecott was appointed as a Laboratory Technician with effect from 16th August, 1948.

Mr J. St. A. M. D'Souza, Laboratory Assistant, Special Grade, proceeded on vacation leave to India on 29th March, 1948.

Mr. Cosmos Coutinho was appointed as Clerk, Grade II, with effect from 1st October, 1948.

Mr. T. M. A. Viana proceeded on vacation leave to India on 3rd November, 1948.

(2) Finance

The cost incurred on behalf of the Laboratory for the items noted was:—

	£
Staff Emoluments	15,815
Upkeep of Laboratory	3,845
Stores and Equipment, approximately (stores still coming in)	4,880
	£24,540

The Revenue, under separate headings, was approximately as follows:—

	£
Calph Lymph	4,610
Stock Vaccines	859
Fees for Laboratory Examinations	3,668
Sale of Sera (Imported)	438
	£9,575

The issues and value of some of the Laboratory products for the year are as follows:—

Items	Issues	Value on basis of published official charges	Value on basis of cost if purchased from South Africa
		£ S.	£
Calf lymph	2,787,615 doses	8,862	11,150
T.A.B. vaccine	102,165 c.c.	1,277	7,662
Plague vaccine	64,965 c.c.	325	4,641
Rabies vaccine	662 courses	165 10	1,384
	Total ..£	10,629 10	24,837

(3) Laboratory Work at Outstations

A report from Mombasa is appended. African Laboratory Assistants are also posted at the following stations:—

Station	Faeces examination	Blood Slides	Other examinations	Total
Kisumu	6,196	11,560	5,881	23,637
Kakamega	4,289	9,777	4,451	18,517
Kericho	1,655	6,605	2,882	11,142
Keruguya	4,948	8,791	1,095	14,834
Kagundo	956	1,868	635	3,459
Nakuru	2,667	6,953	4,529	14,149
Eldoret	3,261	7,059	1,511	11,831
Kitale	1,217	3,708	1,290	6,215
Nyeri	2,818	6,251	3,107	12,176
Kisii	1,421	1,613	2,827	5,861
Meru	1,717	6,124	1,851	9,692
Kiambu	1,818	3,878	3,895	9,591
Kitui	2,612	3,707	4,940	11,259
Machakos	4,357	6,727	4,950	16,034
Fort Hall	2,053	6,982	1,919	10,954
Narok	875	1,181	522	2,578
*Kajiado	—	—	—	—
I.D.H. Nairobi	98	258	3,122	3,478
I.D.H. Mombasa	111	450	6,801	7,362
Msambweni	2,442	3,130	2,890	8,462
Kilifi	798	1,710	1,888	4,396
Wesu	4,535	5,634	2,499	12,668

* There was no Laboratory Assistant at Kajiado during 1948.

ANNUAL REPORT ON THE WORKING OF THE LABORATORY ATTACHED TO THE NATIVE CIVIL HOSPITAL, MOMBASA, FOR THE YEAR 1948

Staff

During the absence of Mr. Jones on two occasions due to ill health Mr. Viana took full charge of the Laboratory. It was not found possible for him to deal with specimens for Kahn test and these were sent to the Medical Research Laboratory, Nairobi, as during one of these periods a large number of throat swabs had to be examined culturally for the presence of *C. diphtheriæ*.

During the latter part of the year one African Grade II Assistant was posted as an addition to the Laboratory staff, also an extra attendant was engaged to assist the African entrusted with the clerical work.

Mr. Viana proceeded to India on vacation leave on 3rd November, 1948.

Mr. Wilderspin was posted to Mombasa for temporary duty as from 1st November.

Accounts

Bills to the sum of Sh. 11,321/50 were submitted to private practitioners in respect of examinations carried out on their behalf. Sh. 1,043/50 of this sum was on behalf of private patients in the European Hospital.

The accounts became very much in arrears during the first half of the year, due in part to the cancellation of instructions issued at the end of last year when it was decided that the individual patients were to be held responsible for their laboratory fees. The ill health

of the Laboratory Technician was also a contributory cause, in that he was responsible at this time for the compiling of the monthly accounts. With the engagement of extra staff, a slight alteration in the method of making up the accounts and no further alterations of instructions in the billing of medical practitioners delays of the kind reported should not happen again.

General

Some dissatisfaction was expressed through various channels by private practitioners with (*a*) the service rendered by the Laboratory, (*b*) some lack of courtesy on the part of the staff, and (*c*) delay in the receipt of accounts for Laboratory fees. As a result of these complaints the Assistant Director of Laboratory Services visited Mombasa during the month of August and discussed the matter with various practitioners and the Laboratory staff, with the result that the position was made clear to the private practitioners that certain limitations to the amount and scope of the work which it was possible to undertake were unavoidable. Addition to the staff was agreed to relieve the pressure on individuals. The position regarding accounts has been discussed elsewhere.

Two outbreaks of typhoid occurred, one involving passengers from a ship from Europe necessitating a number of investigations on patients isolated in the Infectious Diseases Hospital, and the other of local origin, making the investigation of locally manufactured ice-cream imperative. The bacteriological investigation of this product was far from satisfactory owing to the difficulty of carrying out bacteriological work under the conditions existing in the Laboratory and has brought the danger of infections of this kind very much to the notice of the Health Authority, with the result that when a coasting steamer put into the port and reported that she had had a later-proven case on board she was promptly quarantined and examinations of samples of blood, urine and stools demanded on the entire ship's complement. Limitation of the availability of media and the time at the disposal of the Laboratory Technician made it impossible to deal with more than 12 people every other day and this arrangement broke down badly on account of the demands put on the Medical Research Laboratory for media. Before the investigation was completed the maximum incubation period was well past and the work discontinued.

An attempt was made to prepare plates of Bordet-Gengou medium from stock sent from the Nairobi Laboratory as several children were suspected of whooping cough. The results were disappointing as, due to the dusty conditions, a great number of the plates became contaminated before use.

It was noted that a very large number of blood counts, etc., were being carried out on patients in the Native Hospital, many of these giving normal figures. The matter was brought to the notice of the medical officer in charge of the Native Hospital, who immediately issued instructions to his staff to stop all investigations of this nature except where really necessary. This is not the first time that certain normal routine examinations of patients in the hospital have been curtailed owing to the pressure of outside work and it would seem a little unfair to the hospital for which the Laboratory was first inaugurated. The result of these various reductions in examination of routine specimens has been a slight drop in the overall number of specimens dealt with during the year as compared with previous years. The following figures compare the numbers of the various specimens dealt with this year with those of 1947.

Analysis of Examinations

	1948	1947
Blood—		
Films for malarial parasites, etc.	14,434	17,295
Films for differential count	234	284
Total white cell and differential counts	611	375
Total red cell and hæmoglobin estimation	218	249
Total red cell white cell, hæmoglobin estimation, etc.	260	455
Total white cell and hæmoglobin estimation	11	—
Hæmoglobin estimation	651	46
Widals (22 for Brucella also)	462	279
Weil Felix tests	17	8
Blood cultures	75	6
Glucose tolerance curves	27	31
Blood sugar—single specimens	13	22
Kahn tests	6,709	4,202
Blood urea estimations	139	178
Urea clearance tests	4	8
Van den Berg reaction	6	9
Blood groups	80	38
Ide tests	23	14
Blood sedimentation rates	41	2

Fæcal Examinations:—		
Ova, cysts, etc.	10,576	11,773
Occult blood	33	3
Culture	138	2
Urine Examinations:—		
Routine	5,357	6,471
Culture	102	70
Quantitive sugar estimation	14	12
Urea concentration test	2	4
Miscellaneous	4	3
Sputa for T.B., etc.	7,493	5,913
Smears, various for N. gonorrhœa	1,530	2,406
Miscellaneous smears, fluids, etc., for organisms	85	114
Throat swabs for K.L.B.	310	253
Throat swabs for streptococci	11	—
Cerebro-spinal fluid:—		
Organisms	19	30
Cell count	33	11
Kahn test	37	9
Protein	49	—
Sugar	20	—
Chlorides	27	—
Dark ground examinations	6	11
Fractional test meals	25	13
Tissues for Histological examination (sent to Nairobi)	59	56
Water samples	6	1
Water samples B typhosus	1	—
TOTAL EXAMINATIONS OF SPECIMENS EXAMINED	51,104	52,106

The following is an analysis of the value of the Laboratory work carried out on behalf of the European Hospital, Mombasa, during the year 1948.

The figures in the first column are for the total number of specimens received from the European Hospital and those in the second column relate to sums already charged to private practitioners in respect of private patients in the hospital.

		A	B
		Sh. cts.	*Sh. cts.*
Blood malarial parasites	372	1,860	—
Blood total count	33	990	360
Blood differential count	11	55	25
Blood total white cell and differential count	37	555	120
Blood total red cell and haemoglobin	7	85	30
Blood Kahn test	11 at Sh. 20	220	40
Blood Kahn test	10 at Sh. 5	50	55
Blood Widals	18	180	—
Blood Weil-Felix	1	10	—
Blood Haemoglobin estimation	2	10	—
Blood culture	1	20	20
Blood sugar single specimen	1	30	—
Blood Sedimentation rate	1	10	10
Blood group	1	6	6
Blood Van den Berg reaction	2	20	10
Stool ova and cysts	222	555	167 50
Stool occult blood	8	80	—
Stool culture	14	280	—
Urine routine	189	472 50	150
Urine culture	4	80	20
Smears organisms	9	90	—
Throat swabs culture K.L.B.	26	520	—
Throat swabs culture	3	60	—
Fractional test meals	5	250	50
Sputum T.B., etc.	20	200	20
Urea concentration test	1	10	10
Urea clearance test	1	30	—
Histological specimen	2	80	—
Total	—	6,808 50	1,043 50

General

The staff, both medical and technical, continued to be fully occupied with routine work and no research could be undertaken.

Lack of storage space and of accommodation for animals continued to be an embarrassment as the building of the new store and animal house had still not been undertaken.

Publications

Nil.

B—SECTION OF BACTERIOLOGY

Dr. Dowdeswell was in charge of the section up to 1st June when Dr. Cooke took charge.

The routine work was in charge of Mr. de Souza who was relieved by Mr. Pearson while on overseas leave, and vaccine production was done by Mr. Doust and by Mr. King while Mr. Doust was on leave.

Since Mr. Doust's return Mr. King has supervised the media section and assists Mr. Doust who has now taken over the reorganization of the calf lymph section as well as his other duties.

Routine Work

Eleven thousand two hundred and fifteen specimens were received and examined during the year; of these 4,263 were for cultural examination. A comparison of these figures with those of the past ten years is given below.

	Total specimens	*Specimens for culture*
1939	5,273	2,424
1940	4,931	3,019
1941	13,819	4,125
1942	16,409	2,953
1943	14,074	2,498
1944	12,077	3,260
1945	11,415	2,485
1946	16,139	3,230
1947	12,931	3,050
1948	11,215	4,263

Some results of examination of these specimens:—

Sputum and cold pus for tubercle bacilli—675 positive.
Cervical, vaginal and urethral smears for gonococci—27 positive.
Urethral smears (male) for gonococci—138 positive.
Eye smears for gonococci—25 positive.
C.S.F. for meningococci—12 positive.
C.S.F. for pneumococci—40 positive.
C.S.F. for *B. influenzæ*—2 positive.
Skin snip, or nasal smear, for *B. lepræ*—11 positive
Smears for *B. anthrax*—3 positive.

Cultures

Blood Cultures.

S. typhi—12 positive.
Brucella—1 positive.

Stool Cultures.

S. typhi—38 positive.
S. paratyphi C. (Group O).—18 positive. (Of these 18 six were later identified in London by Dr. Joan Taylor as *S. oranienburg* and one as *S. bovis morbificans.*)
S. typhi-murium—2 positive.
S. enteriditis—3 positive.
Shigella flexneri—68 positive.
Shigella sonnei—46 positive.
Shigella schmitzi—24 positive.
Shigella newcastle—10 positive.
Shigella shigal—2 positive.
Atypical dysentery bacilli—16 positive.

Throat Swabs for Culture.

K.L.B.—74 positive (mitis type).

K.L.B.—1 positive (gravis type).

Other Examinations.

Fertility tests—56.

Widal and Weil-Felix tests—2,587.

Water examinations—80.

Mineral water—20 examined.

Milk—665 examined.

Tinned foods—15 examined.

Vaccines and Suspensions.

Autogenous vaccines—56 prepared.

Stock vaccines (streptococcal, staphylococcal, etc.)—198 prepared.

Figures for plague, anti-rabic and T.A.B. vaccine over the past ten years are given below:—

	Vaccines Prepared and Issued 1938 to Including 1948				
	Plague Vaccine		Anti-Rabic*	T.A.B. (in doses)	
	in ml.				
	Prepared	*Issued*	*Issued in courses*	*Prepared*	*Issued*
1939	57,300	45,950	80	73,670	62,715
1940	Fig. not available	57,715	159	124,643	108,133
1941	750,000	610,000	352	208,375†	197,400
1942	760,000	764,600	405	273,435†	262,685
1943	130,000	45,550	210	252,765†	247,905
1944	190,000	68,510	309	191,845	161,500
1945	290,000	204,275	338	144,860	127,580
1946	150,000	78,385	521	115,900	114,860
1947	150,000	46,412	615	132,400	131,260
1948	120,000	64,965	662*	206,790	205,330

Suspensions: T.A.B., "H" and "O"—29 litres produced.

Desensitizing vaccines (pollens, etc.)—58 courses prepared.

Protein shock T.A.B.—2,180 ml. prepared.

Comment

Anti-rabic Vaccine.

(1) Issued vaccine included vaccine prepared at M.R.L. and some obtained from South Africa and Sudan.

(2) In previous years prepared vaccines equalled issued and there was little or none left in stock at the end of the year. Towards the end of 1948 it was possible to make more at the M.R.L. so that at the end of the year we had 236 courses of our own vaccine in stock plus 17 courses of that obtained from South Africa.

(3) †T.A.B. Army supplied as well as civil.

(4) 1946 and after alcoholized T.A.B. prepared.

Sera

Most of the sera stocked are imported from South Africa. Supplies of diphtheria anatoxin from there were discontinued during the year and PTAP and TAF imported from England instead.

The list which follows shows the amounts of some of the sera issued over the last eleven years.

	Diptheria Antitoxin 2,000 units	Diptheria Antitoxin 20,000 units	Tetanus A.T. 3,000 units	Tetanus A.T. 20,000 units
	amps.	amps.	amps.	amps.
1938	50	74	213	213
1939	36	121	259	403
1940	76	101	334	220
1941	82	50	76	230
1942	57	68	109	229
1943	115	159	244	285
1944	36	189	229	396
1945	130	128	312	538
1946	114	540	1,002	916
1947	125	368	1,064	1,379
1948	193	707	1,170	2,071

C—SECTION OF BIOCHEMISTRY

(1) Staff

The staff of the section consisted of the Biochemist, a Senior Laboratory Technician and five Africans. The Biochemist went on overseas leave on 4th June and was still absent at the end of the year.

(2) Routine Work

The following table shows the number and nature of the routine examinations carried out during the year. They were made under the general supervision of the Laboratory Technician:—

(a) Urine—	
General examination—i.e. reaction, specific gravity, albumen, sugar and deposit	3,109
Sugar, quantitative and qualitative	3
Sugar and acetone	176
Sugar and albumin	18
Albumin	11
Albumin and deposit	9
Deposit	90
Bile	101
Bile salts	1
Melanogen	4
Porphyrin	1
Spectroscopic examination	5
Acetone	9
Urobilinogen	1
Specific gravity	1
Blood	1
Chlorides	2
Quinine	3
Diastatic index	2
Total	3,547
(b) Blood—	
Urea	328
Non-protein nitrogen	5
Sugar	24
Uric acid	18
Calcium	12
Cholesterol	5
Proteins-serum	3
Van den Berg test	33
Icteric index	30
Carbon monoxide	2
Sulphonamide	1
Potassium	1
Sodium	3
Total	465
(c) Fæces—	
Occult blood	85
Bile pigments	6
Starch	1
Total	92
(d) Cerebro-spinal Fluid—	
Excess globulin	3
Protein	27
Chlorides	12
Lange gold curve	9
Sugar	1
Chlorides and protein	67
Chlorides and sugar	1
Globulin and protein	9
Globulin and gold curve	1
Protein and Sugar	1
Protein and gold curve	3
Chlorides, globulin and protein	32
Chlorides, protein and sugar	4
Globulin, protein and gold curve	68
Globulin chlorides and gold curve	1
Protein, chlorides and gold curve	1
Globulin, chlorides, protein and gold curve	5
Globulin, protein, chlorides and sugar	7
Chlorides, globulin, protein, sugar and gold curve	2
Specific gravity	2
Total	256

(e) Miscellaneous—

Ascitic fluid—protein and specific gravity	5
Abdominal fluid—protein and specific gravity	1
Ascitic fluid—specific gravity	5
Ascitic fluid—protein	1
Body fluid—specific gravity and bile	1
Fæcal concretions	1
Vomit—blood	2

(f) Physiological efficiency tests—

(i) Renal efficiency tests:	
Urea concentration tests	15
Urea clearance tests	3
Congo red test	1
(ii) Pancreatic efficiency tests:	
Glucose tolerance curves	104
Fæcal fat estimations	16
(iii) Gastric contents analyses:	
Fractional test meals	211
Single specimens	12
(iv) Basal metabolic rate estimations	43

(3) Research Work

Interest in the subject of nutrition was maintained and the results of the analyses of named samples of wheat grown in various parts of East Africa were prepared for publication. The absence of the Biochemist on overseas leave restricted investigational work, but preliminary material was collected in connexion with a study of the effects of nutrition on ageing in the African.

D—SECTION OF PATHOLOGY

Work was necessarily restricted to routine examinations throughout the year. The following were carried out:—

Histological Examinations.

Specimens, either single pieces of tissue or series of tissues, from single cases numbered 1,311. They were mostly from civilian sources in Kenya, but a few came from Somalis, the Seychelles, military laboratories and from Tanganyika.

Kahn Tests.

Sera and cerebro-spinal fluids numbered 26,082.

Blood Groups.

There was a considerable increase in the number of Africans who were sent to be grouped as donors for their friends and relations. Rhesus grouping was done in all instances except in the case of prospective donors for proved "D-positive" recipients.

Records for the first half of the year were inadvertently destroyed, but 191 were performed from June 3rd onwards.

Other Examinations.

Blood sedimentation rate	351
Friedman tests for pregnancy	685
Miscellaneous	130

Post-mortems.

Post-mortems were performed for the most part by the Assistant Director, Laboratory Services, as he is the only member of the staff entitled to draw fees in medico-legal cases; they were mainly restricted to such cases and numbered 159.

E—SECTION OF MEDICAL BIOLOGY

(a) *Fæces Examinations.*

Helminths and Protozoa	European	Asian	African	Total
Tænia	22	5	802	829
A. lumbricoides	7	23	691	721
A. duodenale	33	44	714	791
O. vermicularis	9	14	48	71
T. colubriformis	3	15	9	27
H. nana	—	7	14	21
Larvæ of S. stercolis	11	5	52	68
S. stercolis	1	2	9	12
E. histolytica (active)	12	2	30	44
E. histolytica (cysts)	8	17	59	84
E. coli	156	101	1,129	1,386
I. butschlii	50	42	366	458
G. intestinalis	73	28	103	204
C. mesnili	42	27	338	407
I. hominis	2	—	—	2
E. nana	—	—	—	—
Flagellate cysts	192	37	394	623
Charcot-Leyden crystals	101	37	111	249
H. diminuta	—	—	1	1
T. trichuria	28	28	177	233
O.S. Mansoni	10	7	140	157
Negative Stools	802	575	1,203	2,580
Total examinations	1,562	1,016	6,390	8,968

Total Stool Examinations for the Year 1948=17,426.

Urine Examinations.

Number of specimens examined	243
S. hæmatobium	32

Blood—Parasite Infections.

	European	Asian	African	Total
P. falciparium	128	78	432	638
P. falciparium crescents	3	7	29	39
P. vivax	4	2	6	12
P. malariæ	2	1	—	3
P. ovale	—	—	1	1
Mixed infections	—	—	1	1
M. bancrofti	—	—	2	2
M. perstans	—	—	15	15
T. recurrentis	1	—	22	23
Negatives	2,289	2,003	10,570	14,862
Total	2,427	2,091	11,078	15,596

Hæmatological Examinations.

	European	Asian	African	Total
Total blood counts	924	228	914	2,066
Differential counts	192	466	66	724
Hæmoglobin and R.B.C.'s	43	6	27	76
White cells counts	83	21	703	807
Hæmoglobin and W.B.C.'s	6	4	46	56
Reticulocyte counts	—	—	—	—
Hæmoglobin	1	2	96	99
Platelets counts	1	—	—	1
Price-Jones curves	—	—	—	—
Packed cell volume	—	—	—	—
Miscellaneous Examination	2	—	9	11
Total	1,252	727	1,861	3,840

Miscellaneous Examinations.

Two specimens of splenic pulp for Leishman-Donovan bodies.—Negative.

Twenty-six blood films for Leishman-Donovan bodies.—Two positive.

Four sternal punctures for Leishman-Donovan bodies.—One positive.

Two vaginal swabs for trichomonas.—One positive.

One specimen hair for ringworm.—Positive.

One specimen of gland juice for trypanosomes.—Negative.

F—CALF LYMPH SECTION

Mr. F. A. Bailey was in charge of this section assisted by a senior African assistant, J. H. Kanyi.

Total number of calves received	705
Total number of grammes of pulp collected	16,418
Average yield per calf (grammes)	23
Doses issued to:—	
Kenya	602,465
Uganda	1,228,000
Tanganyika	820,000
E.A. Command and Civil Affairs Department ...	116,950
Zanzibar	16,000
Seychelles	4,200
Total	2,787,615 doses

G—TRAINING OF AFRICANS

Mr. R. Caldecott assumed the duties of African Training on 30th October in place of Mr. Wilderspin who proceeded on temporary duty to Mombasa.

The class consisted of thirteen, one first and one second-grade on revision and eleven third- and fourth-year learners.

On 20th November a final examination was set for the fourth-year learners, of whom there were six. All passed and have since been promoted to second grade. The examination consisted of a three-hour written paper, three hours' practical and 15 minutes' oral on general routine laboratory work.

It has been decided that all future courses will be of six months instead of three months, and a new, more detailed syllabus will be compiled.

DIVISION OF INSECT-BORNE DISEASES—ANNUAL REPORT FOR 1948

The work of the Division was hampered to some extent by the absence on leave of several of the European staff; nevertheless, although our research programme had to be modified, the work done was not much less than in previous years.

The office building at Kericho is now being constructed, but houses have not been built for the two Europeans living there. This is extremely unsatisfactory, and unless the houses are built in the near future it will be necessary to terminate anti-malarial work which should be of the greatest value to the Colony.

During the year it was a pleasure to welcome two scientific workers, who have made use of facilities provided by the Division. It is hoped that eventually it will be possible to provide accommodation for other visiting scientists.

Routine Duties

The identification of insects of medical importance received from all over the Colony has continued throughout the year. Mosquito identifications have been done by Mrs. van Someren and the identification of other insects by Mr. Guggisberg, who is making a special study of the systematics of sandflies. A summary of the mosquitoes identified is given in Appendix I.

New species which have yet to be described include:—

Uranotaenia. Three species (one from Uganda and two from Kenya).
Aedes (*Aedimorphus*). Three species (one from Kenya and two from Uganda).
Aedes (*A. tricholabis*) sp. n. One from Uganda.
Aedes (*Stegomyia*) sp. n. Two from Uganda.
Culex (*Neoculex*) sp. n. Two from Uganda.
Culex (*Culiciomyia*) sp. n. One from Uganda.

In addition to the above a new species of flea (*Echidnophaga*) was found in the Kerio Valley; specimens were obtained from a warthog.

It was found necessary to expand the *Aedes ægypti* colony because of the increased number of tests with insecticides.

Colonies of *O. moubata* and *O. savignyi* are still being maintained in the laboratory and an attempt is being made to establish a colony of *O. turicata*.

Aedes Control.

These measures are still in force throughout the Colony and efforts have been made to make them more efficient. The yellow fever staff have been removed from Vanga with the exception of a dhow inspector. Aedes control was again started in Nairobi towards the end of the year. Careful inspections were carried out at Mombasa and most of the coastal towns and at Kisumu and various small townships along the railway line. Control measures were not as complete in some of these places as was desired, and a certain amount of reorganization was necessary.

Training of African Staff.

Short courses in medical entomology were given to a number of Africans during the year.

Field Investigations and Surveys Carried Out During the Year

The following surveys and investigations were carried out during the year: —

(1) Mosquito survey at Nanyuki.
(2) Snail survey at Fort Hall.
(3) Mosquito larval survey in swamp at Maragua.
(4) *S. neavei* survey at Riana, near Kisii.
(5) *S. neavei* investigation at Ngoina, near Kericho.
(6) Parasitological and entomological survey of Kerio Valley.

Mosquito Survey at Nanyuki.

An African entomological assistant has been stationed at Nanyuki to carry out a mosquito survey after reports of malaria from farmers in the vicinity. The vector position at Nanyuki is somewhat obscure, for although *A. gambiæ* and *funestus* have never been numerous, at certain times of the year *A. christyi* and *pretoriensis* are said to be abundant; females recently fed on human blood; these efforts were unsuccessful as in a few days all the eggs were destroyed by a mould.

Parasitological Survey of the Kerio Valley.

A survey was begun in this area in order to discover whether it is suitable for African settlement. In November when the area was first visited very few *A. gambiæ* or *funestus* were caught, the most prevalent anopheline being *A. coustani* var *ziemanni* which fed readily on humans. About nine miles north of Rimo a number of *Ae. simpsoni* were found breeding in wild sisal plants. As this species is a proved vector of yellow fever a number of monkeys (*Cercopithecus*) were caught in the vicinity and their sera sent for testing to the Yellow Fever Institute, Uganda. A number of fleas were obtained from a warthog shot in the Kerio Valley, one of which proved to be a new species of *Echidnophaga*. The blood of about 200 natives (El Gayo and Maraquet) from Rimo and a few villages on the hills nearby were examined for malarial parasites; four were infected with *P. falciparum*. It is hoped to continue observations throughout the year.

Research

Relapsing Fever.

Cross-immunity tests were continued with a number of strains of *S. duttoni*; the results were contradictory and this part of the work was temporarily abandoned. Transmission experiments were done with a strain of *S. turicatæ* and human and monkey lice. It was found possible to infect both varieties of lice, and in human lice metacyclic forms were seen by dark ground illumination 22 days after the first infective feed. Work on animal reservoirs was continued, but although numerous rats from infected huts were examined none were found harbouring spirochætes.

O. moubata was found in native huts at Elburgon about 8,500 feet above sea level. Two of seven batches (about 10 to a batch) were found infected. It is remarkable to find this vector at such high altitudes. This species of tick was also found in native huts near Kwale and along the coast from in the south to Likoni in the north. Mazeras and Mariakani to the north-west of Mombasa were also searched but no ticks were found. It is probable that the coast hinterland south of Mombasa is infested as far as the Tanganyika border. Of 50 batches collected from this area five were found infected.

Malaria.

The D.D.T. impregnation experiment was continued at Kericho. The natives of the control area were obstructive and the requisite number of blood slides was only obtained with difficulty.

D.D.T. Impregnation of Huts.—Third Year's Results.

The same area was treated as during 1947. There were two impregnations (March and June), and an average of 3,779 huts were treated on both ocasions. The usual epidemic transmitted by *A. gambiæ* and occurring between June and August did not occur in 1947, instead there was an outbreak earlier in the year (March to June) probably transmitted by *A. funestus*. The blood slides were taken as usual in May and August which means that the first specimens were taken towards the end of the *A. funestus* epidemic. In May, the parasite rate for the control area was 36 per cent, and for the treated area 9 per cent; by August the rates had fallen to 19.6 per cent and 5 per cent respectively. This is a very striking result and suggests that practically no malarial transmission occurred in the treated area, the few natives with parasites in their blood probably having acquired infections elsewhere. The solution used was again 5 per cent D.D.T. in power kerosene applied in a dosage of approximately 200 mgs. per square foot, both storeys of the huts being sprayed.

A. funestus adults first appeared in the experimental area in March, but none were found infected until April. The average number caught per hut was small and never exceeded two. A few *A. gambiæ* were also caught but the number was too small to be significant and none were found infected. The infectivity rate for *A. funestus* adults caught in the control area throughout the year was 2.6 per cent. Only one anopheline was caught in the treated area during 1948; this was an *A. funestus*.

Meteorological observations were continued which included the temperature of *A. gambiæ* breeding places; a number of thermohydrographic records of hut interiors were also obtained.

Onchocerciasis.

The treatment of the rivers and streams with D.D.T. in the Kakamega–Kaimosi area was completed by March. Nearly 100 rivers and streams were treated over an area of about 10,000 square miles. All *S. neavei* disappeared for several months, and then one adult was caught near the upper reaches of the Garagoli River in the Kaimosi area. A careful search was made and two small streams which had been previously overlooked were found infested with the fly. Treatment of these and other streams in the vicinity was at once begun and continued for three months. The whole area was again apparently free from the fly until towards the end of the year, when several *S. neavei* were caught near Kakamega. The streams and rivers near Kakamega were at once treated, and it is hoped that the fly has now been finally eliminated from the whole area. A close watch is being kept so that a reinfestation can be speedily detected and promptly dealt with.

An intensive search for *S. neavei* was made in the Kodera area in May, and no flies were found. It would appear that this district, which was successfully treated in 1946, has been permanently freed from the fly.

Yellow Fever.

The following sera were sent to Entebbe for the mouse protection test:—

Human sera from Langata: 57 tested, eight positive.
Cheringani monkeys: five tested, all negative.
Langata monkeys: two tested, both negative.
Langata baboons: two tested, both negative.
Taveta monkeys: 11 tested, all negative.
Coast monkeys: one tested, negative.
Gedi bush babies: five tested, one positive.

The finding of eight protective sera from the Langata Forest is of considerable interest, and is further evidence in favour of this area being a focus of jungle yellow fever. Attempts were made to trace and interrogate the natives concerned as it was thought some of them might have received prophylactic injections of yellow fever vaccine. A few of these natives were closely questioned and denied having been vaccinated. However, at the first opportunity it is hoped to investigate the matter in greater detail. Further specimens of sera from natives in this region will be sent to Entebbe for testing.

The serum of another Gedi bush baby was found to be positive for the mouse protection test. It has been found that bush babies are very sensitive to yellow fever virus and, as with the exception of colobus monkeys, which are extremely difficult to catch, they are the only animals with positive sera found in this country, an effort will be made to trap them in various forests throughout the Colony. Their sera will then be sent to the Yellow Fever Institute, Entebbe.

Trypanosomiasis.

The three strains of polymorphic trypanosomes described in last year's report are still being maintained in laboratory animals. These included strains of *T. rhodesiense* and *T. brucei.*

Testing Insecticides.

Experiments were carried out in conjunction with the Colonial Insecticide Unit, Entebbe, to test the efficacy of residual insecticides in aircraft. East African Airways very kindly co-operated and allowed pieces of impregnated materials, which included perspex, cloth and leather, to be fitted inside an aircraft. These pieces of material were removed at intervals and were tested by being put in contact with small cages of mosquitoes. It was found that the materials treated with D.D.T. were effective for a longer period than those treated with gammexane, and that cloth and perspex retained both insecticides better than leather.

Samples of paint impregnated with D.D.T. were tested during the year in the laboratory. It was found that such paints have residual insecticidal effect lasting for at least three months.

Visitors

Dr. Cluver, Director of the Union Health Department, South Africa.

Mr. S. Hamilton, Senior Sanitary Inspector, Health Department, South Africa.

Dr. B. De Meillon, Entomologist, South African Institute of Medical Research, Johannesburg, South Africa.

Publications

Heisch, R. B.—"A Parasitological Survey of Taveta." *East African Medical Journal*, 25, 78.

Heisch, R. B.—"A Survey at Garsen." *East African Medical Journal*, 25, 220.

Heisch, R. B.—"Preliminary Trial with 5 lb. D.D.T. Smoke Generators Against Mosquitoes." *East African Medical Journal*, 25, 400.

Heisch, R. B.—"Rhodesian Sleeping Sickness in Kenya Colony." *J. Trop. Med. Hyg.*, 11, 225.

van Someren, E. C. C.—"Ethiopian Gulicidæ—Some New Mosquitoes from Uganda." *Proc. R. Ent. Soc.*, London, Vol. 17, Parts 9–10.

ROUTINE IDENTIFICATIONS OF LARVÆ AND ADULTS FOR NAIROBI AND KISUMU

	Larvæ	Adults
KISUMU, 1948:—		
Anopheles coustani Lav.	28	0
Anopheles natalensis H. & H.	0	2
Anopheles funestus Giles	1	31
Anopheles marshalli Theo.	28	0
Anopheles demeilloni Ev.	132	1
Anopheles christyi N. & C.	58	0
Anopheles gambiae Giles	173	244
Anopheles maculipalpis Giles	10	0
Anopheles squamosus Theo.	3	0
Anopheles species	224	0
Uranotaemia balfouri Theo.	12	0
Aedomyia africana N.-L.	0	1
Ficalbia splendens Theo.	3	0
Taenorhynchus (C) *metallicus* Theo.	0	2
Taenorhynchus (C) *aurites* Theo.	0	1
Taenorhynchus (M) *africanus* Theo.	0	27
Taenorhynchus (M) *uniformis* Theo.	0	73
Aedes (*Mucidus*) *scatophagoides* Theo.	17	0
Aedes (*Finlaya*) *ingrami* Edw.	11	0
Aedes (*Stegomyia*) *aegypti* L.	154	2
Aedes (*Stegomyia*) *simpsoni* Theo.	6	0
Aedes (*Stegomyia*) *metallicus* Edw.	6	0
Aedes (*Stegomyia*) *apicoargenteus* group	1	0
Aedes (*Stegomyia*) *africanus* Theo.	55	0
Aedes (*Stegomyia*) *vittatus* Big	36	0
Aedes (*Banksinella*) *lineatopennis* Ludl.	54	9
Aedes Species	120	0
Aedes (*Aedimorphus*) *haworthi* Edw.	14	0
Aedes (*Aedimorphus*) *quasiunivittatus* Theo.	40	0
Aedes (*Aedimorphus*) *cumminsi* Theo.	1	1
Aedes (*Aedimorphus*) *hirsutus* Theo.	35	0
Aedes (*Aedimorphus*) *natronius* Edw.	0	1
Aedes (*Aedimorphus*) *ochraceus* Theo.	27	0
Culex (*Lutzia*) tigripes Grp. & C.	158	2
Culex (*Neoculex*) *rubinotus* Theo.	22	25
Culex (*Neoculex*) *insignis* Cart.	0	34
Culex (*Neoculex*) *albiventris* Edw.	1	0
Culex (*Neoculex*) *horridus* Edw.	4	5
Culex (*Culiciomyia*) *nebulosus* Theo.	33	0
Culex (*Mochthogenes*) *inconspicuosus* Theo.	2	0
Culex (*Culex*) *poicilipes* Theo.	3	0
Culex (*Culex*) *aurantapex* Edw.	0	5
Culex (*Culex*) *annulioris* Theo.	566	1
Culex (*Culex*) *duttoni* Theo.	71	0
Culex (*Culex*) *theileri* Theo.	7	3
Culex (*Culex*) *univittatis* Theo.	351	81
Culex (*Culex*) *simpsoni* Theo.	2	1
Culex (*Culex*) *pipiens* L.	81	17
Culex (*Culex*) *fatigans* W.	82	188
Culex (*Culex*) *trifilatus* Edw.	46	31
Culex (*Culex*) *andersoni* Edw.	3	5
Culex (*Culex*) *vansomereni* Edw.	233	4
Culex (*Culex*) *toroensis* E. & G.	30	22
Culex (*Culex*) *chorleyi* Edw.	31	1
Culex (*Culex*) *musarum* Edw.	6	0
Culex (*Culex*) *antennatus* Beck	21	16
Culex (*Culex*) *decens* Theo.	304	21
Culex species	631	1

Summary

	No. of species	Total No. of larvæ examined	Total No. of adults examined
Anopheles	9	657	278
Uranotaenia	1	12	0
Aedomyia	1	0	1
Ficalbia	1	3	0
Taeniorhynchus	4	0	103
Aedes	15	578	13
Culex	24	2,688	463
Total	55	3,937	858

	Larvæ	Adults
NAIROBI:—		
Anopheles coustani Lav.	328	1
Anopheles coustani var. *tenebrosus* Don.	0	1
Anopheles implexus Theo.	26	104
Anopheles natalensis H. & H.	77	0
Anopheles funestus Giles	46	88
Anopheles funestus var. *confusus* Ev. & L.	10	0
Anopheles rivulorum Leeson	5	0
Anopheles leesoni Ev.	2	0
Anopheles longipalpis Theo.	2	1
Anopheles marshalli Theo.	1	2
Anopheles rhodesiensis Theo.	50	12
Anopheles demeilloni Ev.	87	4
Anopheles garnhami Edw.	1,172	7
Anopheles christyi N. & G.	1,945	3
Anopheles gambiae Giles	657	525
Anopheles cinereus Theo.	141	24
Anopheles rufipes Cough.	69	0
Anopheles pretoriensis Theo.	996	1
Anopheles squamosus Theo.	205	0
Anopheles squamosus var. *entebbiensis* Ev.	4	0
Anopheles species	2,652	9
Megarhinus brevipalpis Theo.	66	5
Megarhinus lutescens group	3	0
Megarhinus species	20	0
Uranotaenia alboaodominalis Theo.	1	5
Uranotaenia bilineata Theo.	0	1
Uranotaenia balfouri Theo.	16	2
Uranotaenia chorleyi Edw.	0	8
Uranotaenia ornata var. *musarum* Edw.	0	12
Uranotaenia mashonaensis Theo.	10	69
Uranotaenia fusca Theo.	9	0
Uranotaenia species	13	15
Aedomyia furfurea End.	0	1
Ficalbia lacustris Edw.	3	0
Ficalbia pallida Edw.	0	1
Ficalbia flavopicta Edw.	0	1
Ficalbia mimomyiaformis Newst.	13	0
Ficalbia plumosa Theo.	0	2
Ficalbia mediolineata Theo.	0	1
Ficalbia species	8	0
Taeniorhynchus (*C*) *metallicus* Theo.	0	1
Taeniorhynchus (*C*) *versicolor* Edw.	0	27
Taeniorhynchus (*C*) *maculipennis* Theo.	0	26
Taeniorhynchus (*C*) *fuscopennatus* Theo.	0	2
Taeniorhynchus (*C*) *aurites* Theo.	0	11
Anopheles maculipalpis Giles.	254	0
Taeniorhynchus (*C*) *microannulatus* Theo.	0	5
Taeniorhynchus (*M*) *africanus* Theo.	0	26
Taeniorhynchus (*M*) *uniformis* Theo.	0	58
Taeniorhynchus species	0	9
Aedes (*Mucidus*) *scatophagoides* Theo.	15	2
Aedes (*Mucidus*) *mucidus* Karch.	0	1
Aedes (*Ochlerotatus*) *fryeri* Theo.	0	16
Aedes (*Finlaya*) *fulgens* Edw.	498	15
Aedes (*Finlaya*) *ingrami* Edw.	69	8
Aedes (*Stegomyia*) *aegypti* L.	799	119
Aedes (*Stegomyia*) *simpsoni* Theo.	128	215
Aedes (*Stegomyia*) *metallicus* Edw.	382	21
Aedes (*Stegomyia*) *soleatus* Edw.	736	18
Aedes (*Stegomyia*) *keniensis* V.S.	3	0
Aedes (*Stegomyia*) *bambusae* s. sp. *kenyae* V.S.	0	2
Aedes (*Stegomyia*) *africanus* Theo.	0	10
Aedes (*Stegomyia*) *vittatus* Big.	106	1
Aedes (*Aedimorphus*) *marshalli* Theo.	6	9
Aedes (*Aedimorphus*) *haworthi* Edw.	18	0
Aedes (*Aedimorphus*) *tarsalis* Newst.	0	1
Aedes (*Aedimorphus albocephatus* Theo.	112	6
Aedes (*Aedimorphus*) *tricholabis* Edw.	0	5
Aedes (*Aedimorphus*) *quasiunivittatus* Theo.	504	11
Aedes (*Aedimorphus*) *dentatus* Theo.	64	19
Aedes (*Aedimorphus*) *Cumminsi* Theo.	59	9
Aedes (*Aedimorphus*) *hirsutus* Theo.	50	0
Aedes (*Aedimorphus*) *fowleri* d'Emm.	1	0
Aedes (*Aedimorphus*) *natronius* Edw.	0	18
Aedes (*Banksinella*) *lineatopennis* Ludl.	7	0
Aedes (*Banksinella*) *circumluteolus* Theo.	0	8
Aedes (*Banksinella*) *albicosta* Edw.	0	19
Aedes (*Banksinella*) *palpalis* Newst.	0	1
Aedes (*Diceromyia*) *furcifer* Edw.	43	12

	Larvæ	Adults
Aedes (*Diceromyia*) *taylori* Edw.	—	5
Aedes (*Diceromyia*) *adersi* Edw.	10	61
Aedes (*Dunnius*) *michaelikati* V.S.	146	0
Aedes (*Skusea*) *pembaensis* Theo.	13	162
Aedes species	2,408	57
Eretmapodites chrysogaster group	95	0
Eretmapodites subsimplicipes Edw.	0	1
Eretmapodites silvestris group	50	0
Eretmapodites silvestris s. sp. *conchobius* Edw.	0	1
Eretmapodites quinquivittatus Theo.	120	4
Eretmapodites species	0	3
Culex (*Lutzia*) *tigripes* Grp. & C.	391	16
Culex (*Neoculex*) *salisburiensis* Theo.	295	19
Culex (*Neoculex*) *kingianus* Edw.	0	4
Culex (*Neoculex*) *rubinotus* Theo.	5	2
Culex (*Neoculex*) *insignis* Cart.	0	35
Culex (*Neoculex*) *wigglesworth* Edw.	0	9
Culex (*Neoculex*) *adersianus* Edw.	3	0
Culex (*Neoculex*) *horridus* Edw.	94	4
Culex (*Culiciomyia*) *nebulosus* Theo.	383	48
Culex (*Culiciomyia*) *cinereus* Theo.	0	1
Culex (*Culiciomyia*) *subaequalis* Edw.	0	2
Culex (*Mochthogenes*) *inconspicuosus* Theo.	6	0
Culex (*Culex*) *poicilipes* Theo.	8	29
Culex (*Culex*) *bitaeniorhynchus* Giles.	13	0
Culex (*Culex*) *annulioris* Theo.	1,269	179
Culex (*Culex*) *annulioris* s. sp. major Edw.	0	1
Culex (*Culex*) *sitiens* Wied.	68	480
Culex (*Culex*) *duttoni* Theo.	796	4
Culex (*Culex*) *theileri* Theo.	87	17
Culex (*Culex*) *univittatus* Theo.	673	76
Culex (*Culex*) *simpsoni* Theo.	280	2
Culex (*Culex*) *striatipes* Edw.	5	5
Culex (*Culex*) *pipiens* L.	1,165	133
Culex (*Culex*) *fatigans* W.	173	883
Culex (*Culex*) *zombaensis* Theo.	5	6
Culex (*Culex*) *mirificus* Edw.	0	6
Culex (*Culex*) *trifilatus* Edw.	207	119
Culex (*Culex*) *andersoni* Edw.	72	30
Culex (*Culex*) *vansomereni* Edw.	549	34
Culex (*Culex*) *toroensis* Edw. & G.	519	7
Culex (*Culex*) *chorleyi* Edw.	22	7
Culex (*Culex*) *musarum* Edw.	18	10
Culex (*Culex*) *antennatus* Beck	12	4
Culex (*Culex*) *quasiguiarti* Theo.	0	13
Culex (*Culex*) *decens* Theo.	224	2
Culex (*Culex*) *perfuscus* Edw.	0	1
Culex (*Culex*) *guiarti* Bl.	4	2
Culex (*Culex*) *weschei* Edw.	4	0
Culex (*Culex*) *grahami* Theo.	0	1
Culex (*Culex*) *pruina* Theo.	0	1
Culex species	2,438	215

Summary

	No. of species	Total No. of larvæ examined	Total No. of adults examined
Anopheles	21	8,729	782
Megarhinus	2	89	5
Uranoraenia	7	49	112
Aedomyia	1	0	1
Ficalbia	6	24	5
Taeniorhynchus	8	0	165
Aedes	33	6,177	831
Eretmapodites	5	265	9
Culex	40	9,788	2,407
Total	123	25,121	4,317

Appendix 3.

Ades Indices for various towns in Kenya 1941 and 1948

Station	Yearly mean	1941 Highest index for the year	Yearly mean	1948 Highest index for the year
Lamu	7·91	18·0	0·33	2·12
Mombasa (Island)	9·4 (1937)	?	0·13	0·37
Mombasa (Mainland)	18·9 (1937)	?	0·15	0·71
Kwa Jomvu	3·08	17·47	0·47	3·07
Kilifi	1·83	6·0	0·44	1·71
Malindi	3·85	7·3	0·23	1·04
Vanga	7·9	11·5	0·64*	1·56
Nairobi	5·9	5·8	0·06†	0·19
Miritini	5·33	38·8	0·56	1·33
Mazeras	6·86	54·9	0·71	2·44
Mariakani	7·82	50·4	0·15	3·79
Samburu	2·44	20·0	0·13	1·83
Kibwezi Area	12·7	28·1	0·00	0·00
Fort Ternan	2·5	9·3	0·72	5·5
Muhoroni	1·51	4·7	0·50	11·1
Kibigori	4·46	11·7	0·05	1·4
Miwani	4·12	10·8	0·51	5·0
Kibos	4·15	12·7	0·30	4·0

*For 1st two months of year.

†For last two months of year

G.P.K. 986—300—5/50.