Annual report of the Public Health Department / Zanzibar Protectorate.

Zanzibar Protectorate.

Annual Report

ON THE

Medical, Sanitary and Biological Divisions

FOR THE YEAR

1926.

ZANZIBAR:

PRINTED BY THE GOVERNMENT PRINTER.

1928.

ZANZIBAR PROTECTORATE

Annual Medical and Sanitary Report 1926.

The Model Medical report has been followed. A Map and Graphs have been included.

There are no special features from the previous reports but there is general progress in provision of Medical and Sanitary Services.

age 2. The Medical and Sanitary Services exclusive of Public Works cost 9.83% of the actual revenue of the Protectorate. 6.27% of the cases treated at Hospitals and dispensaries were of Malaria.

age 4. There were 156 cases of Elephantiasis treated against 96 in 1925.

age 6. 9 cases of Blackwater Fever with 2 deaths against 3 cases with one death in 1925.

age 8. The Economic Biologist finds that 34.4 % of the natives in certain districts are infected with Filariasis. Only 3 cases of Typhoid and 6 of Paratyphoid occurred during the year.

Smallpox

A small epidemic occurred in Zanzibar Town after it had been free for 18 months there were 58 cases with 15 deaths. The disease was probably imported from Rangoon and prompt action was taken 54.148 vaccinations were performed.

Yaws

Over 1,000 cases were treated with Bismuth Salts the results were satisfactory.

Tuberculosis

Tuberculosis

This is slightly on the increase, the opening of new dispensaries has increased the number of cases treated.

e 11. Ankylostomiasis

The Economic Biologist proposes to investigate the incidence of this disease in the present year. Carbon tetrachloride was used largely in the treatment. 98% of the populations are estimated to be infected with Trichocephalus dispar.

Vaculation

Estimated at 202.668 registration of Births and deaths is compulsory but unreliable, average death rate was 23.1 per mille against 20.6. for 1925.

ge 17. Hygiene and Sanitation

The service was strengthened by the appointment of a Sanitation Officer and a European Sanitary Inspector The mosquito control was placed under the Sanitation Officer. Paris Green was used successfully in dealing with anopheline breeding places.

ge 24. No case of Plague has occurred since 1911. Considering the disease is endemic in the neighbouring Colonies this speaks well for the Quarantine Service.

ge 31. School hygiene

There has been routine examination of the schools in the Town, over 1,000 children were medically examined, enlarged spleen and defective teeth are very common, especially among the Arabs.

ge 37. Lectures on Elementary Hygiene is part of the instruction for teachers in the schools, Dr. A.H.Spurrier gave demonstrations at the Museum.

The

Page 38. The Committee will wish to endorse the recommendations of the Deputy Director of Sanitary Services especially the provisions of an up to date destructor and a Lady Medical Officer for Maternity and Child Welfare work.

Page 43. Owing to the opening of new dispensaries and the increased popularity of western medicine 76.585 cases were treated at Hospitals and dispensaries against 48.963 in 1925.

Page 47. A dental surgeon from the Tanganyika Government spent 114 days in the protectorate.

Page 49. Recommendations

The Director of Medical and Sanitary Services gives a considerable list of requirements and the Committee will wish to endorse them especially additional provision for staff; but at present I understand retrenchment is necessary as the crops have not been good.

Laboratory and Veterinary Reports are included also reports on the Leper Settlement where Miss Philpot seems to be doing very good work, and of the Zanzibar Maternity Association which is increasing its activities. The Committee will wish to congratulate the Director of Medical and Sanitary Services and his officers on the considerable progress in public health during the year.

(Sgd) G.J.Rutherford
14.4.28.

FOLDOUT FOLDOUT

OFFICE OF THE DIRECTOR OF
MEDICAL AND SANITARY SERVICES.

Zanzibar, 9th November, 1927.

Sir,

I have the honour to submit, for the information of the British Resident and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitary condition of the Zanzibar Protectorate for the year 1926, together with the returns, etc., appended thereto.

I have also the honour to submit the Annual Report of the Veterinary Division.

I have the honour to be,

Sir,

Your obedient Servant,

J. A. TAYLOR,

Director of Medical and Sanitary Services,
Zanzibar Protectorate.

The Honourable,

The Chief Secretary to the Government,

Zanzibar Protectorate.

CONTENTS.

MEDICAL, SANITARY AND BIOLOGICAL DIVISIONS.

SECTION I.

SECTION II.

SECTION III.

SECTION IV

SECTION V.

SECTION VI.

SECTION VII.

SECTION VIII.

SECTION IX.

RETURNS.

Table I.

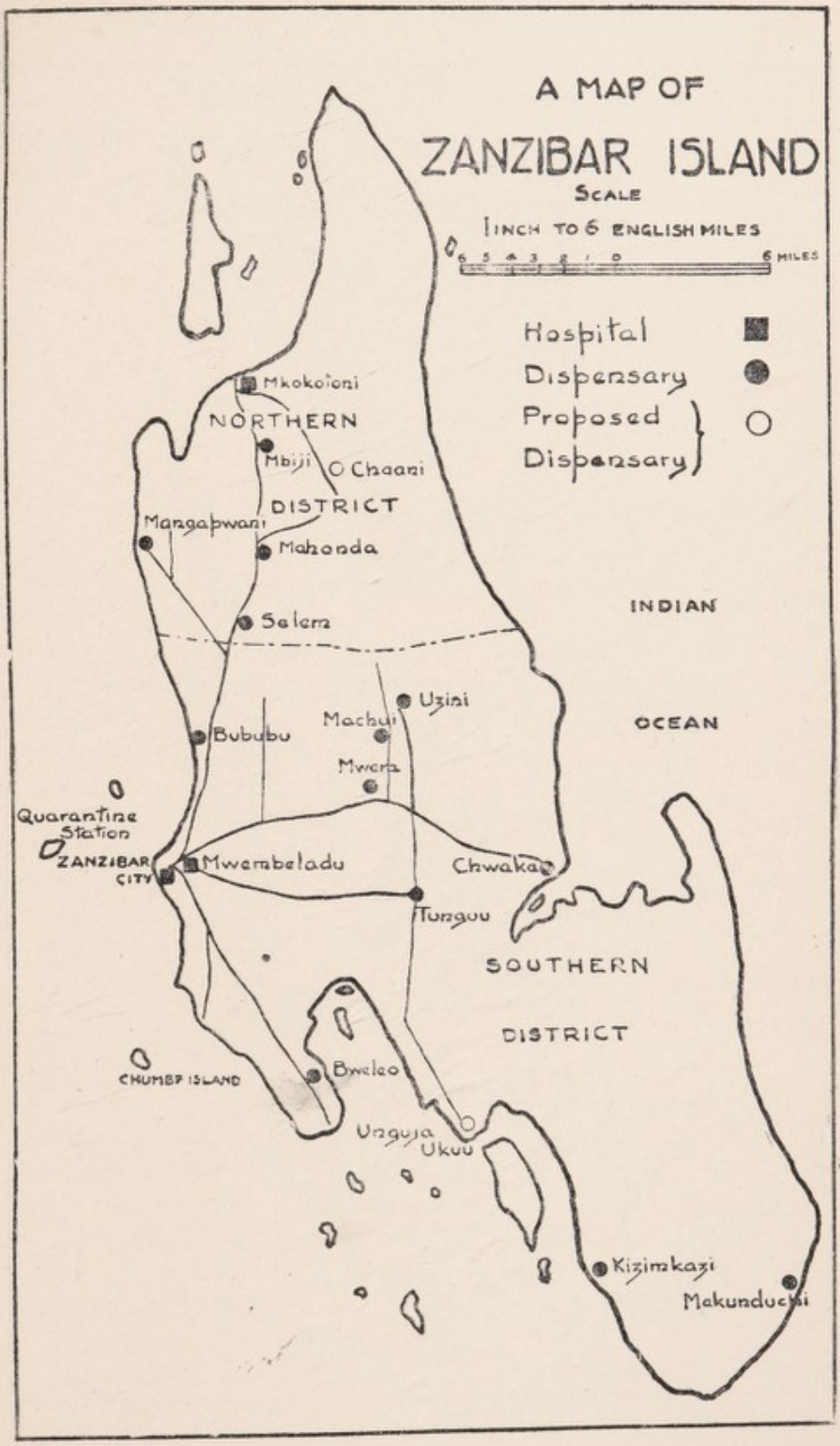
TABLE II.

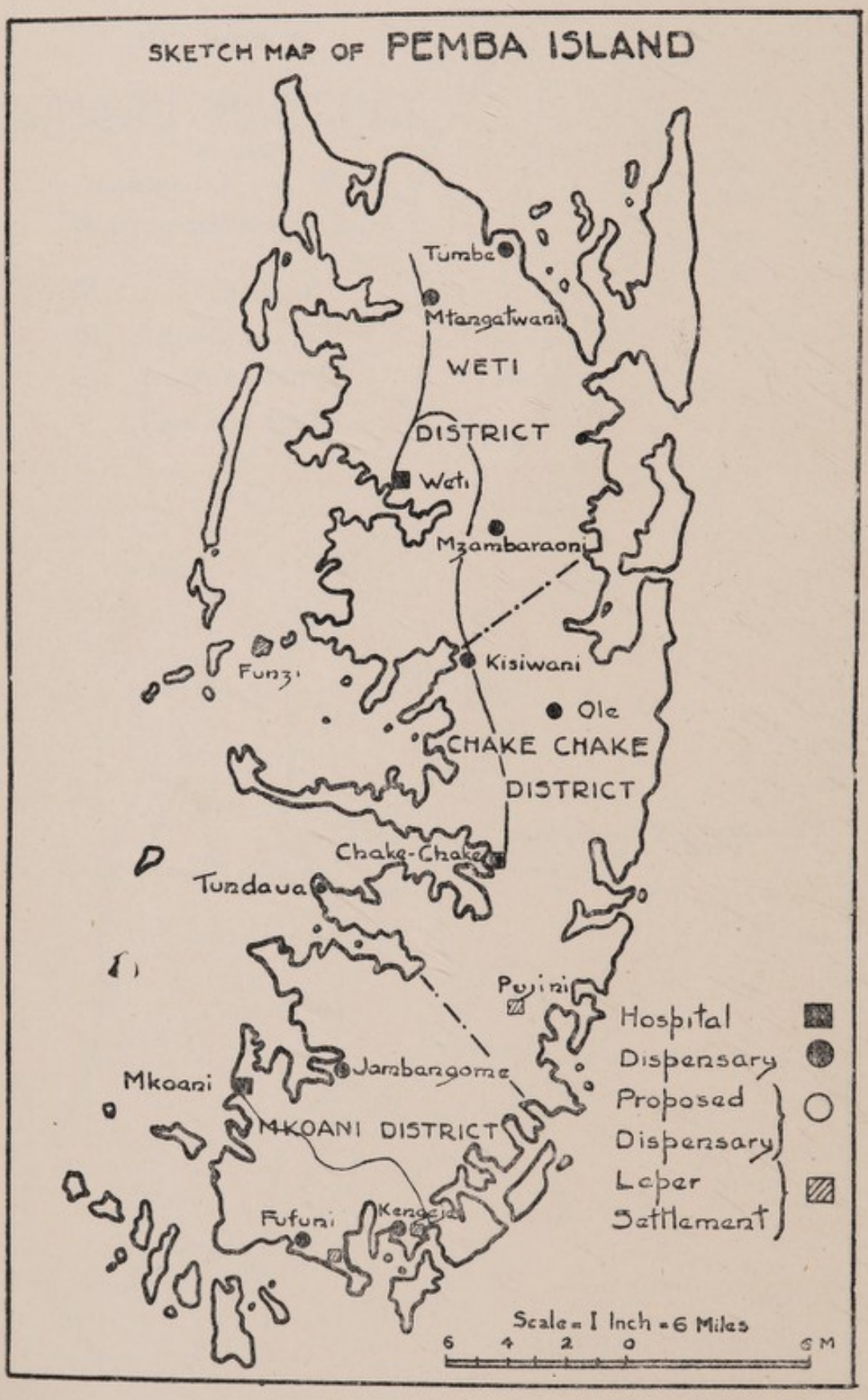
TABLE III.

TABLE IV.

TABLE V AND VI.

APPENDICES.


A MAP OF
ZANZIBAR ISLAND
SCALE
1 INCH TO 6 ENGLISH MILES
6 5 4 3 2 1 0 6 MILES
Hospital
Dispensary
Proposed Dispensary
Mkokoloni
NORTHERN
Mbiji
Chaani
DISTRICT
Mangapwani
Mahonda
Selem
INDIAN
OCEAN
Uzini
Machui
Bububu
Mwera
Quarantine Station
ZANZIBAR CITY
Mwembeladu
Chwaka
Tunguu
SOUTHERN
DISTRICT
CHUMBE ISLAND
Bweleo
Unguja Ukuu
Kizimkazi
Makunduchi


SKETCH MAP OF PEMBA ISLAND
Tumbe
Mtangatwani
WETI
DISTRICT
Weti
Mzambaraoni
Funzi
Kisiwani
Ole
CHAKE CHAKE
DISTRICT
Chake-Chake
Tundaua
Pujini
Jambangome
Mkoani
MKOANI DISTRICT
Fufuni
Kengeja
Hospital
Dispensary
Proposed Dispensary
Leper Settlement
Scale = 1 Inch = 6 Miles
6 4 2 0 6 M

Zanzibar Protectorate.

REPORT ON THE MEDICAL, SANITARY AND BIOLOGICAL DIVISIONS,

FOR THE YEAR 1926.

I. ADMINISTRATION.

(*a*) STAFF.

The establishment for 1926 as sanctioned in the estimates was as follows:—

EUROPEANS.

One Director of Medical and Sanitary Services.
One Senior Sanitation Officer.
One Resident Surgical Officer.
Nine Medical Officers.
One Economic Biologist.
One Sanitary Superintendent.
One Sanitary Inspector.
One Matron
Seven Nurses.
One Missionary Nursing Sister, Leper Settlement.

ASIATICS.

One Senior Sanitary Inspector.
Nine Sub-Assistant Surgeons.
Seven Dispensers.
Thirty-one Sanitary and Mosquito Inspectors.
One Chief Clerk.
Eleven Clerks.
One Senior Laboratory Assistant.
One Engineer Foreman.

NATIVES.

One Dispenser.
Twenty-six Apprentice Dispensers.
Hospital and Dispensary Attendants.
Infectious Diseases Hospital Attendants.
Vaccinators.
Menial Staff.

(*b*) LEGISLATION AFFECTING PUBLIC HEALTH ENACTED DURING THE YEAR.

Public Health Decree, 1922.—Chicken-Pox, included in the Schedule of Infectious Diseases.

The Leprosy Decree, 1926.—A decree to provide for the segregation and treatment of persons affected with leprosy.

(*c*) FINANCIAL.

(*Vide* Table II for further details.)

Revenue.

		£
Hospital fees, sale of drugs, etc.	...	898
Contribution from other dependencies towards Quarantine Services	...	2,550
		£3,448

Expenditure.

		£
Personal Emoluments	...	30,801
Other Charges	...	11,758
Special Expenditure	...	981

Deducting the contribution from other dependencies towards the Maintenance of the Quarantine Service, the total Expenditure on Medical and Sanitary Services was £43,540, being 9.83 per cent of £442,942, the actual revenue of the Protectorate for the year.

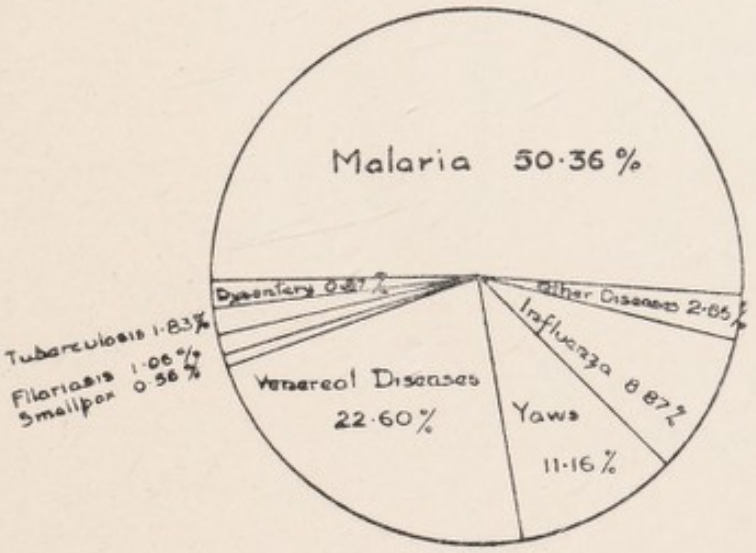
II. PUBLIC HEALTH.

(*a*) GENERAL REMARKS.

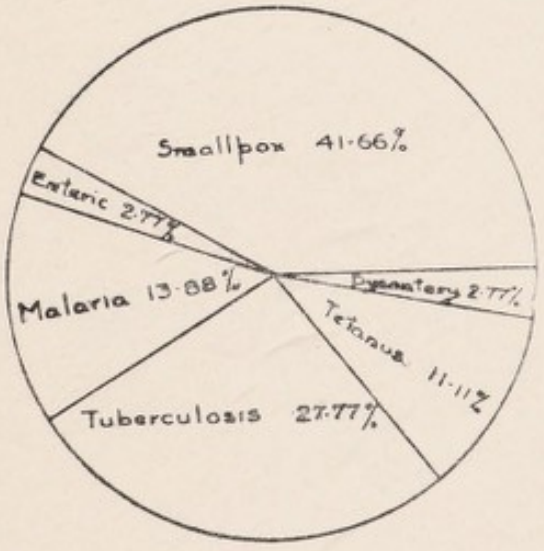
In reviewing the state of health of the Protectorate, it is necessary to divide the native inhabitants into two groups. One group consists chiefly of males of a younger generation, who live under more hygienic conditions, take an active and enthusiastic part in out-door games and seek treatment when necessary at one or other of the district dispensaries. Of those the number increases year by year, and it may be safely said that their general health is very satisfactory and that a noticeable improvement in physique has occurred in recent years. The second group is composed chiefly of males of an older generation and a large proportion of females of all ages, who, placing more confidence in spells and incantations to drive out evil spirits, will neither come for treatment themselves nor bring the younger children still under their control. This latter group, unfortunately, represents the greater portion of the native population, and their general health is naturally far from satisfactory. Much

DIAGRAM SHOWING THE PROPORTION OF THE DIFFERENT EPIDEMIC ENDEMIC AND INFECTIOUS DISEASES (WITH DEATHS) UNDER EACH GROUP TREATED AT HOSPITALS & DISPENSARIES

TOTAL CASES 9546



TOTAL DEATHS 36

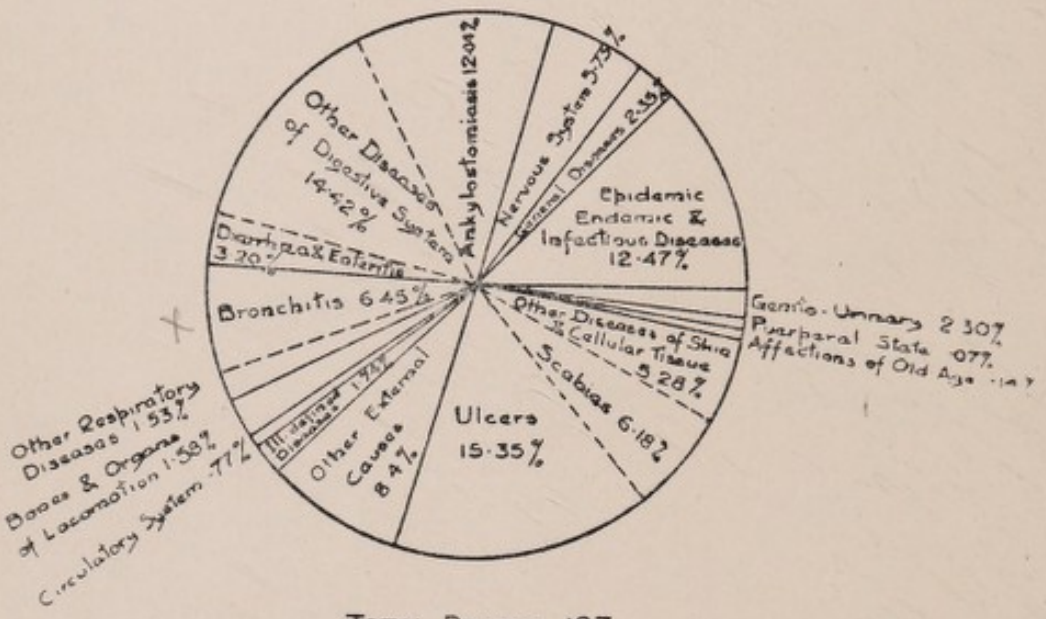


To face page 3.

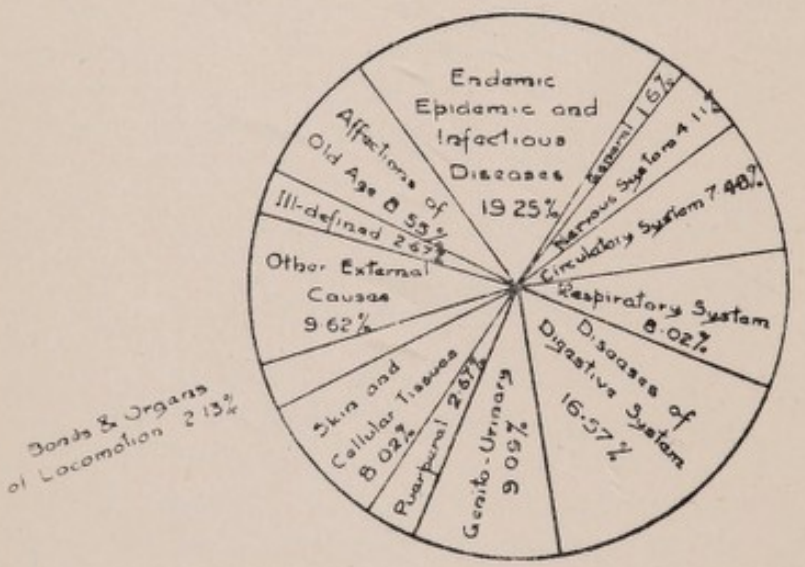
No. 1.

DIAGRAM SHOWING THE PROPORTION OF THE DIFFERENT DISEASES (WITH DEATHS) UNDER EACH GROUP TREATED AT HOSPITALS AND DISPENSARIES

TOTAL CASES 76585



TOTAL DEATHS 187



To face page 3.

No. 2.

sickness and many deaths occur among the children; and the more elderly, having suffered from Ankylostomiasis, Malaria and Filaria from early childhood without receiving any treatment, are anæmic and and debilitated, possess no stamina and easily fall a prey to any inter-current disease.

The following table showing the total number of cases in each Group of Diseases treated at all Government Hospitals and Dispensaries during the year, and the percentage of the number of cases in each Group to the total number of cases treated:—

Group.	Cases.	Percentage to total number of cases treated.
I. Epidemic, Endemic and Infectious Diseases ...	9,546	12.47
II. General Diseases not included above ...	1,798	2.35
III. Affections of the Nervous System and Organs of the Senses	4,388	5.73
IV. Affections of the Circulatory System ...	592	0.77
V. Affections of the Respiratory System ...	6,111	7.98
VI. Diseases of the Digestive System	22,717	29.66
VII. Diseases of the Genito-Urinary System (Non-Venereal)	1,762	2.30
VIII. Puerperal State	57	0.07
IX. Affections of the Skin and Cellular Tissues ...	20,535	26.81
X. Diseases of the Bones and Organs of Locomotion (other than Tuberculosis)	1,213	1.58
XIII. Affections of Old Age	101	0.14
XIV. Affections produced by External Causes ...	6,435	8.40
XV. Ill-Defined Diseases	1,335	1.74
	76,585	100.00

1. General Diseases.

General Diseases.—Of the 1,798 cases treated in this Group, Chronic Rheumatism accounts for 1,287 and Anæmia and Chlorosis for 209. With regard to rheumatism in Pemba, Dr. Young writes: "It is doubtful if true rheumatism exists. Almost every case of rheumatic-like pains can be traced to one or other of the common diseases, more especially to Gonorrhœa". Anæmia, in the same manner, is usually the result of ankylostomiasis or malaria. Only five cases of cancer were recorded last year as compared with thirteen in 1925.

Affections of the Nervous System and Organs of the Senses.—Most of the 4,388 cases recorded in this Group are of a trivial nature, such as neuralgic pains, headache and minor affection of the eyes and ears. Conjunctivitis alone accounts for more than one-third of the total. Of serious conditions, 61 cases of Paralysis were recorded as compared with only eleven in 1925. This increase is no doubt due to the greater accessibility of the new dispensaries for such cases.

Affections of the Circulatory System.—Lymphadenitis and Lymphangitis, usually filarial in origin, account for 355 of the 592 cases in this Group. Ninety-three cases of Heart Disease (Mitral 67) were treated.

Affections of the Respiratory System.—The total number of cases in this Group treated last year was 6,111 as compared with 4,418 in 1925. The numbers of the more important diseases as compared with 1924 and 1925 were as follows:—

		1924.	1925.	1926.
Pneumonia	...	39	77	195
Pleurisy, Empyema	...	33	42	36
Bronchitis	...	2,588	3,688	4,945
Broncho-Pneumonia	...	30	78	27
Laryngitis	...	11	13	47

Diseases of the Digestive System.—These diseases, numbering 22,717, represented nearly 30 per cent of the total number of cases treated during the year. This large number is due chiefly to minor ailments, such as Constipation, Dyspepsia, Diarrhœa, Dental Caries and Sore Throat and to Ankylostomiasis (see page 10).

Of Hernia, 304 cases were recorded last year as against 184 in 1925 ond 197 in 1924.

Diseases of the Genito-Urinary System (Non-Venereal).—Many of the diseases in this Group are of filarial origin. Hydrocele and Orchitis account for 658 cases as compared with 637 in 1925 and 505 in 1924. Schistosomiasis (see page 71) accounts for 420 cases, and Nephritis for 54, as against ten and seventeen in the two previous years.

Affections of the Skin and Cellular Tissues.—The 20,535 cases in this Group represent about 26 per cent of the total cases treated during the year. Ulcers numbered 11,740 as compared with 7,116 in 1925 and 7,010 in 1924. The district dispensaries have proved of great value by bringing early treatment within reach, and comparatively few of the extensive disabling Tropical Ulcers, very common a few years ago, are now seen. Elephantiasis cases to the number of 156 were recorded last year as compared with 95 in 1925 and 83 in 1924. Of these 69 were reported from Pemba and 87 from Zanzibar Island. The increase was chiefly due to cases returned from the new district dispensaries.

Diseases of the Bones and Organs of Locomotion (other than Tuberculosis).—Most of these are the sequelæ or complications of other diseases such as Malaria and Gonorrhœa.

Affections Produced by External Causes.—Of the 6,403 cases included in this Group, 329 necessitated admission to hospital, and 18 deaths occurred. The district dispensaries are also proving of great value in providing early treatment for injuries which, however trivial in themselves, formerly often resulted in troublesome ulcers difficult to heal and causing long periods of disability.

Ill-Defined Diseases.—This Group consists almost wholly of cases of General Debility and Undefined Fever. The former are, as a rule, the results of Ankylostomiasis and Malaria. Undefined Fever no doubt includes many cases of Malaria and also many cases of Influenza, of which there was an epidemic of a mild type last year.

2. Communicable Diseases.

(a) *Mosquito or Insect Borne.*

Malaria.—The total number of cases treated during the year was 4,808 as compared with 3,321 in 1925 and 3,004 in 1924. Of last year's cases, 2,584 were returned with the type undefined, the remaining 1,616 being diagnosed microscopically or clinically as follows:—

Benign Tertian	... 731	or	45.23%
Quartian	... 23	,,	1.42%
Sub-Tertian	... 863	,,	53.34%

The following table shows the number of cases of Malaria treated at each station during 1924, 1925 and 1926.

Stations.	Cases treated.		
Zanzibar Island.	1924.	1925.	1926.
Zanzibar ...	1,340	1,170	1,985
Selem ...	84	126	87
Mkokotoni ...	266	198	129
Mwera ...	28	130	149
Chwaka ...	73	10	97
Mbiji ...	46	...	158
Machui ...	84	142	209
Mahonda ...	16	108	192
Mangapwani ...	...	62	65
Kizimkazi ...	...	36	115
Bweleo ...	...	...	6
Tunguu ...	...	...	6

Pemba Island.				
Weti	...	256	268	305
Chake Chake	...	553	707	453
Mkoani	...	253	310	414
Kengeja	...	...	45	91
Mtangatwani	...	...	...	41
Jambangome	...	...	9	99
Tumbe	...	...	...	65
Fufuni	...	...	...	46
Tundauwa	...	...	...	40
Stabuli	...	...	...	32
Mzambaraoni	...	...	...	13
Ole	...	...	...	11
		3,004	3,321	4,808

That the increased number of cases of Malaria is due to expansion of medical work and not to an increased prevalence of the disease throughout the Protectorate is shown by the following comparison:—

		1924.	1925.	1926.
Percentage of cases of Malaria to all cases treated	...	7.46	6.75	6.27

The increase in the number of cases treated in Zanzibar Town is largely due to the opening of a dispensary in the native quarter of the town.

Of last year's cases, 450 were admitted to hospital and five terminated fatally as against 358 admissions with nine deaths in 1925 and 263 admissions with four deaths in 1924. In Zanzibar Town 216 deaths were returned as due to malaria as compared with 226 in the previous year and 155 in 1924. These figures are, however, of little value for the purposes of comparison. Most of the deaths returned are among natives who have received no treatment and of whom it is necessary to diagnose the cause of death from information supplied by relatives. That they had previously and recently suffered from attacks of fever can be ascertained, but that malaria was the actual cause of death is very doubtful. Considerable progress has been made, both last and in previous years, in anti-malarial work on the outskirts of the town, and all investigations indicate that if complete and accurate figures could be obtained for comparison some definite improvement both in case incidence and mortality rates would be shown. The largest number of cases occurred during January, June, July and December, all of which months were preceded by heavy rainfall.

Blackwater Fever.—Nine cases with two deaths occurred as compared with three cases and one death in 1925 and four cases and two deaths in 1924.

The following is a summary of the information obtained from the records of these cases:—

Sex:—Eight males, one female.

Ages:—Recorded as 18, 25, 28, 30, 35, 43, 44, 50 and 51, but these can be taken as only approximate.

Nationality:—Goans 5, Chinese 2, Hindoos 2, Parsee 1.

Occupation:—Three were employed in Government Service, one as a clerk, one as a temporary carpenter and one as a prison warder. Of the remainder, two were cooks, one a tailor and one a baker. The two Chinese were, like several others of this nationality, engaged in the Beche-de-Mer trade; they wander about the coasts and apparently take no precautions against Malaria. The female case was the wife of a sub-assistant surgeon.

Locality:—Four contracted the disease in Pemba and five in Zanzibar.

Period of Residence:—One had been in the Protectorate only about eight months, the remainder for several years. All, however, had previously resided in malarious districts.

Previous Malaria:—All had suffered from numerous attacks of Malaria.

Previous Blackwater:—Seven of the nine cases had a definite history of previous attacks. One on four occasions, three on three, one on two and two on one occasion.

Quinine:—Some had taken quinine irregularly as a prophylactic and all in insufficient quantities for previous attacks of Malaria.

Seasonal Incidence:—Two cases occurred in January, two in February, one in March, two in June and one in September.

Cause of the Attack:—In all cases, the cause was numerous attacks of malaria inadequately treated.

Cause of Death:—In both of the fatal cases the cause of death was heart failure after the urine had cleared.

Dengue.—Only one case of Dengue was recorded, as compared with 447 cases in 1925 when a severe epidemic occurred.

Filariasis.—The returns show 102 cases under this head. This number, however, gives little indication of the widespread nature or serious and far-reaching effects ascribed by the medical staff to this disease. Dr. Young, in his report for Weti, Pemba, writes with regard to Filariasis: "This is the most important mosquito-borne disease among Africans. Filarial conditions, such as Hernia, Hydrocele, Elephantiasis and Deep Abscess, have provided 30 per cent of the operations at the Hospital and 50 per cent of the major operations. Of the in-patient admissions to the Hospital 30 per cent of the whole have been for conditions of apparently Filarial causation.

The almost complete absence of any other form of Hernia than the inguinal variety is one of the reasons for supposing that Hernia is rightfully regarded here as the result of Filarial Lymphatic and Venous Varicocele."

The investigations of the Economic Biologist, Dr. Mansfield Aders, have shown that of 1,300 *C. fatigans* collected from various houses in Zanzibar Town more than 20 per cent had proboscis infection of *Mf. bancrofti*. Dr. Aders has also shown that the infection rate for 595 natives residing in various districts, with different topographical features, of Zanzibar Island was 34.4 per cent.

Already mentioned 1925 p. 73

(*b*) *Infectious Diseases.*

The following table shows the number of cases with deaths of the more important infectious diseases treated during 1926 and the previous two years:—

	1924.		1925.		1926.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Enteric Group	...	...	3	...	8	1
Small-pox	10	1	3	...	53	15
Wooping Cough	7	...	167	...	52	1
Influenza	138	4	359	...	847	...
Mumps	3	...	19	...	17	...
Dysentery	19	1	74	3	93	1
Leprosy	41	...	14	...	37	...
Chicken-pox	9	...	5	...	32	...
Yaws	429	...	492	1	1,066	...
Tetanus	1	1	8	2	9	4
Tuberculosis	132	10	130	8	175	9
Syphilis	239	...	250	...	383	...
Soft Chancre	82	...	178	...	356	...
Gonorrhœa	944	2	989	...	1,419	...

including complications.

Enteric Fever.—Three of the cases were Typhoid Fever and five Paratyphoid B., the fatal case occurring among the latter. Four of the patients were Europeans; one non-official, who probably contracted the disease (Typhoid) outside the Protectorate; and three officials, all cases of Paratyphoid, one of whom contracted the disease in Pemba and two in Zanzibar. Of the four remaining cases one (fatal) was an African, one a Parsee and one a Goan, all in Government Service, and one Hindoo.

Small-pox.—After the Protectorate had been free from Small-pox for eighteen months, two cases were discovered in the native quarter of Zanzibar Town on September 18th.

Fifteen cases occurred in the town or suburbs, the last on October 8th, but up to the end of the year isolated cases were still occurring in various villages.

In all, 53 cases with 15 deaths were recorded as compared with three cases and no deaths in the previous year and ten cases with one death in 1924. Last year's figure includes one case removed

from a Bombay steamer in the month of June. Of the remaining 52 cases, seven occurred in September, 19 in October, 13 in November and 13 in December, including three on the last day of the year. Two of the patients developed the disease in Pemba immediately after arrival from Zanzibar, but fortunately the early detection, and prompt measures taken, prevented the spread of the disease in that island. The origin of the outbreak could not be ascertained with certainty, but at least three of the September patients had during the previous week been employed unloading or had handled rice from a Rangoon steamer. During the year 59,148 vaccinations were performed.

Influenza.—An epidemic of a mild type occurred last year, which reached its height during June and July. In all 847 cases were treated, but the symptoms were so slight that only 17 patients were admitted to hospital and no deaths occurred among these. On the other hand, five deaths were registered as due to Influenza by private medical practitioners, and the Sub-Assistant Surgeon, who investigates all deaths in the town not so registered, recorded 35 deaths from the same cause. An increased number of deaths were also recorded from respiratory diseases and a considerable number from indefinite causes, such as fever and rheumatic pains. It therefore seems probable that this mild epidemic of Influenza, of little consequence in itself, was the contributing cause of a large number of deaths among a population whose constitution has been undermined by Ankylostomiasis, Filaria and Venereal Disease.

Dysentery.—Of the 93 cases treated last year, 24 were diagnosed as Amœbic and 17 as Bacillary Dysentery. In Zanzibar Town one death was returned as due to Amœbic Dysentery and 65 to Dysentery of undefined type. It is thought that many of latter were not caused by true Dysentery but by other conditions, more especially intestinal tuberculosis.

Leprosy.—See Appendix II (page 76).

Yaws.—Of the 1,066 cases treated last year, 828 were returned from Pemba and 238 from Zanzibar Island. The large increase, as compared with previous years, is due chiefly to cases treated at the new districts dispensaries and the satisfactory results obtained by Sodium Potassium Bismuth Tartrate, which induces sufferers from this disease to seek treatment in large numbers.

Tuberculosis.—Of the 175 cases treated last year, three were tuberculosis of bones and 172 pulmonary, as compared with 132 pulmonary in 1924 and 130 in 1925. Some of the increase is due to cases returned from new dispensaries, but the number of cases treated in Zanzibar Town has also increased.

The number of deaths in Zanzibar town returned as due to tuberculosis during each of the past five years was as follows:—

1922.	1923.	1924.	1925.	1926.
165	185	167	132	145

From hospital and dispensary returns and information gathered from other sources, it would appear that tuberculosis is increasing in the over-crowded and ill-ventilated bazaar and native quarters. These is no doubt that many of the deaths recorded under Pyrexia of Uncertain Origin and other headings are often in reality due to Pulmonary Tuberculosis, combined with Influenza, Malaria, Ankylostomiasis and other conditions diminishing the resistence of the individual.

Venereal Diseases.—The increased number of cases of Gonorrhœa treated, as shown by the Table (page 8), is chiefly due to the inclusion of the disease and its complications under the same heading. Many cases of Gonorrhœa, Soft Chancre and Syphilis were also treated at the new dispensaries, which accounts for the increase in the two last-named diseases.

The serious effects of Syphilis are much less evident in this Protectorate than in many localities on the mainland. This is no doubt partly due to inherited immunity, but there is also reason to believe that the greater prevalence of Yaws in the Protectorate is a contributing cause. It would appear that the relationship of Yaws to Syphilis corresponds to some extent with that of Cow-pox to Small-pox, and investigations with regard to this and to what extent immunity persists after treatment of Yaws by Bismuth might prove of a great value.

(c) *Helminthic Diseases.*

The following table shows the number of cases of Helminthic Disease treated last year as compared with the two previous years:—

	1924.	1925.	1926.
Ankylostomiasis ...	3172	3747	9222
Filariasis ...	185	109	102
Schistosomiasis ...	114	138	420
Ascariasis ...	32	30	17
Tæniasis ...	...	5	18

Ankylostomiasis.—The opening of the new district dispensaries has enabled a much larger number to receive treatment for th disease, which, so far as it has been possible to carry out investigations, apparently affects the whole native population. Of the cases treated last year, 4,503 were returned from Pemba and 4,719 from Zanzibar Island. In all 174 were admitted to hospital and 14 terminated fatally. In Zanzibar Town 23 deaths were registered as due to ankylostomiasis. The disease may cause little disability for many years, but becomes of serious importance when combined with other

diseases, especially as age advances, and is undoubtedly the direct or indirect cause of a much larger number of deaths than the returns indicate.

In the interests of economy, Carbon Tetrachloride is the drug chiefly used in treatment, and, on the whole, gives satisfactory results, but most of the Medical Officers prefer Oil of Chenopodium when available. The Economic Biologist proposes to make investigations with regard to Ankylostomiasis during the coming year. When these are completed it is hoped that it will be possible to commence an intensive campaign against this disease, which, by lowering vitality and sapping energy, not only adversely affects the vital statistics but in numerous other ways is of far-reaching economic importance.

Schistosomiasis.—The increase in the number of cases treated last year is of considerable significance.

In previous years the incidence of this disease was chiefly among natives who had resided for varying periods on the mainland, and although the existence of endemic centres, especially in Pemba, was suspected, these were not thought to be numerous, and such investigations as could be carried out failed to locate them. The opening of new district dispensaries throughout the Protectorate has, however, made clear that the disease is much more widespread than anticipated. Almost every dispensary has reported a certain number of cases as occurring in persons who had never been outside the Protectorate, and there now appears to be no other explanation possible but that numerous centres of infection exist in both islands. Of the cases treated last year, 239 were reported from Pemba and 181 from Zanzibar Island. The Economic Biologist, on his return from leave, will also undertake special investigations with regard to this disease.

Filariasis.—Reference to this disease has already been made (page 7).

Other Helminthic Diseases.—Ascariasis especially, and Taeniasis, are much more common than the figures in the table indicate. The natives consider these of little importance, but a large number recorded in the returns under Ankylostomiasis and other diseases receive concurrent treatment. It is estimated that 98 per cent of the population are infected with Trichocephalus dispar.

(*b*) VITAL STATISTICS.

(1) General Native Population (Arabs and Africans).

The last census taken in 1924 showed the native population of the Protectorate as 202,665. No exact estimate is possible for last year. Registration of births and deaths is compulsory, but the birth returns cannot be accepted as reliable. The death returns can, however, be taken as approximately correct, especially so for Zanzibar Township, where they can be checked by the burial permits issued.

From the middle of 1924, when the Census was taken, to the end of 1926, the excess of deaths over births was approximately 1,500. Immigration and emigration during the same period was as follows:—

1924	(half-year) Excess of Immigrants ...	1,914
1925	Excess of Immigrants	1,276
		3,190
1926	Excess of Emigrants	3,330
	Excess of Emigrants over Immigrants during the whole period	140

These figures do not differentiate between the different nationalities, but it is estimated that approximately 700 of the excess emigrants last year were Asiatics, and the remaining 2,630 natives. It is also thought that, if correct registration of births could have been obtained, the number during 1924 and 1925 would have slightly exceeded the deaths. Taking all factors into consideration, a rough estimate is that the native population has decreased by 1,000 since the census was taken in 1924, but that for the year 1926, considered separately, there was a decrease of 3,000 owing to the increased number of deaths and excess of emigrants. From Table III. (page 60) it will be seen that the deaths throughout the Protectorate for all races numbered 5,017 as compared with 4,573 in 1925 and 4,111 in 1924.

Based upon these figures and the estimated total population, the crude death rate per 1,000 for each of the three years was as follows:—

	1924.	1925.	1926.	
Death Rates	18.7	20.6	23.1	per 1,000

From Table III it will also be seen that the increase in the number of deaths occurred solely in Zanzibar Island, whereas in Pemba there was not only no increase but a slight decrease as compared with 1925 and a considerable decrease as compared with the previous four years.

In Zanzibar Town the deaths of Arabs and Africans numbered 1,276 in an estimated population of 28,500, representing the high death rate of 44.3 as compared with 36.7 in 1925 and 30 in 1924.

It is difficult to account satisfactorily for this greatly increased death rate. Fifteen deaths, three of which occurred in Zanzibar Town, were due to Small-pox as compared with none in the previous year, but beyond this the only other epidemic was one of Influenza during the months May-September. This epidemic (see page 9), although of a mild type, was apparently the cause of a large number of deaths among those who failed to seek treatment or observe any precautions. Investigations also appear to show that the figures recorded for Ankylostomiasis and Tuberculosis do not accurately represent the increased number of deaths due directly or indirectly to these diseases.

Further factors which have helped to increase the town death rate are the establishment of new district dispensaries, the opening of new roads and increased facilities for transport resulting in an increased number of serious cases being brought into hospital from outside the town. Unfortunately, the usual native procrastination occurs, and many of the cases reach the hospital in a moribund condition and die within a few hours of admission, but such deaths are necessarily included in the town returns.

As in previous years, the largest number of deaths occurred in the months succeeding heavy rains. The natives suffer greatly from the effects of wet and cold. Their houses, while admirably constructed to prevent the entrance of fresh air and sunshine, entirely fail to keep out heavy rain, and during the rainy season they are damp, dark and miserable, and the inhabitants contract and readily succumb to numerous complaints. During the two months, November and December 1925, 24 inches of rain fell as compared with an average of 11.5 inches for the same months in the previous ten years, and almost double the usual number of deaths occurred in January. Again in June, following heavy rains in April and May, an increased number of deaths occurred, also accounted for to some extent by the Influenza epidemic.

As will be seen from the hospital and dispensary returns, there has been a great expansion in medical work during the past year. It is therefore a matter of serious concern to find, making all allowance for the factors detailed above, that instead of an improvement in the vital statistics there has been a greatly increased death rate.

The returns for the month of December show a decreased mortality, and it is hoped this improvement may be maintained during the coming year. Before, however, a satisfactory position can be obtained, much remains to be done in the way of breaking down native prejudices and customs. Housing and sanitation, especially in the native quarter of the town, maternity and child welfare work, the extension of home and hospital treatment for more serious conditions, all require urgent attention.

Of the 1,103 Africans who died in Zanzibar Town last year, only 184 had been attended by qualified Medical Practitioners. Many of those who attend regularly at the Dispensaries as out-patients for minor ailments take no steps to obtain home or hospital treatment for more serious conditions, but revert to their ancient superstitions and witchcraft. This unsatisfactory state of affairs can only be remedied by education, health propaganda and a sufficient medical staff to enable patients to be visited in their own homes when really necessary.

In the past, the population of the Protectorate has been not only maintained but increased year by year owing to an excess of immigrants over emigrants. In the six years from 1920-1925 inclusive, the excess of immigrants returned was 19,256, but last year, as already

shown, an excess of 3,330 emigrants was recorded. This remarkable change, it is thought, has been brought about by the attraction, more especially to natives of mainland origin, of the improved conditions and prospects now obtaining in Tanganyika Territory. If this is correct and an excess of emigration is maintained, the question of conserving the health and lives of the indigenous population of the Protectorate becomes one of increased economic importance.

The diseases most prevalent among the general native population have already been dealt with under General Diseases (page 3) and Communicable Diseases (page 5).

(2) General European Population.

Four Europeans died in the Protectorate during the year; two in the Government and two in the U.M.C.A. Hospital. Of the former one was a baby ten days old and one a Leading Seaman removed from H.M.S. "Effingham", who died from Septic Pneumonia a few hours after admission. The two who died in the Mission Hospital had been engaged in missionary work for many years, one, more especially on the mainland, an elderly man, aged 63, who died from Dysentery contracted outside the Protectorate; the other a lady, aged 84, who first came to Zanzibar in 1877 and had continued to reside in the Protectorate after retirement from active work in 1902.

The total number of non-official Europeans treated at Government Hospitals and Dispensaries was 221, the most important illnesses being:—

Typhoid Fever	1	Dysentery	2
Malaria	19	Tuberculosis	2
Influenza	16	Septic Pneumonia	1

Five births occurred during the year.

(3) European Officials.

During the year 222 cases of illness were recorded, and 140 of these the patients were placed off duty. The figures for 1925 were 180 and 78 respectively.

The principal causes of illness were:—

Paratyphoid B	3	Tuberculosis	1
Malaria	30	Heart Disease	1
Influenza	26	Respiratory Diseases	13
Dysentery	3	Injuries	15

Two of the cases of Paratyphoid were contracted in Zanzibar Town and one in Pemba; the source of infection was not traced.

The cases of Dysentery, due to Flexner Y, were of a mild type.

Medical Boards:—Medical Boards were held on two Officials during the year and resulted in both being permanently invalided from the service, one for Pulmonary Tuberculosis and one for Heart Disease and Neurasthenia.

Table showing the Sick, Invaliding and Death Dates of European Officials for 1924, 1925 and 1926:—

	1924.	1925.	1926.
Total number of officials resident ...	116	128	128
Average number resident ...	74	84.5	99.98
Total number on sick list ...	110	78	140
Total number of days on sick list ...	544	467	516
Average daily number on sick list ...	1.49	1.28	1.41
Percentage of sick to average number resident ...	2.00	1.51	1.40
Average number of days on sick list for each patient ...	4.95	5.99	3.69
Average sick time to each resident ...	7.85	5.52	5.16
Total number invalided ...	1.00	5.00	2.00
Percentage of invalidings to total residents ...	0.86	6.40	1.57
Total deaths ...	1.00	0.00	0.00
Percentage of deaths to total residents ...	0.86	0.00	0.00
Percentage of deaths to average number resident	1.35	0.00	0.00

Number of cases of sickness contracted away from residence. No record.

(4) Non-European Officials.

Under this heading are included all non-European officials (Asiatics and Africans) down to and including Grade IV. In all 1,537 cases of illness were recorded, for 369 of which the officials were placed off duty and 86 admitted to hospital.

The principal causes of illness were:—

Paratyphoid	3	Respiratory Diseases	271
Malaria	287	Digestive Diseases	357
Blackwater Fever	2	Skin Diseases	78
Influenza	193	External Injuries	133
Dysentery	15	Undefined Fever	122

Deaths.—During the year three deaths occurred, the causes being suicide, accidental poisoning and paratyphoid B.

Medical Boards.—Seven Medical Boards were held resulting in the permanent invaliding of six officials for Neurasthenia 2, General Debility 1, Asthma and General Debility 1, Mental Disease 1, Peripheral Neuritis 1.

Table showing the Sick, Invalidings and Death Rates of Non-European Officials for 1926:—

Total number of officials resident	574
Average number resident	497.22
Total number on sick list	569
Total number of days on sick list	3384
Average daily number on sick list	9.27
Percentage of sick to average number resident	1.15
Average number of days on sick list for each patient ...	5.95
Average sick time to each resident	6.80
Total number invalided	6.00
Percentage of invalidings to total residents	1.05
Total deaths	3.00
Percentage of deaths to total residents	0.52
Percentage of deaths to total average number resident ...	0.60

(5) Police.

The total number of non-commissioned officers and men in the Police in 1926 was 550, the average number resident in the Protectorate being 500.

Four deaths occurred during the year and thirteen of the Force were discharged as medically unfit.

Ziwani Police Lines.—The average number of the Force resident in the Ziwani Lines was 354, and 1,763 cases of illness were treated. The number admitted to hospital was 172, and among these occurred the four deaths recorded above; one from Pneumonia, one from Intestinal Obstruction, one from Cancer of the Liver and one from Hepatitis. The average daily number in hospital was 4.1.

The principal causes of illness were Malaria, Ankylostomiasis, Respiratory Diseases, Digestive Diseases and External Injuries. Although Malaria still ranks as one of the chief diseases, the incidence has been greatly reduced in recent years by the anti-malarial work carried out in the vicinity of the Lines.

The average number of women resident in the Lines was 212 and of children 115. The deaths of two women and three children occurred during the year.

III. HYGIENE AND SANITATION.

REPORT BY THE DEPUTY DIRECTOR OF SANITARY SERVICES.

(A) General Review of Work Done and Progress Made.

The Public Health Service of the Protectorate was strengthened by the appointment of a Sanitation Officer and a European Sanitary Inspector.

After the departure of the Economic Biologist, the staff engaged in suppression of mosquitoes was placed under the control of the Sanitation Officer and later in the year was merged into the Sanitary Division.

Owing to an outbreak of Small-pox, which was widely distributed throughout the Island, it was necessary to detach various members of the Sanitary Staff from their normal duties and place them on Small-pox and vaccination duties.

The sanitation of Pemba was under supervision of the Medical Officers and Sub-Assistant Surgeons, assisted by two Asiatic Sanitary Inspectors. These Medical Officers were also responsible for veterinary work, including meat inspection, control of slaughter-houses and cattle quarantine.

The work done during the year is detailed under appropriate headings in the following pages.

I. Preventive Measures.

Mosquito and Insect-Borne Diseases.

Towards the end of the year the work in connection with the suppression of Mosquitoes was transferred from the Biological to the Sanitary Division. Mosquito Inspectors now work under Sanitary Inspectors, and are responsible to them instead of being a separately organised brigade. By this means much overlapping has been done away with, and unified control should make for more efficiency.

Since the amalgamation of the Sanitary and Mosquito Staffs, a distinct step forward has been taken in Anti-Mosquito work by the inauguration of inspection of boats and lighters in the harbour. These vessels are moored in large numbers near the shore at Malindi, and, as has been mentioned in previous reports, they are prolific breeding places for both Culex and Stegomyia. Many, if not a large majority, of the adult Mosquitoes caught in the neighbourhood must orginate from them.

As the law now stands, we have no authority to deal with these vessels, except by the good will of the owners. In this connection I would like to record our appreciation of the active and sympathetic help accorded to the work by the African Wharfage Company, who have arranged that each of their lighters is cleaned for inspection once a week.

Since the use of the oil as a larvicide in lighters would be liable to make them unfit for the transport of foodstuffs, it was decided to use "Septol" (1/10,000 approximate), which has given very satisfactory results.

TABLE No. 1.

Comparative table showing collections of mosquito larvæ found in the township:—

		1924.	1925.	1926.
Anopheles	...	5	4	15
Culex	...	87	66	197
Stegomyia	...	384	469	868

TABLE No. 2.

Comparative table showing collections of mosquito larvæ found in N'gambo Districts (African Town):—

		1924.	1925.	1926.
Anopheles	...	4	9	24
Culex	...	157	12	7
Stegomyia	...	763	676	4,497

TABLE No. 3.

Analysis of breeding places of anophelines, found in the township, in relation to the months of the year:—

	Temporary pools.	Cement Drains.	Cement Tanks.	Wells.	Tins pots, etc.	Total.
January	1	...	...	...	...	1
February	2	1	...	...	...	3
March	...	...	...	1	...	1
April	3	2	3	...	...	8
May	9	2	3	...	...	8
June	1	1	1	2	...	5
July	1	...	...	...	...	1
August	...	2	...	...	...	2
September	...	1	...	...	...	1
October	1	...	...	2	...	3
November	...	...	1	...	...	1
December	...	1	...	...	...	1
					Total breeding places	39

TABLE No. 4.

The following mosquito adults were caught in the township:—

	1924.	1925.	1926.
Anopheles ...	11	182	451
Culex ...	2,483	2,737	2,342
Stegomyia ...	266	180	128

TABLE No. 5.

Adult Anophelines were found in:—

The Government Prisons	on 30 occasions.
Ziwani Police Lines	,, 24 ,,
The Parsee Temple	,, 17 ,,
Kiungani Mission School	,, 6 ,,
Private House (Mnazi Moja)	,, 4 ,,
Gulioni Customs and Hospital	,, 3 ,,
Mwembeladu Hospital	,, 1 ,,
Kikwajuni House	,, 1 ,,

TABLE No. 6.

Sullage and cesspits oiled weekly during 1926:—

January ...	1,449
February ...	1,375
March ...	1,427
April ...	1,450
May ...	1,559
June ...	1,487
July ...	1,519
August ...	1,537
September ...	1,594
October ...	1,647
November ...	1,619
December ...	1,694
Total ...	18,357

	1924.	1925.	1926.
No. of notices served	366	121	150
No. of convictions obtained	7	...	2
No. of prosecutions instituted	8	...	2

It will be seen from Table No. 3 that on five occasions Anopheline larvæ were found in cement or iron tanks. There are many such tanks in the town, particularly in mosques, and measures should be taken to mosquito-proof all such water containers.

It will be seen from Table No. 5 that Anopheles adults were caught with greatest frequency in the Ziwani, Jail and Parsee Temple area. A great deal of permanent anti-malarial work has been done in this area, and it is only during and just after the rains that the Anopheles are caught there. Much work still remains to be done, and the first measure should be a clearance of bush and scrub which would make breeding places more easily found, would allow pools to evaporate more quickly and would lessen the protection given to adult mosquitoes in their flight in search of food.

Together with clearance of bush, more drainage is required, particularly in the area between Kilimani Hill and the sea.

It should be noted that "Anopheles" refers to Anopheles costalis, "Culex" to C. fatigans and "Stegomyia" to Aedes argenteus.

As before, Culex is the most frequently found mosquito in the town, while the "Catch" of larvæ shows a preponderance of Stegomyia. This is due to the fact that the usual breeding places of Stegomyia are more accessible and more easily examined. Culex, breeding in cesspits, sullage pits and more particularly in choked or unevenly graded drains, is assured comfortable and protected breeding places until an efficient drainage system is laid in the town.

As 20 per cent of Culex fatigans in the town are infected with Microfilaræ (*vide* Economic Biologist's report for 1925), the prevalence of filariasis is not to be wondered at.

It is found in practice that oiling of cesspits is not always satisfactory, as, when the surface of the water in the pit is broken by floating solid matter, the film does not spread well and, having been spread, may be pushed back by a rush of water coming into the pit. Mosquito-proof covers and efficient traps would appear to be the best way of dealing with such Culex nurseries.

Anti-malarial work.—The most important anti-malarial works carried out during the year were the canalising of the Saateni stream and levelling and grading of the Ziwani Swamp. The former work consists of a large earth canal which, though broken badly during the May rains, was reconstructed and withstood the November rains well. It is to be hoped that by next rains it will be firm enough to withstand the action of the floods which it must carry.

On the sports ground a sump has been constructed to collect storm water for pumping into the creek.

Paris Green has again been used with success in dealing with temporary large Anopheline breeding places.

Land crabs have given much trouble, particularly on the reclaimed land between Kilimani Mission and the Golf Course, by burrowing into and gradually widening "weep holes" and generally undermining the concrete drains. A sample of "Cyanagas" was obtained from New York and tried as a poison. In three experiments a large number

of these pests were killed, and arrangements are being made to procure a supply of the poison for regular use.

In Pemba a considerable amount of permanent anti-malarial work was carried out at Chake Chake in the swamp between the market and European bungalows.

In Weti no permanent work was done, but regular attention to the earth drains in neighbouring swamps has proved an effective anti-malarial measure. A scheme for sullage water and swamp drainage for Weti has been drawn up and submitted, but the work is still under consideration.

Epidemic Diseases.

(*a*) *Small-pox.*—Fifty-three cases of Small-pox occurred during the year. Two of these cases occurred in Pemba and one was removed from a ship.

An outbreak started in the Native Town on September 18th. The following table shows the distribution of reported cases:—

	No. of Cases.	1st Reported.	Last Reported.
Town and Suburbs ..	15	September 18th	October 8th
Mkokotoni ..	3	,, 21st	,, 7th
Chukwani ..	17	October 5th	November 25th
Mwera ..	12	,, 9th	December 21th
Chwaka ..	3	December 31st	..
Pemba ..	2	..	..

The following table shows the number of cases of Small-pox in Zanzibar and Pemba Islands during the last five years:—

	1922		1923		1924		1925		1926	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Zanzibar ..	167	54	203	56	10	1	3	..	51	22
Pemba ..	10	..	33	4	..	..	..	..	2	..
Total ..	177	54	236	60	10	1	3	..	53	22

Forty Small-pox cases were treated during the year at the Infectious Diseases Hospital, there being fifteen deaths and nine patients remaining on December 31st. Of the patients who died, four were admitted in a moribund condition.

A considerable saving of life could be effected if a European Sister were put in charge of the hospital during epidemics; the nursing there, being done entirely by natives, is far from satisfactory.

The following table gives the particulars of Small-pox cases treated during the year at the Infectious Diseases Hospital:—

(a)	Total number of cases ...	40
	Died	15
	Discharged	16
	Remaining on 31st December, 1926 ...	9
(b)	Sex:—	
	Males	32
	Females	8
		40
(c)	Nationalities:—	
	Swahili	35
	Ismaili	2
	Arabs	2
	Hindoo	1
		40
(d)	Ages:—	
	1 to 5 years	3
	16 ,, 20 ,, ...	8
	21 ,, 30 ,, ...	19
	31 ,, 40 ,, ...	7
	41 ,, 50 ,, ...	3
		40

Owing to the fact that most of the early Small-pox cases were casual labourers doing different work each day and sleeping nowhere in particular, the task of the finding and isolation of contacts was difficult. Often patients deliberately tried to mislead the authorities as to where they come from so as to protect their, as yet, uninfected friends from isolation. However, at least some of the contacts were isolated for each case occurring in the town, and house-to-house vaccination was carried out in all neighbourhoods in which infected cases were found.

In time every house in the town was visited and the occupants vaccinated.

During the epidemic, vaccination stations were established in all outlying districts from which cases were reported. Vaccinators were also stationed at the market in the town and on all the roads leading to the town, persons unable to produce evidence of recent vaccination being vaccinated.

All vaccinations were not successful, this was at any rate partly due to people deliberately removing the lymph before it could dry.

TABLE.

The following table shows the number of vaccinations carried out during the year:—

Month	Town	Steamers	Dhows	Mkokotoni	Chwaka	Mwera	Weti	Chake Chake	Total
January ...	152	12	178	...	...	...	114	103	559
February ...	290	25	647	...	...	...	74	89	1,125
March ...	253	28	162	...	...	...	84	54	581
April ...	186	21	34	...	...	...	120	58	419
May ...	295	12	43	...	...	...	37	64	451
June ...	293	24	28	...	...	...	...	40	385
July ...	478	9	48	...	...	...	...	18	553
August ...	516	7	80	...	...	...	62	36	701
September ...	3,367	20	96	475	...	...	38	43	4,039
October ...	21,240	60	233	1,642	...	4,217	734	372	28,498
November ...	6,451	79	290	...	955	3,584	357	1,754	13,470
December ...	6,044	85	292	...	716	394	455	381	8,367
Total ...	39,565	382	2,131	2,117	1,671	8,195	2,075	3,012	59,148

Chicken-pox.—An outbreak of this disease occurred at the same time as the Small-pox outbreak. This fact has been noted during previous epidemics of Small-pox. The greatest care is taken to diagnose the disease correctly and differentiate it from Small-pox. In any case, where there is the slightest doubt as to the correct diagnosis, the patient is isolated and kept under observation. Out of a total of thirty-two cases occurring during the last three months of the year, twenty were treated at the Infectious Diseases Hospital. All these ran the typical course of Chicken-pox and none proved to to be suffering from Small-pox.

The epidemic was scattered and did not affect the various schools to a serious extent. No deaths occurred.

It is interesting to note, in connection with recent observations on the subject, that no case of Herpes Zoster was seen or reported. Labial Herpes is here a frequent concomitant of Malaria, Pneumonia and other infective fevers, but Herpes Zoster or Shingles seems unknown.

Other Epidemic Diseases.—Plague.—No cases of Plague have occurred in Zanzibar since 1911, but active measures of rat destruction are continued yearly, and a daily average of a dozen rats are examined bacteriologically for B. Pests. Quite apart from the question of plague prevention, a vigorous campaign against rats is constantly necessary, conditions being so favourable for rat reproduction, that without such a campaign the whole town would be over-run. For particulars, see Section VII, Destruction of Vermin.

Tuberculosis.—Pulmonary Tuberculosis is undoubtedly a frequent cause of illness and death, as much as 30 per cent of the total Sputa examined for bacilli proving positive. As mentioned in previous reports, every effort is made to improve the housing conditions of the people, especially with regard to ventilation. No isolation of the sick or any special treatment is undertaken.

Enteric and Dysentery.—Fly destruction is regularly undertaken, and fly breeding is prevented as much as possible by efficient scavenging (*see* Section VII).

All cases of Enteric are isolated at home or in hospital and strict instructions issued as to disposal of excreta, and the house in which the case occurred is disinfected.

The water supply is examined bacterologicaly every month with a view to discovering any possible contamination.

Three cases of Enteric and five cases of Para-Typhoid B. occurred during the year. The origin of these cases was not traced, 39 possible carriers being examined with negative results.

Amœbic Dysentery is not common, Entamœba Histolytica was found in 10 per cent of suspected cases and in 0.6 per cent of the total number of stools examined.

Bacillary Dysentery, in the true sense of the term, is also not believed to be common, although Dysentery is returned as the cause of death in 66 cases in Zanzibar town, but as the records of the Native Hospital show that no deaths occurred from Bacillary Dysentery, and cases with the acute toxæmia and collapse characteristic of this disease do not occur, one is led to the conclusion that these so-called Dysenteries are more in the nature of a Tropical Diarrhœa, or Diarrhœa due to malarial infection, or the Terminal Diarrhœa of Tuberculosis rather than true Dysentery. Practically all these are reported by the Health Office Death Inspector, who has to rely on the statements of relatives for his diagnosis.

Leprosy.—All cases of Leprosy are sent to Funzi Island Leper Settlement. Practically all cases come from the poorest section of the population and from the districts rather than the town. The patients' belongings are either disinfected or burnt. Similarly the hut is disinfected or, if very dilapidated, destroyed.

Most of the cases are in an advanced state of the disease when seen, but it is reasonable to hope, as the improved prospects of cure become known, that patients will come forward earlier and more willingly. At present there is no doubt that the disease is concealed and no efforts made to report cases.

Helminthic Disease.

(*a*) *Ankylostomiasis.*—The most prevalent infection in the Island, 77.3 per cent of suspected cases being found positive on microscopical examination.

One of the most important measures of defence against this disease is the provision of suitable latrines and privy pits with cement tops, and the work of supplying these in suitable places was continued throughout the year.

(*b*) *Schistosomiasis.*—The disease is becoming more prevalent. It is hoped that the Economic Biologist, on his return from leave, will continue his investigations into the origin of the disease in the Protectorate and the presence or absence of a snail capable of acting as Vector.

Other helminthic infections are not, with the exception of Ascariasis, common. Many natives harbour round worms, but heavy infections do not appear to occur frequently.

II. General Measures of Sanitation, Zanzibar.

(*a*) *Sewage Disposal and Drainage.*—Cesspits and cesspools continue to receive the sewage of the town with the exception of a few houses near the sea front and where the old square section Arab type of storm water drains have been tapped to receive sullage water.

Twenty-seven cesspools in houses were closed during the year and the waste water conducted into a new public drain.

Drains.

	Public.			Private.		
	1924	1925	1926	1924	1925	1926
Masonry drains—						
Linear yards ..	No record	No record	No record	No record	No record	No record
Linear yards constructed ..	342	1,400	1,546	812	1,307	982
Linear yards repaired ..	1,700	2,250	600	120	315	500
Storm water earth Drains—						
Linear yards ..	5,280	5,630	5,630	..	..	..
Linear yards cleaned and graded ..	14,560	15,910	15,910	..	..	..

The replacement of a few of the old type of square section drains by proper sewers has been very gradual during the past three years, but the improvement effected is considerable. The reduction in the number of cesspools, made possible by this important health measure, reduces potential mosquito breeding placess and the nuisance arising from the disposal of domestic liquid waste by percolation within buildings with its attendant evil odours emanating from the sewage saturated subsoil.

Cesspools and Cesspits.

	1924	1925	1926
No. of cesspools and cesspits approximately ..	5,300	5,456	5,462
No. of new cesspools and cesspits approximately ..	167	35	33
No. of cesspools and cesspits abolished ..	11	8	27
No. of cesspools and cesspits cleaned ..	404	449	281

Public Latrines.

For Males.						For Females.					
No.			No. of seats.			No.			No. of seats.		
1924	1925	1926	1924	1925	1926	1924	1925	1926	1924	1925	1926
2	2	3	10	10	13	2	2	3	6	6	8

Two of the public latrines are fitted with water flushed trough closets and one erected last year has white glazed squatting basins with independent flushing.

(*b*) *Refuse Diposal and Scavenging.*—Refuse is collected from the private dust bins and conveyed by hand carts to the destructor. The town refuse is chiefly composed of wet vegetable matter and the destructor cannot cope with it all, especially in wet weather. The least noxious refuse, e.g., road sweepings, comprising mostly leaves, waste papers and refuse from the Native part of the town is utilised for reclaiming parts of the creek which retain pools of water during the neap tides.

A larger area of the Native part of the town was scavenged during the year and is responsible for the increase shown in the following table in the quantity of refuse collected:—

	1924	1925	1926
No. of men employed to remove refuse ...	191	191	191
„ „ carts at work daily ...	46	46	53
No. of cart loads of refuse removed, daily average ...	118	151	201
„ „ „ „ „ „ burnt, „ „ ...	106	144	147·25
„ „ „ „ „ „ buried, „ „ ...	12	7	53·75
„ „ „ „ „ dust and incombustible material removed daily ...	16	20	17
No. of dust bins provided ...	437	750	2048

(*c*) *Water Supply.*—The water supply continues to be satisfactory. Considerable piling has been done to prevent contamination of the springs by surface water.

There is an increasing demand for piped water supply to premises, and private wells are being gradually closed.

Seventy-nine samples were taken during the year.

	1924	1925	1926
PIPE-BORNE WATER:—			
Source (river, lake or spring) ...	Spring	Spring	Spring
No. of linear yards	17,493	25,340	32,597
No. of standpipes along roads ...	34	46	49
No. of standpipes in compounds and houses	351	401	459
WELLS:—			
Public—			
Number	6	6	6
No. with pumps protected against surface water and mosquito-protected ...	...	...	...
Private—			
Number	89	88	83
No. with pumps protected against surface water and mosquito-protected	8	8	8

	1924	1925	1926
TANKS:—			
Public—			
No. underground	...	...	...
No. mosquito-protected and served by pumps	...	...	...
No. above ground	2	2	2
No. mosquito-protected	2	2	2
No. of 400 gallons capacity or less ...	...	...	...
No. above 400 gallons	2	2	2
Private—			
No. underground	5	5	5
No. mosquito-protected	5	5	5
No. above ground	399	405	408
No. mosquito-protected	149	155	158
No. of 400 gallons capacity or less ...	343	349	352
No. above 400 gallons	56	56	56
NATURE OF TANKS:—			
Wood	...	...	...
Iron	149	155	158
Concrete	250	255	255
BARRELS:—			
Number	2,869	2,890	2,897
No. mosquito-protected	1,148	1,169	1,169
No. unprotected	1,721	1,721	1,728

(*d*) *Offensive Trades.*—A number of the camel-driven oil mills have been removed, and before the end of June the remaining six will also have left the town.

The other offensive trades carried on within the township are:— Pottery and lime burning Storage of copra and hided. Recovery of gold and silver.

(*e*) *Clearance of Bush.*—The area of bush cleared amounted to 36,085 square yards, this is just a little more than half of the amount of bush cleared during the two previous years and is due to the long periods of dry weather experienced during the year.

(*f*) . *Sanitary Inspectors.*—With an average of only five Inspectors to deal with the scavenging and routine sanitary work, it has only been possible to cope with a small proportion of the insanitary conditions prevailing.

The routine work in connection with town cleansing takes up a great deal of the Inspectors' time; however, the amount of work which has been done is, I consider, a matter for congratulation in view of the inexperience of the totally inadequate staff.

The following table summarises the work of the Sanitary Inspector during the past three years. It is, however, impossible to show in detail the results of many of the numerous other duties of the Inspectors, which take up a great deal of their time. The increase in the number of visits to private houses is due to the inclusion of the inspections by the mosquito searchers.

A campaign against defaulters for non-compliance with sanitary notices was found necessary during the first six months of the year. This had a salutary effect, considerably lightening the work of inspectors but necessitiated may hours being spent in the courts and much time spent on repeated visits to the premises concerned.

During the year the sum of Rs. 86,194 was expended by the owners of property to abate nuisances.

	1924.	1925.	1926.
No. of Sanitary Inspectors employed ...	5	5	5
No. of Mosquito Inspectors employed ...	7	12	11
Visits to dwelling houses ...	2,817	34,12	285,703
,, hotels and bars ...	410	615	141
,, eating houses ...	698	742	1,241
,, lodging houses ...	1,036	1,110	724
,, aerated water factories ...	240	254	285
,, bake houses ...	334	330	223
,, foodstalls ...	1,262	1,300	1,420
,, cowsheds ...	1,168	1,210	802
,, godowns ...	1,209	1,256	618
,, markets ...	668	685	1,460
No. of boats and dhows inspected for mosquitoes ...	...	...	784
No. of notices served to remove insanitary conditions ...	1,984	1,822	3,096
No. of notices not complied with at end of year .	4	46	31
No. of nuisances abated ...	5,045	6,115	7,800
No. of convictions for not removing insanitary conditions ..	49	52	141
No. of premises where mosquito larvæ were found ...	556	429	5,416
No. of mosquito notices served ...	556	194	150
No. of mosquito notices not complied with at end of year ...	nil	nil	nil
No. of mosquito nuisances abated ...	556	429	5,416
No. of convictions obtained for not removing facilities for the breeding of mosquitoes...	6	nil	2
No. of houses cleaned and disinfected ...	18	2	20
No. of drains, tanks and barrels oiled ...	numerous	numerous	1,799
No. of linear yards of drain cleaned out and disinfected ...	5,813	2,215	560,740
No. of cesspits constructed ...	23	87	63
No. of W. C's installed ...	...	...	8
No. of cesspools emptied ..	381	362	218
No. of cesspools constructed ...	167	35	33
No. of cesspools covered with cement concrete covers ...	680	465	100
Ruins cleaned out ...	147	138	250
Huts demolished ...	3	5	22
No. of public latrines and urinals cleaned out daily ...	16	16	21
No. of troughs regularly cleaned out ...	4	4	4
Paupers removed ...	...	...	115
Paupers buried ...	81	146	50
Lepers sent to Pemba ...	9	14	5
Cases of infectious disease removed to Isolation Hospital ...	10	3	15

General Measures of Sanitation, Pemba.

(a) *Sewage Disposal and Drainage.*

Such drains as exist have been kept cleansed, and the flow of sullage water therefrom made to continue along earth drain extensions where necessary. Even in Government buildings sinks and cement drains are sometimes entirely lacking.

No part of the submitted programme of drainage construction has been carried out.

(b) *Refuse Disposal and Scavenging.*

The small Horsfall Incinerator and drying shed has continued to be of great use, but has been inadequate to deal with the immense amount of rubbish from the native town of Kitutia. Refuse to the total of 7,687 loads have been removed, but the main town, roads and station only, have been properly cleansed. An attempt was made to cleanse and set up as a model area for extension, as scavenging staff permitted, a part of the dirty cosmopolitan portion of Kitutia. It has been necessary, however, to work at the burning and burying of rubbish all through Kitutia in any available pits in the town. Furthermore the outlying towns of Mtemani and Kizimbani have also produced much rubbish. The maintenance of the Model Area has therefore rather lapsed.

Early in November clove pickers suddenly began to use the area above the town water supply for defæcation. Steps were immediately arranged with the Administration for policing the area until the Public Works Department had erected an extensive five-strand barbed wire fence. All bush was at the same time cleared.

(c) *Summary of Routine Work, Pemba.*

Inspections	17,436
Nuisances found	173
Notices served	110
Verbal notices	59
Notices complied with	71
Mosquito nuisances found	313
Mosquito notices served (prosecution 1) ...	193
Cesspools oiled regularly	2,832
Amount of kerosene and crude oil used ...	40 gallons.

Bush clearing and grass cutting	13 acres.
Swamps oiled regularly	4
Amount of oil used for swamps	164 gallons.
Tanks regularly oiled	137
Wells ,, ,, ...	2
Amount of oil used for tanks and wells ...	8 gallons.
Number of refuse loads removed	8,786
Dogs killed and buried	386
Number of rats killed	383
Vaccinations	5,087
Filling in Pits	52
Dhows examined	73
Eating houses inspected	12
Drains cleared and flushed	3,000 yards.
Earth drains kept clean continuously ...	3,520
Inspections at Kizimbani and Mtemani ...	100
Market inspections	400
Slaughter house inspections	300
Fitos for Funzi cut, shaped and brought in ...	3,000
Boritis cut, shaped and brought in	600
Nguzos cut, shaped and brought in	600
Mkamba moyo cut, shaped and brought in ...	150
Funzi and Nduni leper rations	700
Births registered	662
Deaths registered	662
Paupers sent to Zanzibar	14
Suspected lepers examined bacteriologically ...	39
Certified lepers sent to Funzi Leper Settlement	9

III. School Hygiene.

The work done at the Government School Clinic comprises the daily treatment of all boys reporting sick from the Government Schools, the Sir Euan Smith Madressa and the Shia Imami Ismailia Aga Khan School, together with routine general examination of all schoolboys in the town.

The diseases and injuries treated are mainly minor ones, and much good has been done by the discovery and treatment of disease in its early stages.

A very natural desire on the part of some boys to use attendance at the Clinic for very minor or imaginary complaints, or as a relaxation from the school work, has, with the co-operation of the School Authorities, been suppressed.

The following table shows the ailments treated at the daily "sick parade". The figures represent individual ailments and not attendances:—

TABLE.

Diseases.	Nos.	Diseases	Nos.
Adenitis	45	Cellulitis	4
Anæmia	5	Coryza	90
Abscess	15	Chancre, soft	3
Ankylostomiasis	14	Diarrhœa	6
Asthma (Bronch.)	1	Debility	12
Boils	67	Dyspepsia	19
Buboes	15	Fever, undefined	6
Bronchial Catarrh	193	Fever (Malaria)	217
Burns	3	Gonorrhœa	14
Contusions	214	Jiggers	89
Constipation	164	Jaundice	3
Conjunctivitis	12	Lymphangitis	1
Minor ailments	367	Laryngitis	2
Otorrhœa	3	Toothache	36
Onychia	17	Tonsillitis	27
Orchitis	11	Ulcers	215
Pyorrhœa Alveolaris	4	Urticaria	7
Pharyngitis	5	Trachoma	4
Rheumatism	9	Pleurisy	1
Ringworm	9	Whitlow	13
Sprains	74	Colic	17
Stomatitis	5	Dermatitis	7
Scabies	59	Vaccination	300

The total number of schoolboys who underwent routine medical examination during the year was 1,046, the numbers from the various schools being:—

Government Primary School	...	107
,, Elementary School	...	162
The Sir Euan Smith Madressa	...	410
Shia Imami Ismailia Aga Khan School	...	107
Mwembeladu School ...	...	40
Government Industrial School	...	37

Taking the most important defects discovered in routine examination, the percentages for the various races were as follows:—

TABLE.

	Arabs	Indians	Swahilis and others
Lack of cleanliness	22%	26%	27%
Defective teeth	31%	26%	16%
Enlarged tonsils	13%	14%	5%
Defective vision	19%	18%	15%
Enlarged spleen	31%	10%	20%
Parasitæmia	12%	9%	17%

The following table shows the defects discovered in routine examination.—

TABLE.

	Arabs.	Swahilis.	Others.	Indians.
Number examined ...	145	112	51	738
Malnutrition ...	21	15	3	114
Disease of skin ...	12	21	6	55
Lack of cleanliness ...	20	19	8	140
Vaccination required ...	30	20	11	170
Teeth ...	46	16	11	196
Nose and Throat ...	2	...	...	2
Tonsils ...	20	7	2	108
External Eye Disease ...	2	1	...	13
Vision ...	27	13	12	133
Ear Disease ...	4	...	...	9
Hearing ...	1	...	...	2
Heart and Circulation ...	3	3	1	10
Lungs ...	...	...	...	6
Rickets ...	3	...	...	11
Deformities ...	4	4	...	16
Lymphatic Glands ...	8	8	8	9
Spleen ...	45	24	9	80
Other Disease or Defect...	4	2	2	38
Parasitæmia ...	18	20	10	70

The following table shows the numbers treated as a result of routine examination:—

TABLE.

Disease.	Nos.	Disease.	Nos.
Ascaris Infection	3	Myopia	20
Adenitis	33	Malaria	118
Anæmia	10	Otorrhœa	4
Ankylostomiasis	3	Rhinitis	3
Bronchial Catarrh	6	Splenitis	158
Dermatitis	15	Tonsillitis	80
Dental Caries	50	Urticaria	3
Laryngitis	1	Vaccination	231

IV. Labour Conditions.

Industrial conditions are non-existent in Zanzibar, labour being entirely employed in agricultural and manual work, such as road-making and other Public Works, stevedoring, etc.

Far the largest amount of this labour is engaged in agricultural work and, after this, in road construction and public works.

As the demand is greater than the local supply, there is a considerable influx of labour from the mainland, which is distributed throughout the two Islands in the different plantations and public works, and a very large immigration of labour to Pemba takes place during the clove harvest.

All labourers are inspected on board ship on arrival to exclude infectious disease, and such as require it are vaccinated as a regular routine measure of the Port Health Service.

These large drafts of labour find lodgings for themselves in the most insanitary parts of the town until they obtain work on various plantations, where they find accommodation in different native huts and temporary erections.

With the present staff available for Public Health work it is impossible to exercise any supervision over these labourers, scattered as they are throughout the plantations on both Islands. Moreover, as they migrate from one plantation to another in accordance with the demands for pickers, or at their own whim, and as the picking season is of a short duration, it would be very difficult to supervise and insist on adequate housing and latrine accommodation and other requirements of hygiene, such as can be demanded where large gangs of labourers are permanently employed. But, from cursory observation, it cannot be denied that the housing conditions of these labourers are entirely unsatisfactory.

V. Housing and Town Planning.

With such close settlement and narrow streets, no real improvement can be made in a large proportion of the housing until the overcrowding of the land with buildings is reduced.

Considerable effort has been concentrated on an endeavour to secure better lighting and ventilation, but we have to admit that we are entirely unsupported in our demands by specific legal provisions, and numerous building proposals are concurred with knowing full well that they are going to bring into existence many of the features we strive day by day to remedy. The rapid development of native residential areas is responsible for the increase in the number of native huts.

	1924.	1925.	1926.
Total number of houses (Zanzibar Township)	3,307	3,330	3,351
Number occupied by Europeans (Zanzibar Township)	137	135	136
Number occupied by Europeans and Asiatics	3,229	3,195	3,212
Number of Huts	7,530	7,862	8,112

Sanitary supervision is exercised over the building of houses in main towns.

VI. Food in Relation to Health and Disease.

(a) *Inspection and Control.*

All meat exposed for sale in the market is inspected and stamped at the Slaughter-house by the Veterinary Officer.

There is no staff available for shop-to-shop inspections of food-stuffs. The frequent seizures of tinned milk, weevily grains and other articles of food, which apparently have been held in stock for years, point to the need for this important work being undertaken systematically.

Foodstuffs Examined and condemned.		1924.	1925.	1926.
Aerated Water (Bottles)	...	1,848	388	576
Sacks, Onions	...	203	150	8
Cases, Chocolates	...	14	—	—
Sacks, Dates	...	1	—	—
,, Rice	...	663	261	3,500
,, Cereals	...	67	—	—
,, Matama	...	30	—	—
,, Moong	...	36	10	—
,, Ginger	...	2	—	—
,, Cassia	...	2	—	—
,, Almonds	...	2	—	—
,, Potatoes	...	101	10	10
Bottles, Pickles	...	96	—	—
,, Grape Juice	...	35	—	—
Barrels, Grape	...	—	15	—
Tins, Provisions	...	388	39	—
Sacks, Four	...	—	1,334	—
,, Grains	...	—	6	—
Tins, Condensed Milk	...	—	95	160
Cases, Tobacco	...	—	12	24
,, Cocoa	...	—	788	—
Lbs. Beef	...	—	—	93
,, Fish	...	—	—	580
,, Fruit	...	—	—	2,400
,, Ghee	...	—	—	130
,, Jaggery	...	—	—	600

Pemba.

In Pemba sodden rice and tinned goods have been the chief articles to be condemned.

Bakeries have been inspected by the Sanitaiton Officer, and the stocks always found good and cleanliness a feature of the work, although the buildings are not ideal.

Milk is produced for and distributed in family circles. Control and inspection of this article is therefore hardly possible.

(b) *Markets Zanzibar Town.*

The markets are inspected twice daily by a Sanitary Inspector, and the cleansing is carried out by the Health Department.

A circulating hot-water boiler has been installed, the stalls are now washed daily with boiling water containing washing soda to remove all fat. The transport and handling of the meat leaves a lot to be desired, and until this is controlled by legislation the efforts to keep the meat market a model of cleanliness are nugatory.

A stout fence now encloses the meat and fish sections and prevents goats and dogs from gaining access.

Part of the road in front of the meat and fish sections has been dressed with tar and the dust nuisance considerably reduced.

(c) *Dairies.*

All the sheds at the Government Dairy, Mji Mpia, i.e., 249 stalls, were occupied during the year. Five new sheds received the stock from four of the insanitary cowsheds in the town, which were closed.

The drainage from the four original sheds is collected in large covered pits. The contents are removed by buckets every second day and allowed to flow over the ground around the sheds, it is then turned into the soil. The drainage from the six new sheds continues to discharge directly on the soil and streams of excrementitious liquid around these sheds are unavoidable, although every precaution is taken to maintain the natural absorbtive properties of the sandy soil. As may be imagined, milking is not conducted under ideal conditions.

A junior Sanitary Inspector supervises the milking and transport to the Milk Depôt at the market, where Mji Mpia milk only is sold.

The major part of the milk supply continues to be brought into the town by natives. This milk is invariably adulterated. The conditions under which it is collected and the method of transport are bad. We have no staff to investigate these supplies or systematically to control this milk when it reaches town.

Forty-five samples were taken during the year.

(d) *Aerated Water Factories.*

Improvements were made to the plant of a number of the Aerated Water Factories. Metallic contamination has not been so frequent. The total number of bottles condemned was 576.

	1924.	1925.	1926.
Samples taken ...	44	65	80

(e) *Slaughter-House, Zanzibar Town.*

The Slaughter-House is undoubtedly the best on the East Coast, and has been found to be satisfactory in every respect, being fitted with every convenience to facilitate ante-mortem inspection of cattle and meat inspection.

(f) *Slaughter-House, Weti, Pemba.*

The building has been kept in sanitary condition by Public Health labour. Surprise inspection of meat and offal by the Sanitation Officer has been carried out.

VII. Reduction of Vermin.

(a) *Rats.*

Further experiments were tried with poison baits containing three grains of barium carbonate in a vehicle of wheat flour and ghee. The results have not proved conclusive, a large proportion of the baits set were always removed or partially eaten, but no dead rats were found. Tested experimentally on several occasions on rats in captivity the baits always proved to be fatal.

		1924	1925	1926
Number of trappers employed	...	7	7	7
Rats trapped	...	11,945	9,183	16,654
Rats purchased	...	4,486	4,251	3,944
Rats killed, Weti, Pemba	...	—	—	383

Classification.

	Rattus Rattus.	Mus Norvegicus.	Pachyura Cærulea.	Mus Muscalus.	Cricetomys gambianus.	Unclassified.
1924	8,850	2,583	911	620	394	3,073
1925	11,105	1,059	1,027	93	150	..
1926	18,500	477	1,389	58	174	383

(b) *Flies.*

One thousand and eighty fly breeding places were found during the year and the nuisances abated.

The refuse destructor dump is the largest fly nursery in the town and requires constant supervision and attention due to large quantities of small refuse being dumped in its raw state.

(c) *Pariah Dogs.*

Seven hundred and thirty-three pariah dogs were destroyed during the year.

(B.) Measures Taken to Spread the Knowledge of Hygiene and Sanitation.

Lectures on Elementary Tropical Hygiene are a regular part of the course of instruction for teachers held at the Government Schools. Demonstrations on Public Health subjects are also given at the Museum by Dr. A. H. Spurrier, C.M.G., O.B.E., to groups of pupils from the different schools in the town.

The public are beginning to appreciate the work of the Department and, as mentioned in last year's report, nuisances are brought to our notice by private individuals and advice is frequently asked for.

(C.) Training of Sanitary Personnel.

Owing to the nature of their duties, not much time is available for theoretical instruction of Inspectors.

Lectures on Sanitation and Sanitary Inspectors' duties and lectures on mosquito control were given weekly.

Practical instruction is given in the Districts, and the Inspectors show improvement as they gain experience and a knowledge of the essentials of their duties.

(D.) Recommendations.

1. A temporary increase of European Sanitary Inspectors to train a locally recruited personnel.

2. Mosquito and Insect-borne Diseases.

The work as detailed in last year's report should be continued as funds allow.

3. Helminthic Diseases.

(a) Ankylostomiasis.—The work should be continued on the lines previously laid down.

(b) Schistosomiasis.—An investigation into the possibility of acquiring infection locally and the species of snail involved is required.

4. Native Dwellings.

The remarks in last year's recommendations still hold good.

5. Public Latrines.

More public latrines are required.

6. Refuse Disposal.

The present Destructor is unsatisfactory and the site is unsuitable. The erection of a new Destructor or other methods of refuse disposal should be considered. The extension of the native town and the difficulty of collecting refuse there requires a larger supply of labour or motor transport effectively to dispose of such refuse.

7. Roads:

Tarring should be extended as much as possible on town roads to obviate the dust nuisance.

8. Maternity and Child Welfare:

As mentioned in last year's report, but little progress can be made without the appointment of a Lady Medical Officer or a Lady Health Visitor. The work done at the Maternity Home, whilst most excellent and praiseworthy in itself, is too limited in scope to bring about material advancement in this important branch of Public Health. Such Health Visitors should have a knowledge of the language and an understanding of native customs and prejudices.

9. Reclamation or Canalisation of the Creek separating the Town proper from the Native Township of Ngambo:

This creek is tidal, and at low tide is a broad expanse of mud, which, especially at night, emits an offensive odour which is a constant cause of complaint from those dwelling in the vicinity. Numerous drains and sewers also discharge into it, and sludge from cesspools and cesspits in the neighbourhood is deposited at low water.

The public health and the amenities of the neighbourhood would undoubtedly be greatly improved by complete reclamation, canalisation, or some arrangement of tidal velves at the railway bridge, whereby the surface could be kept constantly covered by water. The matter has been under consideration for several years and a good deal of reclamation has been done both at the head of the Creek and by incinerated refuse near the Destructor.

Pemba Island.

1. The following additional appointments are required for efficient Sanitation work in the Island:

One Sanitation Officer and two European Sanitary Inspectors.

The former would also undertake the Medical and Administrative Control of Funzi Leper Settlement, which at present is a very severe tax on the Medical Officer, Weti.

2. Additional Sanitary labour is required in the Township of Weti, Chake and Mkoani.

3. Continuation and extension of the present anti-mosquito work and swamp drainage is urgently necessary in the above towns.

B. SPEARMAN,

Deputy Director of Sanitary Services,

Zanzibar Protectorate.

IV. PORT HEALTH WORK AND ADMINISTRATION.

The work of Port Health Officer throughout the year was undertaken by the Sanitation Officer.

All vessels arriving in harbour are boarded before pratique is given. The hours of work are from 7 a.m. until 10 p.m., and, except on very special occasions, no pratique is granted before or after these times.

In the cases of steamers arriving from Bombay, the names and addresses of all immigrants are taken and they are kept under surveillance for one week after arrival, and all vaccinated who require it. The personal effects of all deck passengers are claytonised before passing through the Customs.

All dhows' crews and passengers are required to report at the Health Office for inspection and vaccination if necessary.

Dhows proceeding to Pemba ports are required to call at Zanzibar to obtain pratique before making the Pemba port.

The total number of steamers granted pratique during the year was 521 as compared with 458 in 1925.

The total number of dhows granted pratique during the year was 1,409 as compared with 1,448 in 1925.

From September 18th until October 22nd the Port was declared infected owing to an outbreak of Small-pox in the town. During this period all ships arriving in harbour observed voluntary quarantine.

One mail steamer arrived from Bombay in quarantine in the month of June owing to Small-pox, one case being discovered among the deck passengers after the ship had left Mombasa. The total number of persons quarantined from this steamer was 231. They remained at the Quarantine Station for 14 days and were then allowed to proceed to their destinations in Zanzibar and Tanganyika Territory. Owing to the small number quarantined, the usual difficulty of allocating accommodation according to sects did not arise and no complaints or dissatisfaction arose.

A lock-up store for heavy baggage close to the landing-place was built during the year. This should prove a great boon, as many of the quarantined passengers have a quantity of very heavy baggage, and the handling and safe storing of this constituted a real difficulty and frequently gave rise to serious complaints and criticism on the part of the owners.

The attached tables give a résumé of the work done during the year:—

TABLE O.

Port Sanitation Return 1925.

	Arrivals.			Ships quarantined.	Ships claytonised.	Passengers landed.	Passengers under surveillance.	Number persons vaccinated.	Persons placed in quarantine.
	British.	Foreign.	Total.						
Steamers—									
January ..	32	12	44	..	..	2,571	..	466	..
February ..	28	12	40	..	..	2,229	..	389	..
March ..	28	13	41	..	..	2,223	..	410	..
April ..	27	13	40	..	..	2,012	..	427	..
May ..	24	15	49	..	..	1,763	..	392	..
June ..	22	15	37	1	1	1,046	325	383	231
July ..	32	15	47	..	..	2,124	..	434	..
August ..	37	15	52	..	..	1,634	..	371	..
September ..	27	14	41	..	..	1,533	..	401	..
October ..	26	15	41	..	..	1,977	..	418	..
November ..	30	15	45	..	..	2,337	..	520	..
December ..	24	18	42	..	..	1,980	..	327	..
Men-of-War ..	..	..	2	..	..	..	..	..	..
Total ..	347	172	521	1	1	23,429	325	4,938	231
Total for 1925 ..	314	144	458	3	4	21,632	2	1,406	1,765

TABLE O—*Continued.*

Port Sanitation Return 1925.

	Arrivals.			Dhows quarantined.	Dhows claytonised.	Passengers under surveillance	Number of persons vaccinated.	Persons placed in quarantine.	Passengers landed.
	British.	Foreign.	Total.						
Dhows—									
January ..	93	36	129	..	..	..	178	..	601
February ..	103	75	178	..	..	..	647	..	1,310
March ..	140	101	241	..	..	..	162	..	571
April ..	96	12	108	..	..	..	34	..	255
May ..	81	3	84	..	..	..	43	..	321
June ..	103	3	106	..	..	..	28	..	378
July ..	94	1	95	..	..	..	48	..	402
August ..	93	5	98	..	..	..	80	..	462
September ..	94	6	70	..	..	..	96	..	217
October ..	95	3	98	..	..	..	233	..	264
November ..	87	1	88	..	..	..	290	..	317
December ..	83	31	114	..	..	..	292	..	321
Total ..	1,132	277	1,409	..	..	..	2,131	..	5,419
Total for 1924 ..	1,130	318	1,448	3	2	..	1,212	38	6,861

V. MATERNITY AND CHILD WELFARE.

ZANZIBAR MATERNITY ASSOCIATION.

This Association is controlled by a Committee consisting of the Director of Medical and Sanitary Services (President), other Government officials and private persons. The Government contributes an annual grant to the Association, but the necessary funds are chiefly provided by private subscriptions and donations, and by fees from patients who can afford to pay.

The Annual Report of the Association is appended (Appendix, page 79) and records the valuable work done during the past year. Taking native prejudice into consideration, it is most satisfactory to find that as many as 48 patients were admitted to the Maternity Home only opened during the last month of the previous year.

Beyond what is done by the above Association, limitation of staff prevents this important branch of Public Health work being seriously undertaken.

VI. HOSPITALS AND DISPENSARIES.

(*a*) OUT-PATIENTS.

The establishment of more District Dispensaries during the past year has brought medical aid within reach of most of the inhabitants of the Protectorate.

The total number of cases treated at Government Hospitals and Dispensaries was 76,585 as compared with 48,963 in 1925 and 40,247 in 1924. In addition to these, many persons living in the neighbourhood of Walezo apply for and receive treatment at the Poor House Dispensary, and the number of cases treated there last year was 1,396. Various departments were also supplied with drugs and dressings for the treatment of minor accidents and ailments among their employees, but no record of the number so treated is available. The re-attendances at the Dispensaries numbered 143,622, making in all 220,207 attendance during the year.

TABLE.

The following table shows, by stations, the number of cases treated at Government Hospitals and Dispensaries during 1924, 1925 and 1926:—

Stations.		Cases treated.		
Zanzibar Island.		1924.	1925.	1926.
Zanzibar	...	13,841	16,544	24,505
Selem	...	2,046	1,660	3,734
Mkokotoni	...	2,928	29881	2,470
Mwera	...	1,174	1,263	2,209

Chwaka ...	1,237	1,425	2,395
Mbiji ...	1,480	2,872	2,912
Machui ...	1,286	1,740	2,219
Mahonda ...	540	1,446	2,831
Mangapwani ...	—	1,756	1,498
Kizimkazi ...	—	673	2,400
Bweleo ...	—	—	200
Tunguu ...	—	—	431
Uzini ...	—	—	49
Pemba Island.			
Weti ...	3,905	3,464	4,153
Chake Chake ...	7,479	8,049	8,675
Mkoani ...	4,331	3,355	5,589
Kengeja ...	—	1,557	2,000
Mtangatwani ...	—	—	1,567
Jambangome ...	—	278	1,492
Tumbe ...	—	—	816
Fufuni ...	—	—	891
Tundauwa ...	—	—	1,008
Stambuli ...	—	—	1,695
Mzambaraoni ...	—	—	604
Ole ...	—	—	242
	40,247	48,963	76,585

The new Dispensaries were opened in the following months:—

April	Mtangatwani
May	Mwembeladu (Zanzibar Town)
June	Tumbe
July	Fufuni and Tundauwa
August	Stambuli
October	Mzambaraoni
November	Bweleo and Tunguu
December	Ole and Uzini

(*b*) IN-PATIENTS.

The total number of patients admitted to all hospitals in 1926 was 3,224 with 187 deaths as compared with 2,966 patients with 123 deaths in 1925 and 2,483 patients with 123 deaths in 1924.

European Hospital, Zanzibar.—The number of patients admitted was 76 with two deaths as compared with 62 admissions and no deaths in 1925 and 72 admissions with one death in 1924.

The most important causes of admission were:—

Typhoid Fever	1	Heart Disease	1
Paratyphoid B.	3	Broncho-Pneumonia	1
Malaria	37	Pneumonia	1
Dysentery	3	Appendicitis	2
Tuberculosis	3	Injuries	7

One of the two deaths was a Leading Seaman removed from H.M.S. "Effingham", who died of Septic Pneumonia a few hours after admission; the other of a baby a few days old.

Asiatic and Native Hospitals.—The number of non-Europeans admitted to all hospitals was 3,148 as compared with 2,898 in 1925 and 2,411 in 1924.

The following table shows the number of admissions, with deaths, at each station during the past and previous two years:—

	1924.		1925.		1926.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Zanzibar Island.						
Zanzibar	1,046	64	1,699	76	1,922	137
Mkokotoni	74	2	95	1	90	—
Selem	31	—	39	—	46	1
Pemba Island.						
Weti	490	23	398	15	467	16
Chake Chake	622	30	529	30	496	27
Mkoani	148	3	138	1	127	4
	2,411	122	2,898	123	3,148	185

The most important causes of admission were:—

Typhoid Fever	2	Paralysis	15
Paratyphoid B.	2	Heart Disease	17
Malaria	395	Broncho-Pneumonia	6
Blackwater Feper	9	Pneumonia	65
Small-pox	40	Ankylostomiasis	174
Influenza	17	Hernia	124
Dysentery	36	Orchitis	44
Tuberculosis	7	Hydrocele	222
Syphilis	36	Cellulitis	134
Gonorrhœa and Complications	50	Ulcer	427
Cancer	5	Elephantiasis	32
Apoplexy	5	Injuries	322

The increased number of deaths returned from the Zanzibar Hospitals is partly accounted for by the occurrence of 15 deaths from Small-pox last year as compared with none in 1925 and one in 1924. With regard to the remainder, Dr. Vassallo, the Resident Surgical Officer, points out that the figures do not accurately represent the hospital mortality, as many patients are admitted to hospital in a moribund condition and die within a few hours. Owing to the establishment of District Dispensaries and the increased facilities for transport in the way of new roads and more motor vehicles, the

Zanzibar Hospital from being the hospital for only part of the town has now become the hospital for the greater part of the whole island. Instead of cases of all kinds being admitted as formerly, it is now possible to provide accommodation for only the most serious, and, as many of these are in the last stage of disease, an increased mortality rate is inevitable.

(*c*) OPERATIONS.

The number of more serious operations performed at the Zanzibar, Weti and Chake Chake Hospitals during the year was 1,241 as compared with 652 in 1925 and 413 in 1924.

Zanzibar Hospital.—Dr. Vassallo was in charge throughout the year, and 776 operations were performed as compared with 347 in 1925 and 188 in 1924. These figures do not include minor operations such as dental extractions, wound stitchings and small abscess incisions, which last year numbered 2,831. In addition there were 1,047 injections (chiefly for Tuberculosis, Syphilis and Diabetes), 1,123 irrigations for Gonorrhœa and 391 prostatic massages. Of the cases operated upon, 44 terminated fatally.

Weti Hospital.—Dr. Austin was in charge from the beginning of the year until the 23rd March, Dr. Madge from the 24th March to 31st May and Dr. Young from the 1st June to end of the year. The number of operations performed was 353 as compared with 200 in 1925 and 188 in 1924. Death followed operation in five cases.

Chake Chake Hospital.—Dr. Watkins-Pitchford was in charge from the 1st January to 8th June and Dr. Madge from the 9th June to the 12th November. From the 12th November to the end of the year no resident Medical Officer was available, and visits were paid when possible by Dr. Young, the Medical Officer at Weti. The number of operations performed was 112 as compared with 105 in 1925 and 51 in 1924.

Among the operations performed during the past year at the different hospitals were the following:—

	Zanzibar	Weti	Chake Chake	Total
Hydrocele ..	89	69	24	182
Hernia ..	67	21	4	92
Hernia, Strangulated ..	7	3	..	10
Tumour ..	23	15	..	38
Elephantiasis ..	22	7	6	35
Haemorrhoids ..	16	1	..	17
Cataract ..	5	..	..	5
Circumcisions ..	62	23	23	108
Amputations ..	13	6	1	20

(*d*) X-RAY EXAMINATIONS.

Screenings numbered 511 during the year and 204 photographs were taken. Very satisfactory results were obtained, and the department is greatly indebted to the Director of Railway and Electricity and his staff for their valuable assistance.

(e) MEDICAL BOARD AND EXAMINATIONS

During the year, 53 Medical Boards were held at the Zanzibar Hospital, 366 candidates were medically examined for Government and naval employment, and 105 officials (Europeans and Non-Europeans) were examined prior to proceeding on leave.

(f) DENTAL SERVICE.

The arrangement with the Tanganyika Government for a Dental Surgeon to visit Zanzibar periodically proved of great value. Captain A. S. Newton in all spent 114 days in the Protectorate during the year, and furnishes the following statistics with regard to work done for the European officials and their families:—

Attendances	...	245
Fillings	...	119
Extractions	...	43
Pulp Treatment	...	7
Scalings	...	30

A large number of non-European officials, school children and natives also received treatment.

(g) GULIONI INFECTIOUS DISEASES HOSPITAL.

Return for the year 1926.

	Remaining from 1925.	Admitted during 1926.	Total.	Died.	Discharged.	Remaining end of 1926.
Small-pox	...	40	40	15	16	9
Suspected Small-pox	...	1	1	...	1	...
Measles	...	2	2	...	2	...
Chicken-pox	...	26	26	...	26	...
Leprosy	1	4	5	...	5*	...
Leprosy Suspected	...	1	1	...	1	...
Total	1	74	75	15	51	9
Contacts:—						
Small-pox	...	73	73	...	71	2
Chicken-pox	...	6	6	...	6	...
Measles	...	1	1	...	1	...
Plague	...	1	1	...	1	...
Total	...	81	81	...	79	2
Grand Total	1	155	156	15	130	11

* Tranferred to Funzi Leper Settlement.

(*h*) BUILDINGS.

Statement of work carried out during 1926.

Zanzibar.	Rs.	cts.
Kitchen for Salem Dispensary	635	56
New luggage shed at Prison Island Quarantine Station..	2,981	21
Dispensaries completed:—Mwembeladu, Bweleo, Tunguu and Uzini.		
Pemba.		
Nursing Sister's Bungalow at Weti	14,240	00
Kitchen and Latrines at Chake Chake Hospital ...	2,905	18
Leper Settlement at Funzi Island (in course of construction	39,640	00
Dispensaries completed:—Mtangatwani, Tumbe, Fufuni, Tundauwa, Stambuli, Mzambaraoni and Ole.		

(*i*) RECOMMENDATIONS.

1. *Medical Staff.*—A sufficient number of Medical Officers is necessary to allow four, including the Resident Surgical Officer, to be stationed in Zanzibar Island and three in Pemba.

The details recorded in this Section make it obvious that the work now performed at the Zanzibar Hospitals cannot be coped with satisfactorily by two Medical Officers without some assistance.

The whole time of a third Medical Officer is more than fully required to make weekly visits to the twelve District Dispensaries within reach, to train and re-train the native dispensers and to co-ordinate and generally supervise the whole dispensary service in both islands. Inspection visits to Pemba and to the south of Zanzibar Island, the former essential for the proper co-ordination of the service, necessitate the absence of this officer periodically from headquarters, and a substitute must be found temporarily to carry on his more routine work.

The fourth Medical Officer is necessary to take charge of the Police Lines, Central Prison and Lunatic Asylum, and Mwembeladu Dispensary, where it is estimated the attendances for 1927 will number 30,000. His whole time could be profitably employed on these duties alone, but he has also to assist at the Zanzibar Hospitals and to act as substitute for the District Dispensary Medical Officer and for either of the Hospital Medical Officers when temporarily absent owing to illness, local leave or other cause.

With four Medical Officers available the position is, therefore, far from ideal, but if the number is to be reduced to three, as suggested, in my opinion not only will the health of the Medical Officers break down but the whole district dispensary service be completely disorganized.

The alternative of curtailing the work at the Zanzibar Hospital I do not think can be seriously contemplated, since this hospital is the only one available for operative work and serious cases for the greater part of the population (127,000) of the island. It already provides insufficient accommodation, more especially for surgical cases, of which there is usually a long waiting list.

2. *District Dispensaries.*—The establishment of four more District Dispensaries to bring medical aid within reach of a large population living in the neighbourhood of Pujini in Pemba, and Makunduchi, Chaani and Ungujakuu in Zanzibar Island is urgently required. In spite of their prejudices and leanings towards witchcraft, the natives themselves have petitioned for these dispensaries. The existing dispensaries are doing very valuable work; they are the cheapest form in which medical aid can be provided, and their urgent need is indicated by the vital statistics for the year (page 11). It has, however, only been possible to give the present dispensers a most elementary training, and all require to be re-called for further tuition. To be able to do this, others must be trained to replace them, and also a number of trained men must be kept in reserve to act as substitutes and to fill vacancies as they occur. At the same time, unless constant supervision is exercised, the work of the dispensers will deteriorate, the natives will lose confidence and revert to their old beliefs and practices, and more harm than good will result.

I cannot therefore advocate an increase in the number of dispensaries unless the medical staff is adequate to give the necessary training and supervision.

3. *New Infectious Diseases Hospital.*

4. *Mental Hospital.*

5. *Accommodation for Tuberculosis Patients.*

6. *Ankylostomiasis Campaign.*

The need for these and other less important works and improvements have been dealt with in detail in previous reports.

I endorse the recommendations of the Deputy Director of Sanitary Services (pages 38-39).

VII. PRISONS AND ASYLUMS.

PRISONS.

At the beginning of 1926 there were 213 prisoners in all the Protectorate prisons. During the year 1,744 were admitted, 1,689 were discharged and 12 died, leaving 256 in prison at the end of the year.

The cause of deaths were recorded is follows:—

Pulmonary Tuberculosis	1	Strangulated Hernia	1
General Debility	4	Intestinal Obstruction	1
Myocarditis	1	Perineal Abscess	1
Dysentery	1	Apoplexy	1
Tetanus	1		

The infection in the Tetanus case was contracted two days before admission to prison.

Seven prisoners were released on medical grounds.

CENTRAL PRISON, ZANZIBAR.

At the beginning of 1926 there were 155 prisoners in the Central Prison; during the year 1,019 were admitted, 968 were discharged and 12 died from the causes shown above, leaving 194 in prison at the end of the year. The average daily number in prison was 161.

The total number of cases of illness treated was 868. Of these, 307 were admitted to hospital, the average daily number in hospital being 9.48. The principal causes of illness were Malaria and Ankylostomiasis and Respiratory, Digestive and Skin Diseases.

LUNATIC ASYLUM.

	M.	F.	Total.
Patients remaining 31st December, 1925	12	7	19
Patients admitted during 1926	17	1	18
Patients discharged during 1926	10	0	10
Patients died during 1926	6	1	7
Patients remaining 31st December, 1926	13	7	20

Of the deaths, one is recorded as due to Cerebral Hæmorrhage and the remainder to General Debility and Nervous Exhaustion. Admissions to hospital numbered 41, chiefly for Respiratory and Digestive Diseases.

Increased facilities for recreation and employment have been provided during the year, but the present building is unsatisfactory in almost every respect and provides accommodation for only the more advanced or serious cases. The necessity for the provision of a real Mental Hospital, where not only the present type of case but also the early and minor forms of mental alienation can be treated and properly cared for, has been drawn attention to in previous medical reports.

POOR ASYLUM.

The Poor Asylum is situated at Walezo, about four miles from Zanzibar. It is under the care of the Roman Catholic Mission, and two sisters are on duty there daily. A large number of destitute and incurable cases are nursed and treated. It also serves as a District Dispensary for the natives of the surrounding districts, who seek treatment in large numbers for various diseases, and much useful and

beneficial work is done. Visits are paid at least once a week by a Medical Officer and Sub-Assistant Surgeon.

The following table gives the number of in-patients treated during the year:—

Particulars.	M.	F.	Total.
Remaining on 1st January, 1926	68	139	107
Admitted during the year	424	98	522
Died during the year	70	50	120
Discharged during the year	353	52	405
Remaining at the end of the year	69	35	104

The number of out-patients treated was 1,396.

LEPER SETTLEMENTS.

See Appendix II. (page 76).

VIII. METEOROLOGY.

The Medical Department is indebted to the Director of Agriculture for the statistics supplied in Table IV (page 66).

The following table compares the rainfall recorded at the different stations during 1924, 1925 and 1926:—

	1924	1925	1926
Zanzibar Island.			
Zanzibar	53.05	65.68	42.63
Mkokotoni	66.22	74.87	54.65
Salem	58.80	79.28	63.90
Kidichi	60.46	90.29	86.37
Koani	82.67	85.98	71.92
Chwaka	51.85	59.65	51.36
Pemba Island.			
Banani	75.16	63.66	59.78
Weti	92.08	65.45	60.76
Mkoani	—	—	73.57
Fufuni	—	—	70.39
Kigomacho	67.14	—	—

From the above figures, the average rainfall for Zanzibar Island and Pemba Island for the years was as follows:—

	1924	1925	1926
Zanzibar Island	62.18	75.63	61.81
Pemba Island	78.13	64.55	66.15

Reference has already been made in the body of the Report to the effect of rainfall on the incidence of disease.

J. A. TAYLOR,

Director of Medical and Sanitary Services,

Zanzibar Protectorate.

IX. SCIENTIFIC.

(a) ANNUAL REPORT OF THE BIOLOGICAL DIVISION FOR 1926.

The Economic Biologist proceeded on leave in May, 1926, and was absent for the rest of the year.

During the four months work in 1926 the "Malaria Survey" of the Zanzibar Protectorate was continued.

The following résumé comprises the chief data obtained, since the work was undertaken:—

Total number of African children examined	...	1,542
Parasite rate	...	1,047 = 67.8%
Gametocyte rate	...	211 = 13.6%

The species of parasite found were:—

Benign Tertian	...	597 = 38.7%
Subtertian	...	303 = 19.6%
Quartan	...	88 = 5.7%
Benign Tertian Gametocytes	...	124 = 8.4%
Subtertian Gametocytes	...	51 = 3.3%
Quartan Gametocytes	...	35 = 2.2%

The ages of the children varied from one to six years.

Parasites in small numbers were often found in thick films only, these are returned in the total parasite rate (1,047), but are classified in all doubtful cases as undefined.

The Malarial Parasite in African Adults.

Total number of African adults examined	...	479
Parasite-rate	...	98 = 20 %
Gametocyte rate (subtertian only)		6 = 1.2%

The majority of them showed very few parasites in thick films and generally none in the thin. Most were returned as undefined Benign, and Quartan gametocytes were not identified in thick films. The natives examined were from various parts of the island representing areas differing in topographical features.

From these findings it will be seen that Malaria is general among the native population. All three species of the Plasmodium are prevalent, Benign Tertian being the commonest form.

The Anophelines in Relation to Malaria.

Engorged females of Anopheles costalis and funestus were collected from various districts throughout the Island. They were dissected on the seventh day after capture and only sporozoit infections counted as positive, oocysts were not reckoned in the natural infectability rate for the two species of Anophelines.

Total number of Anophelines dissected (Anopheles costalis and funestus) ...	3,000	
Total number showing Sporozoits ...	214	7.1%
Total number of A. costalis dissected ...	1,833	
Total number of A. costalis showing Sporozoits ...	134	7.7%
Total number of A. funestus showing Sporozoits ...	80	7%

No dissections were made of Anopheles mauritianus, maculipalpis, squamosus and longipalpis as they were never captured in native huts or houses.

Filariasis.

Blood films taken at night between 9 p.m. and 10 p.m. were examined for the incidence of Microfilaria bancrofti.

Total number of African adults examined ...	595	
Parasite Rate ...	199	33.4%

The natives were selected from various villages in the Island and the Town of Zanzibar.

At the same time adults of Culex fatigans engorged with blood were captured in various houses throughout the town and dissected on the twelth day to ascertain the natural infectability rate of this mosquito.

Total number of Culex fatigans dissected ...	1,300	
Parasite rate (proboscis infection) ...	266 = 20.3%	

Thoracic infections were not reckoned as positive.

The final results of the Malarial and Filarial Survey have been published elsewhere.

Biological Laboratory.

Examinations to the number of 280 were made, the majority of which were blood films for Malaria. Other examinations included veterinary material, comprising Trypanosoma, Piroplasma, etc.

A certain number of stools were submitted from the bacteriological laboratory for confirmatory diagnosis as to species of Amœbæ, various protozoal intestinal parasites and some helminthological material.

W. MANSFIELD-ADERS.
Economic Biologist.

(*b*) BACTERIOLOGICAL AND PUBLIC HEALTH LABORATORIES.

The work in the laboratory well maintained the average of previous years.

Routine examination of clinical material from the Hospital and bacteriological examinations of milk and water fully occupy the time of the Senior Laboratory Assistant and his staff. All cases of doubt and important cases are referred to the Sanitation Officer.

A bacteriological examination of the water supply was performed at monthly intervals throughout the year. This, taken as a whole, was quite satisfactory, but there is undoubtedly a tendency to contamination by surface water after heavy rain. In order to obviate this, extensive sheet piling round the springs was undertaken, which it is hoped will diminish this tendency. Blood films of 1,120 children were examined as part of the routine examination in connection with the school Medical Service. Of these, 132 or 23.5 per cent were found to contain malarial parasites, giving an infection rate of 23.5 per cent.

An unusually large number of Widal Reactions were performed during the year. This was due to the fact that all native attendants at the Government dairies were examined with a view to ascertaining if any carriers occurred amongst them. Of a total of 1,965 specimens of fæces examined, 1,296, or 66 per cent, were positive for Ankylostomiasis, whilst 69, or 3.5 per cent were positive for Ascaris. The Ankylostome rate is in reality higher than the figures indicate, as the stools examined include a number from patients treated for the disease and re-examined until a negative result is obtained as the result of treatment.

Autogenous vaccines to the number of 20 were prepared in the Laboratory during the year. From reports received from the Medical Officers using these vaccines benefit resulted in the majority of cases, though no striking effects were noted.

Estimation of the percentage of sugar in blood was performed in ten cases of Diabetes. Work of this nature has not before been undertaken in the laboratory, and is found to occupy a considerable time. Diabetes is not a common disease in the Protectorate, and the majority of cases are found among Indians, natives but rarely suffering from the disease.

The majority of legal cases, of which 37 were undertaken, during the year were examinations of knives or garments for blood or spermatozoa. All these examinations are made by the Sanitation Officer personally.

The attached table shows the amount of work done during the year.

B. SPEARMAN.

Deputy Director of Sanitary Services

Zanzibar Protectorate.

Bacteriological Laboratory Return for the year 1926.

Blood.

Total:—3918.*	Positive.	Negative.
Sugar Estimation ...	10	0
Spirochæta obermeyeri ...	3	2
Filaria ...	10	17
Differential Counts ...	65	0
Arneth Counts ...	0	0
Red Cells Enumeration ...	38	0
White Cells Enumeration ...	38	0
Widal's Test ...	12	38
Wasserman's ...	52	38
Haemoglobin ...	18	0
Specific Gravity ...	1	0
Blood Platelets Count ...	1	0
Blood Coagulating test ...	1	0
Cultural Examination for Streptococci ...	0	1

	Undefined	S. T.	B. T.	Q	Neg.
Malaria	431	226	287	10	2,619

Sputum.

Total:—386.	Positive.	Negative.
Tubercle Bacilli ...	109	258
Pneumococci ...	3	1
Micrococci catarrhalis ...	0	0
Cultural Examination ...	0	0
Spirochæta bronchialis ...	13	2

Fæces. Total:—1,965.		Pos.	Neg.
Amœbæ	E. histolytica 13	15	129
	A. coli 2		
Ankylostoma ...		1,296	380
Ascaris ...		69	20
Tænia ...		1	0
Bilharzia ...		11	0
Blood ...		0	1
Cultural Examination for B. Flexner		3	12
,, ,, ,, B. Shiga		0	11
,, ,, ,, B. Typhoid		3	1
Balantidium Coli ...		0	1
Giardia Intestinalis ...		8	0
Other parasites ...		4	0

Urine.

Total:—911.	Positive.	Negative.
Sugar ...	54	35
Albumin ...	46	0
Casts ...	12	1
Bilharzia ...	61	31
Urea ...	4	1
General Examination ...	403	0
Cultural Examination for B. Coli ...	2	1
Acetone ...	0	2
Leptospira Hebdomadalis ...	0	1
Phosphates ...	1	0
Hæmoglobin ...	1	0
Cultural Examination for Gonococci	1	1
Gonococci ...	65	163
Diazo Reaction ...	5	1
Bile ...	2	0
Spermatozoa ...	4	5
Black Water fever ...	7	0
Micro Filaria ...	1	0

Nasal Secretions. Total:—26.	Pos.	Neg.
Leprosy ...	6	20

*This number includes the routine examination of School Children 1120, out of which number 138 were Positive but Undefined Parasites and 982 were Negative.

Bacteriological Laboratory Return for the year 1926—(*Continued*).

Rat Examination.			Vaccines.		Chemical.	
Total:—4164.	Pos.	Neg.	Total:—21.	Number.	Total:—310.	Number.
B. Pestis	...	4164	Staphylococci	1	Fresh Milk	77
			Streptococci	0	Condensed Milk	14
Miscellaneous Total:—103.	Pos.	Neg.	Gonococci	7	Water	75
			B. coli	2	Milk Cream	2
			Shiga	0	Food-Stuffs	0
			Catarrhalis	4	Beverages	0
			Others	2	Tinned Provisions	0
Discharge from Abscess for general examination ...	8	0	B. typhoid	1	Minerals	0
Fluid from Thorax ...	1	0	Fyorrhea	4	Legal cases	37
Throat Swabs for B. diphtheria ...	0	2			Drugs	102
Smear from Ulcers ...	6	0	Pathological Examination Total:—5.	Number.	Other Examination (Disinfecting fluid) ...	1
Vomit ...	1	0			Ghee	2
Material from Tumour ...	1	0				
Uterine smear ...	1	0				
Pus from Thorax Cavity for T.B. ...	0	1				
Hair Root for Tinea ...	0	1	Malignant	3		
			Innocent	2		
Cultural Examination:—						
Pus ...	5	0				
Eye discharge ...	2	0				
Throat Swab ...	1	0				
Nasal Secretion ...	1	0				
Spirochæta pallida ...	11	61				

TABLE I.

A. EUROPEAN STAFF

Name.	Rank of Appointment.	Where Stationed on 31st December, 1926.
J. A. Taylor ..	Director of Medical and Sanitary Services	Zanzibar
B. Spearman ..	Deputy Director of Sanitary Services	,,
S. M. Vassallo ..	Resident Surgical Officer ..	.
J. H. Semple ..	Medical Officer ..	On leave
W. A. Young ..	,, ,, ..	(Pemba) Weti
T. A. Austin ..	,, ,, ..	On leave
O. H. Watkins-Pitchford ..	,, ,, ..	,,
W. H. Smith ..	,, ,, ..	Zanzibar
J. B. C. Madge ..	,, ,, ..	,,
W. L. Gopsill ..	,, ,, ..	.
Miss A. E. Chambers ..	Matron ..	,,
,, M. Gittins ..	Nursing Sister ..	,,
,, G. M. Rainey ..	,, ,, ..	,,
,, V. I. Dargan ..	,, ,, ..	,,
,, I. Pegg ..	,, ,, ..	(Pemba) Chake Chake
,, A. S. Milne ..	,, ,, ..	Zanzibar
,, D. E. Johnstone ..	,, ,, ..	(Pemba) Weti
W. M. Aders ..	Economic Biologist ..	On leave
P. Cairns ..	Sanitary Superintendent ..	Zanzibar
E. H. Lavers ..	Sanitary Inspector ..	,,

B. PRINCIPAL MEMBERS OF SUBORDINATE STAFF.

Name.	Rank.	Where Stationed on 31st December, 1926.
K. V. Joshi ..	Sub-Assistant Surgeon ..	On leave
F. P. Paul ..	,, ,, ..	Zanzibar
C. D. Rana ..	,, ,, ..	(Pemba) Mkoani
M. L. Mehta ..	,, ,, ..	Zanzibar
M. V. Vaidya ..	,, ,, ..	Mkokotoni
R. C. Sood ..	,, ,, ..	(Pemba) Chake Chake
T. W. Dev ..	,, ..	Ziwani
Dinanath Kaura ..	,, ,, ..	Zanzibar
S. Livingstone ..	Dispenser ..	,,
A. J. Raval ..	,, ..	,,
J. F. de Cruz ..	,, ..	On leave
C. Almeida ..	,, ..	Zanzibar
L. A. Vaz ..	,, ..	(Pemba) Weti
M. A. de Silva ..	,, ..	,, Chake Chake
S. R. Fernandes ..	,, ..	Zanzibar
J. J. Antao ..	,, ..	,,
I. B. Martin ..	Chief Clerk ..	,,
F. de Souza ..	Senior Sanitary Inspector ..	,,
Jadowji K. Gohel ..	Sanitary Inspector ..	(Pemba) Chake Chake
A. A. Madhani ..	,, ,, ..	Zanzibar
J. M. Noronha ..	Cashier ..	,,
A. G. Kark ..	Laboratory Assistant ..	,,

C. APPOINTMENTS, CHANGES, ETC., IN STAFF.

Appointments.

Name.	Rank of Appointment.	Date.
	(*a*) Europeans.	
Dr. J. B. C. Madge ..	Medical Officer ..	4.2.26
Dr. W. L. Gopsill ..	,, ,, ..	12.3.26
Miss D. E. Johnstone ..	Nursing Sister ..	19.3.26
Mr. E. H. Lavers ..	Sanitary Inspector ..	16.4.26
	(b) Asiatics.	
Ratanchand Sood ..	Sub-Assistant Surgeon ..	9.6.26
T. W. Dev ..	,, ,, ..	9.6.26
J. S. Nunes ..	Clerk ..	18.3.26

Acting Appointments.

Dr. B. Spearman, Deputy Director of Sanitary Services, as Director of Medical and Sanitary Services from 1st January to 22nd March, 1926.

Dr. J. M. Semple, Medical Officer, as Deputy Director of Sanitary services from 1st January to 22nd March, 1926.

Change of Title.

Senior Sanitation Officer, to Deputy Director of Sanitary Services, on 1st January, 1926.

Transfers.

Dr. D. S. Scott, Medical Officer, to Kenya Colony, 14th November, 1926.

Termination of Appointments.

Dr. P. L. L. Craig, Medical Officer, on 20th December, 1926.

Miss T. Grant, Nursing Sister, on 24th October, 1926.

Miss Philpot, Missionary Nursing Sister, on 18th April, 1926.

Retirement.

C. F. de Souza, Clerk, on 22nd March, 1926.

Death.

B. N. Gundevia, Sanitary Inspector, on 12th April, 1926.

LEAVE.

Name.	Rank of Appointment.	Date.
Dr. J. A. Taylor ..	Director of Medical and Sanitary Services	1.1.26 to 22.3.26
Dr. B. Spearmen ..	Deputy Director of Sanitary Services	26.3.26 ,, 21.10.26
Dr. W. A. Young ..	Medical Officer ..	1.1.26 ,, 19.4.26
Dr. J. M. Semple ..	,, ,, ..	21.5.26 ,, 31.12.26
Dr. W. M. Aders ..	Economic Biologist ..	25.10.26 ,, 31.12.26
Mr. P. Cairns ..	Sanitary Superintendent ..	1.1.26 ,, 28.1.26
Miss I. Pegg ..	Nursing Sister ..	1.1.26 ,, 22.3.26
,, A. S. Milne ..	,, ,, ..	1.1.26 ,, 20.5.26
,, V. I. Dargan ..	,, ,, ..	12.4.26 ,, 21.10.26
	(b) Assiatics.	
K. V. Joshi ..	Sub-assistant Surgeon ..	22.9.26 ,, 31.12.26
M. L. Metha ..	,, ,, ..	7.4.26 ,, 27.9.26
J. F. de Cruz ..	Dispenser ..	27.12.26 ,, 31.12.26
M. de Silva ..	,, ..	1.1.26 ,, 20.6.26
F. J. Fernandes ..	Clerk ..	27.12.26 ,, 31.12.26
R. C. Viegas ..	,, ..	2.6.26 ,, 22.11.26

TABLE II.

(A) Expenditure:—

Personal Emoluments:—			£
Salaries and Allowances			30,801
Other Charges:—			
Hospitals and Dispensaries:		£	
Maintenance of Hospitals	...	2,676	
Medical and Surgical Stores	...	2,506*	
			5,182
Sanitation Division:			
Sanitary equipment	...	672	
Maintenance of patients in infectious diseases hospitals	...	308	
Maintenance of Quarantine Station	...	45	
Maintenance of motor launch	...	111	
Maintenance of lepers	...	1,593	
Drugs, incidental and burial of destitutes	...	51	
Rewards for killing rats	...	42	
			2,822
Laboratories:			
Upkeep of laboratory equipment	...	145	
Maintenance of Biological Division	...	55	
Vaccines and serums	...	496	
			696

*This does not include the cost of a consignment of drugs received in 1926 but for which payment was not made until 1927.

Miscellaneous Expenditure:			
Uniforms	...	261	
Incidentals	...	195	
Passages	...	1,885	
Travelling Expenses	...	557	
Books	...	53	
Purchase of opium for sale	...	107	
			3,058
Special Expenditure:			
Instruments and hospital equipment	...	567	
Experimental animals	...	50	
Furniture	...	134	
Motor-car	...	200	
Typewriter	...	30	
			981
Total Expenditure			£43,540

(B) Receipts:—

		£
Hospital fees, sale of drugs, etc.	...	898
Contribution from neighbouring dependencies for Quarantine Services	...	2,550
		£3,448

Table III.

(1) Return of Statistics of Population for the year.

(Some of the figures are only approximately correct.)

	Europeans and Whites	Africans	Asiatics
Number of inhabitants in 1925 ..	280	205,000	16,125
Number of Births during the year 1926 ..	5	3,442*	383
Number of Deaths ,, ..	4	4,710	303
Number of Immigrants ,, ..	All races 27,286		
Number of Emigrants ,, ..	,, 30,616		
Number of inhabitants in 1926 ..	280	202,000	15,425
Increase ..	..	..	..
or			
Decrease ..	..	3,000	600

* Number registered but probably incomplete.

(2) Births Registered in the Island of Zanzibar, 1921-1926:—

	1921	1922	1923	1924	1925	1926
Town Area ...	479	482	413	501	424	437
Mkokotoni District ...	986	1,090	785	1,064	1,073	846
Mwera District ...	513	459	282	301	350	401
Chwaka District ...	613	623	555	768	499	285
Kizimkazi ...	—	—	—	—	—	299
Total ...	2,591	2,658	2,035	2,634	2,346	2,198

(3) Deaths Registered in the Island of Zanzibar, 1921-1926:—

	1921	1922	1923	1924	1925	1926
Town Area ...	1,076	1,262	1,258	1,043	1,379	1,560
Mkokotoni District ...	839	888	1,009	749	854	799
Mwera District ...	780	803	705	476	746	957
Chwaka District ...	512	504	482	564	400	335
Kizimkazi ...	—	—	—	—	—	181
Total ...	3,207	3,457	3,454	2,832	3,379	3,832

(4) Comparative Statement of Births and Deaths registered in the Island of Zanzibar, 1921-1926:—

	1921	1922	1923	1924	1925	1926
Town Area—						
Births ...	479	481	413	501	424	437
Deaths ...	1,076	1,262	1,258	1,043	1,379	1,560
District—						
Births ...	2,112	2,177	1,622	2,133	1,922	1,761
Deaths ...	2,131	2,195	2,196	1,789	2,000	2,272
Total—						
Births ...	2,591	2,658	2,035	2,634	2,346	2,198
Deaths ...	3,207	3,457	3,454	2,832	3,379	3,832

(5) Comparative Statement of Births and Deaths registered in the Island of Pemba, 1921-1926:—

District	1921	1922	1923	1924	1925	1926
Chake Chake—						
Births ...	640	625	485	565	860	689
Deaths ...	533	328	366	476	446	377
Weti—						
Births ...	689	467	350	376	419	517
Deaths ...	554	491	621	461	441	491

Mkoani—							
Births	...	342	575	319	340	749	426
Deaths	...	271	397	302	342	307	317
Total—							
Births	...	1,671	1,667	1,154	1,281	2,028	1,632
Deaths	...	1,358	1,216	1,289	1,279	1,194	1,185

(6) Comparative Statemeent of Births and Deaths registered in the Zanzibar Protectorate, 1921-1926:—

		1921	1922	1923	1924	1925	1926
Zanzibar Island—							
Births	...	2,591	2,658	2,035	2,634	2,346	2,198
Deaths	...	3,207	3,457	3,453	2,832	3,379	3,832
Pemba Island—							
Births	...	1,671	1,667	1,154	1,281	2,028	1,632
Deaths	...	1,358	1,216	1,289	1,279	1,194	1,185
Total—							
Births	...	4,262	4,325	3,189	3,915	4,374	3,830
Deaths	...	4,565	4,673	4,743	4,111	4,573	5,017
Excess of deaths over births	...	303	348	1,554	196	199	1,187

(7) Births—Zanzibar Township.

(*a*) The total number of births registered in the Town of Zanzibar during the year 1926, was as follows:—

Births registered		...	437
Still-born	...	...	58
			495

(*b*) Nationality:—

Europeans	...	...	5
Asiatics	...	...	343
Natives, Indigenous		...	58
			437

(8) Deaths—Zanzibar Township.

(*a*) The total number of deaths registered in the Town of Zanzibar during the year 1926, was as follows:—

Males	...	...	809
Females	...	...	751
			1,560

(*b*) Nationality of the deceased:—

Europeans	...	...	4
Asiatics	...	...	280
Africans, Indigenous		...	969
,, Others		...	307
			1,560

(9) Return of Causes of Deaths in Zanzibar Town during 1926:—

I. *Epidemic, Endemic, and Infectious Diseases*:

Diseases.	No.
Paratyphoid B.	1
Malaria	216
Blackwater	2
Small-pox	15
Whooping Cough	2
Influenza	40
Dysentery Amœbic	1
,, Undefined	65
Tetanus	4
Tuberculosis, Pulmonary	145
Tuberculosis of Bones and Joints	2
Syphilis	16
Gonorrhœa and its Complications ...	2
Filariasis	7

II. *General Diseases not mentioned above*:

Cancer	4
Chronic Rheumatism	56
Diabetes	5
Anæmia	11
Pernicious Aæmia	1
Hodgkin's Diseases	1

III. *Affections of the Nervous System and Organs of the Senses:*

Diseases.	No.
Meningitis	1
Cerebral—	
Hæmorrhage	38
Embolism	4
Thrombosis	6
Locomotor Ataxia	1
Epilepsy	14
Paralysis	13
Eclampsia, Convulsions (non-puerperal) five years or over	2
Infantile Convulsions	27
Other affections of the Nervous System ...	7

IV. *Affections of the Circulatory System:*

Acute Endocarditis or Myocarditis	3
Valvular Disease	82
Myocarditis	1
Aneurism	1
Arterio-Sclerosis	3
Embolism, non-cerebral	3
Other Diseases, Circulatory System ...	3

V. *Affections of the Respiratory System:*

Bronchitis	143
Broncho-Pneumonia	11
Pneumonia	19
Empyema	2
Asthma	8

VI. *Diseases of the Digestive System:*

Affections of the Pharynx or Tonsils ...	2
Diarrhœa and Enteritis, under two years ...	62
Diarrhœa and Enteritis, two years and over...	32
Ankylostomiasis	23
Hernia	6
Cirrhosis of the Liver	1
Hepatitis	1
Peritonitis (of unknown cause)	2
Other affections of the Digestive System ...	7

VII. *Diseases of the Genito-Urinary System (Non-Menereal)*:

Diseases.	No.
Acute Nephritis	8
Chronic Nephritis	4
Affection of the Kidney (Pyelitis, etc.) ...	1
Extravasation of Urine	1
Hydrocele	6
Other Diseases, Urethra	2

VIII. *Puerperal State*:

Puerperal Septicæmia	1
Sequelæ of Labour	4

IX. *Affections of the Skin and Cellular Tissues*:

Gangrene	1
Carbuncle	1
Abscess	2
Cellulitis	3
Ulcers	5
Elephantiasis	2

X. *Diseases of Bones and Organs of Locomotion (other than Tuberculosis)*:

Arthritis	3

XI. *Diseases of Infancy*:

Premature Birth	9

XII. *Affection of old Age*:

Senility	250

XIII. *Affection Produced by External Causes*:

Suicide by cutting instrument	1
Accidental poisonings	1
Fracture	4
Other external injuries	7

XIV. *Ill-Defined Diseases*:

Ascites	2
Debility	77
Pyrexia of uncertain origin	41
Total ...	1,560

Table IV.

METEOROLOGICAL OBSERVATIONS—1926

MONTH.	TEMPERATURE.								RAINFALL.									
	Zanzibar Town.				Pemba, Banani				Zanzibar.						Pemba.			
	Means of		Absolute		Means of		Absolute											
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Town.	Selem.	Kidichi.	Kwani.	Mkokotoni.	Chwaka.	Weti.	Banani.	Mkoani.	Fufuni.
January ..	88·1	80·6	89·9	78·4	89·3	80·1	91·5	78·0	0·30	0·81	0·54	0·50	0·19	1·46	0·79	1·08	0·88	1·27
February .	88·6	81·3	91·9	79·2	90·6	80·0	92·0	78·0	0·08	1·69	0·79	0·65	0·00	0·08	0·27	0·58	0·54	6·07
March ..	88·9	81·1	92·3	77·2	90·9	80·3	94·0	76·0	7·07	6·83	15·65	7·88	7·22	4·43	4·39	7·39	7·51	9·14
April ..	87·0	79·4	91·0	74·6	81·5	79·6	92·0	75·5	8·52	17·88	22·64	22·77	14·05	22·73	22·37	19·04	23·40	16·60
May ..	84·6	76·7	87·2	73·8	85·9	77·5	89·5	74·5	6·54	12·24	15·28	15·04	16·98	8·79	11·75	14·34	24·82	23·60
June ..	83·9	76·0	86·1	74·0	85·2	77·2	88·0	75·0	0·38	0·61	0·77	1·00	1·32	0·79	2·51	3·65	4·24	2·33
July ..	82·9	74·4	85·2	72·3	83·9	75·4	86·5	72·5	0·50	0·98	0·23	1·06	0·14	0·24	2·42	1·30	0·80	1·34
August ...	82·8	73·6	85·2	71·4	84·0	74·0	86·5	72·0	0·96	0·79	1·73	0·83	1·45	0·91	0·53	1·49	2·07	1·23
September ..	84·3	75·0	87·2	72·3	85·8	75·6	89·5	73·5	1·79	5·43	5·98	4·46	2·06	1·50	2·42	2·03	1·90	1·64
October ..	84·6	76·1	87·0	73·8	87·1	76·9	88·5	74·5	4·12	5·18	8·16	7·33	2·51	0·36	0·75	0·47	0·81	0·07
November ..	86·7	78·0	89·4	74·0	87·9	78·1	91·0	76·0	10·26	9·29	10·77	9·29	6·17	2·52	10·06	5·23	4·99	4·11
December ..	87·8	80·0	89·8	75·5	89·2	79·7	95·0	77·0	2·11	2·17	3·83	1·11	2·56	1·20	2·50	3·18	1·61	2·94
Total ..	85·8	77·7	92·3	71·4	86·8	77·9	95·0	72·0	42·63	63·90	86·37	71·92	54·65	45·01	60·76	59·78	73·57	70·39

TABLES V AND VI.

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patients.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
I. EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.									
Enteric Group—									
(*a*) Typhoid Fever ..	..	3	..	3	2	..	..	..	3
(*c*) Paratyphoid B ..	..	5	1	5	1	...	..	..	5
Relapsing Fever ..	..	2	..	2	..	..	..	..	2
Malaria—									
(*a*) Tertian ..	5	219	1	224	3	444	63	507	731
(*b*) Quartan ..	..	2	..	2	..	21	..	21	23
(*c*) Aestivo-autumnal ..	4	89	2	93	2	692	77	769	862
(d) Cachexia ..	..	42	..	42	..	527	39	566	608
(e) Blackwater ..	..	9	2	9	..	..	..	..	9
(f) Parasite undefined	2	89	..	91	..	1,843	641	2,484	2,575
Small-pox	..	40	15	40	..	10	3	13	53
Whooping Cough ..	..	5	1	5	..	36	11	47	52
Influenza	..	17	..	17	..	637	157	830	847
Mumps	..	..	..	..	..	12	5	17	17
Dysentery—									
(*a*) Amœbic ..	1	10	1	11	..	11	2	13	24
(*b*) Bacillary ..	..	9	..	9	..	7	1	8	17
(*c*) Undefined or due to other causes	1	20	..	21	1	23	8	31	52
Leprosy	1	1	..	2	..	23	12	35	37
Other Epidemic Diseases-									
(*a*) Rubeola ..	..	2	..	2	..	2	3	5	7
(*b*) Varicella ..	..	26	..	26	..	4	2	6	52
(*c*) Yaws	2	19	..	21	4	824	221	1,045	1,066
Tetanus	..	8	4	8	..	1	..	1	9
Mycosis—									
Aphthæ	..	..	..	..	..	34	23	57	57
Thrush	..	..	..	..	..	14	9	23	23
Tuberculosis, Pulmonary and Laryngeal	2	55	9	57	2	78	37	115	172
Tuberculosis of the Vertebral Column	..	1	..	1	..	..	..	..	1
Tuberculosis of Bones and Joints	1	..	..	1	..	1	..	1	2
Syphilis—									
(*a*) Primary ..	2	18	..	20	1	83	23	106	126
(*b*) Secondary ..	..	3	..	3	..	184	21	205	208
(*c*) Tertiary ..	1	15	..	16	1	30	2	32	48
(*d*) Hereditary ..	..	..	..	..	..	1	..	1	1
Soft Chancre ..	..	4	..	4	..	343	9	352	356
A.—Gonorrhœa and its complications	2	50	..	52	1	1,310	57	1,367	1419
Other Infectious Diseases— Filariasis	..	..	..	..	..	79	23	102	102
Carried forward ..	24		36		18				

TABLES V AND VI.—(*Continued.*)

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patients.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
Brought forward ..	24		36						
II. GENERAL DISEASES NOT MENTIONED ABOVE.									
Cancer or other malignant Tumours of the Stomach or Liver	..	1	1	1	..	..	..	..	1
Cancer or other malignant Tumours of the Stomach or Liver	..	1	..	1	..	..	..	..	1
Cancer or other malignant Tumour of organs not specified	..	3	2	3	..	..	1	1	4
Tumours (non-malignant)	1	31	..	32	1	34	9	43	75
Acute Rheumatism ..	..	1	..	1	..	..	..	..	1
Chronic Rheumatism ..	1	8	..	9	..	1,047	231	1,278	1,287
Scurvy ..	..	1	..	1	..	..	..	..	1
Beri-Beri ..	..	3	..	3	..	1	..	1	4
Rickets ..	..	..	..	..	..	..	1	1	1
Anæmia—									
(*a*) Pernicious ..	..	..	..	..	..	..	..	..	..
(*b*) Other Anæmias and Chlorosis	..	2	..	2	..	54	153	207	209
Diseases of the Thyroid Gland—									
(*a*) Exophthalamic Goitre	..	..	..	..	..	..	12	12	12
(*b*) Other Diseases ..	..	..	..	..	..	2	4	6	6
Diseases of the Spleen ..	..	1	..	1	..	165	27	189	190
Alcoholism	..	1	..	1	..	3	..	3	4
Chronic poisoning by Morphia	..	1	..	1		1	..	1	2
III. AFFECTION OF THE NERVOUS SYSTEM AND ORGANS OF THE SENSES.									
Meningitis (not including Tuberculous Meningitis or Cerebro-Spinal Meningitis)	..	1	1	1	..	..	..	..	1
Locomotor Ataxia ..	..	1	1	1	..	..	..	..	1
Other affections of the Spinal Cord	1	6	1	7	..	..	..	..	1
Apoplexy—									
(*a*) Hæmorrhage ..	1	5	1	6	..	..	..	..	7
Paralysis—									
(*a*) Hemiplegia ..	..	1	..	1	..	6	..	6	7
(*b*) Other Paralysis ..	1	14	2	15	..	36	3	39	54
Mental Alienation ..	..	5	..	5	..	12	12	12	47
Carried forward ..	29		45						

TABLES V AND VI.—(*Continued.*)

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patients.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
Brought forward ..									
III. AFFECTIONS OF THE NERVOUS SYSTEM AND ORGANS OF THE SENSES—*(Contd.)*									
Epilepsy	..	5	1	5	..	4	..	4	9
Chorea	..	1	..	1	..	..	..	..	1
A.—Hysteria ..	..	1	..	1	..	..	22	22	23
B.—Neuritis ..	..	4	..	4	..	186	14	200	304
C.—Neurasthenia ..	..	..	..	..	..	237	26	263	263
D.—Neuralgia and Headache	..	7	..	7	..	564	107	671	678
Other affections of the Nervous System	..	4	1	4	..	39	17	56	60
Diseases of the Eye and Annexa—									
Conjunctivitis ..	..	11	..	11	1	1,315	163	1,478	1,489
Other Diseases ..	1	57	..	58	..	481	68	559	617
Affections of the Ear or Mastoid Sinus	1	8	..	9	..	799	143	942	951
IV. AFFECTIONS OF THE CIRCULATOY SYSTEM.									
Acute Endocarditis or Myocarditis	..	5	3	5	8	8	3	11	16
Other Diseases of the Heart—									
(*a*) Valvular—									
Mitral	1	13	3	14	1	44	9	53	67
Aortic	..	2	2	2	..	1	..	1	3
(*c*) Disordered action of the Heart	..	..	..	..	..	7	..	7	7
Diseases of the Arteries—									
(*b*) Arterio-Sclerosi ..	..	..	..	..	..	1	..	1	1
(*c*) Other diseases ..	..	..	..	..	..	8	1	9	9
Embolism or Thrombosis (non-cerebral)	..	5	3	5	..	..	..	..	5
Diseases of the Veins—									
Hæmorrhoids ..	2	26	..	28	1	38	3	41	69
Varicose Veins ..	..	4	..	4	..	4	4	8	12
Other Diseases ..	..	..	..	..	1	1	2	3	3
Diseases of the Lymphatic System—									
Lymphangitis ..	1	6	..	7	..	183	63	246	253
Lymphadenitis, Bubo (non-specific)	3	15	..	18	..	77	7	84	102
Hæmorrhage of undetermined cause—									
Epistaxis	..	..	..	..	..	5	2	7	7
Other affections of the Circulatory System	..	29	3	29	..	6	3	8	38
Carried forward ..	38	1,053	61	1,291	30	21,119	4,192	25,311	26,602

TABLES V AND VI.—(*Continued.*)

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patiens.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
Brought forward ..	38	1,053	61	1,091	24	12.676	2.557	15,233	16.324
V. AFFECTIONS OF THE RESPIRATORY SYSTEM.									
Diseases of the Nasal Passages—									
Adenoids	..	..	..	..	..	9	2	11	11
Rhinitis	..	..	..	..	..	11	4	15	10
Coryza	..	..	..	..	..	410	113	525	523
Affections of the Larynx—									
Laryngitis ..	..	1	..	1	..	39	7	46	47
Bronchitis—									
(*a*) Acute	1	60	..	61	2	3,155	506	3,661	3,722
(*b*) Chronic ..	..	8	..	8	1	980	233	1,213	1,221
Broncho-Pneumonia ..	3	7	1	10	1	12	5	17	26
Pneumonia—									
(*a*) Lobar	..	48	8	51	2	30	7	37	88
(*b*) Unclassified ..	..	18	4	18	..	72	17	89	107
Pleurisy, Empyema ..	..	8	1	8	..	23	5	28	36
Congestion of the Lungs	..	..	..	..	..	7	4	11	11
Asthma	..	8	1	8	..	219	43	262	270
Other affections of Respiratory System	..	2	..	2	..	25	6	31	33
VI. DISEASES OF THE DIGESTIVE SYSTEM.									
A.—Diseases of the Teeth and Gums	..	..	..	..	..	1,884	423	2 307	2,307
B.—Other affections of the Mouth	..	12	..	12	..	172	37	239	221
Affections of the Pharynx or Tonsils	..	13	..	13	..	693	87	780	793
A. Ulcer of the Stomach	..	1	..	1	..	..	..	..	1
Other affections of the Stomach—									
Gastritis, Dyspepsia, etc.	..	7	..	7	..	702	136	838	845
Diarrhœa and Enteritis (under two years)	..	..	..	..	..	11	8	19	19
Diarrhœa and Enteritis (two years and over)	2	39	2	41	..	627	123	750	791
Colic	..	..	..	..	..	1.256	267	1.523	1,523
Colitis	..	13	..	13	..	87	23	110	123
Ankylostomiasis ..	3	174	14	177	11	7.149	1,896	9,045	8,222
Diseases due to Intestinal Parasites—									
(*a*) Cestoma (Tænia) ..	..	1	..	1	..	12	5	17	18
(*c*) Nematoda (other than Ankylostoma	..	..	..	..	..	10	7	17	17
Appendicitis	..	2	..	2	..	2	..	2	4
Carried forward ..									

TABLES V AND VI.—(*Continued.*)

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patients.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
Brought forward ..									
VI. DISEASES OF THE DIGESTIVE SYSTEM—*(Continued).*									
Hernia	7	124	8	131	4	157	16	173	804
A. Affections of the Anus, Fistula, etc	..	5	..	5	..	1	..	1	6
B. Other affections of the Intestines—									
Constipation ..	..	6	..	6	..	4,961	1,378	6,339	6,345
Cirrhosis of the Liver ..	..	7	1	8	..	1	..	1	9
Other affections of the Liver—									
Hepatitis	..	5	1	5	..	74	7	81	86
Cholecystitis ..	..	3	..	3	..	..	..	..	3
Jaundice	..	2	..	2	..	9	2	11	13
Peritonitis (of unknown cause)	..	2	..	2	..	2	..	2	4
Other affections of the Digestive System	..	17	5	17	..	36	10	46	63
VII. DISEASES OF THE GENITO-URINARY SYSTEM (NON-VENEREAL).									
Acute Nephritis ..	1	4	1	5	1	4	3	7	12
Chronic	..	2	2	2	..	32	8	40	42
A.—Chyluria ..	..	1	..	1	..	..	..	..	1
B.—Schistosomiasis ..	..	4	..	4	..	403	13	416	420
Other affections of the Kidneys	..	26	..	26	..	8	2	10	36
Urinary Calculus ..	..	..	..	..	..	1	..	1	1
Diseases of the Bladder—									
Cystitis	..	2	..	2	..	91	3	94	96
Diseases of the Urether ..	..	10	2	10	3	24	..	24	34
Diseases (non-Venereal) of the Genital Organs of Man—									
Epididymitis ..	..	6	1	6	..	6	..	6	12
Orchitis	3	44	..	47	..	139	..	139	186
Hydrocele	6	222	10	228	13	244	..	244	172
Other Diseases ..	..	100	1	100	..	197	..	197	297
Cysts or other non-malignant Tumours of the Ovaries	..	5	..	5	..	..	1	1	6
Uterine Tumours (non-malignant)	..	1	..	1	..	..	4	4	5
Uterine Hæmorrhage (non-puerperal)	..	..	..	..	..	..	19	19	19
A. Metritis									
Carried forward ..									

TABLES V AND VI.—(*Continued.*)

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patients.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
Brought forward ..									
VII. DISEASES OF THE GENITO-URINARY SYSTEM (NON-VENEREAL)—*(Continued).*									
B. Other affections of the Female Genital Organs—									
Displacement of Uterus	..	1	..	2	..	..	12	12	13
Amenorrhœa ..	..	..	..	..	..	..	13	13	13
Dysmenorrhœa ..	..	..	..	..	..	..	10	10	10
Leucorrhœa ..	..	..	..	..	..	..	29	29	29
Ovaritis	..	..	..	..	..	..	11	11	11
Vaginitis	..	..	..	..	..	..	7	7	7
Other affections ..	..	..	..	..	..	..	25	25	25
Diseases of the Breast (non-puerperal)—									
Mastitis	..	..	..	..	..	..	11	11	11
Abscess of Breast ..	..	..	..	..	..	..	4	4	4
VIII. PUERPERAL STATE.									
A.—Normal Labour ..	..	21	..	21	..	..	8	8	29
B.—Accidents of Pregnancy—									
(*a*) Abortion ..	..	..	..	..	..	..	2	2	2
(*b*) Other accidents of pregnancy	..	3	..	3	..	..	5	5	8
Puerperal Septicæmia ..	..	1	1	1	..	..	..	..	1
Sequelae of Labour ..	..	10	4	10	3	..	..	..	10
Puerperal affections of the Breast	..	..	..	..	..	..	7	7	7
IX. AFFECTION OF THE SKIN AND CELLULAR TISSUES.									
Gangrene	..	5	1	5	2	..	..	..	5
Boil	..	..	..	..	..	441	53	494	494
Carbuncle	..	2	1	2	..	..	..	..	2
Abscess	2	19	1	21	6	771	73	844	865
Whitlow	..	4	..	4	..	37	2	39	43
Cellulitis	1	138	1	139	3	241	37	278	417
Tinea	..	3	..	3	..	331	87	518	521
Scabies	1	12	..	12	..	3,707	1,017	4,724	4,737
Ulcers	4	440	8	444	15	8,662	2,634	11,296	11,740
Other Diseases of Skin—									
Urticaria ..	..	..	..	..	..	372	63	335	285
Eczema	..	15	..	15	..	422	57	479	494
Herpes	..	3	..	3	..	4	..	4	7
Psoriasis	..	..	..	..	..	8	1	9	9
Carried forward ..									

TABLES V AND VI.—(*Continued.*)

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patients.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total, Admissions.	Yearly Total, Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
Brought forward ..									
IX. AFFECTION OF THE SKIN AND CELLULAR TISSUES—(*Continued*).									
Elephantiasis ..	1	32	3	33	1	103	20	123	156
Chigoes	..	..	..	..	..	67	15	82	82
Other Diseases ..	..	7	..	7	3	425	96	321	528
X. DISEASES OF BONES AND ORGANS OF LOCOMOTION (Other than Tuberculosis).									
Diseases of Bones—									
Osteitis	..	6	1	6	..	2	1	3	9
Diseases of Joints—									
Arthritis	..	19	3	19	3	140	13	172	172
Synovitis	..	14	..	14	..	188	43	245	245
Other Diseases of Bones or Organs of Locomotion	..	11	..	11	3	693	88	776	787
XIII. AFFECTION OF OLD AGE.									
Senility	..	34	16	34	..	54	13	67	101
XIV. AFFECTIONS PRODUCED BY EXTENAL CAUSES.									
Suicide by cutting Instruments	..	1	1	1	..	..	..	..	1
Food Poisoning ..	..	1	..	1	..	..	..	..	1
Attacks of poisonous animals—									
Snake bite	..	1	..	1	..	1	..	1	2
Other accident Poisonings	..	..	..	..	..	1	..	1	1
Burns (by Fire) ..	1	2	..	3	..	21	7	28	31
Wounds (by cutting or stabbing Instruments)	..	85	3	85	..	52	11	63	148
Wounds (by Fall) ..	..	15	1	15	..	20	3	23	38
Wounds (in Mines or Quarries)	..	18	2	18	..	9	2	11	29
Wounds (by Machinary)	..	..	..	..	..	21	2	23	23
Wounds (crushing, e.g., rail accidents, etc.)	..	12	1	12	..	24	3	27	39
Injuries inflicted by Animals, Bites, Kicks, etc.	..	21	..	21	..	35	3	38	59
A.—Dislocation ..	..	7	..	7	2	8	1	9	16
Carried forward ..	73				103				

TABLES V AND VI.—(*Continued.*)

Return of Diseases and Deaths (In-Patients) and of Diseases (Out-Patients) for the year 1926.

Diseases.	In-patients.					Out-patients.			Total cases In- and Out-patients.
	Remaining in Hospital at the end of 1925.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at the end of 1926.	Males.	Females.	Total.	
Brought forward ..	78				193				
XIV. AFFECTIONS PRODUCED BY EXTERNAL CAUSES—(*Continued*).									
B.—Sprain	..	..	..	..	..	21	3	24	24
C.—Fracture ..	3	44	5	47	2	19	3	29	69
Other external Injuries ..	3	122	5	125	7	5,044	780	5,824	5,919
XV. DEFINED DISEASES.									
A.—Diseases not already specified or ill-defined									
Ascites	..	2	1	2	..	2	1	3	5
Oenama ..	..	1	..	1	..	5	1	6	7
Debility	3	19	4	22	..	4,467	87	554	576
Pyrexia of uncertain origin	..	..	..	..	..	656	91	747	747
Total ..	87	3,224	187	3,311	112	59,837	13,437	73,274	75,585

APPENDICES.

APPENDIX I.

Registration of Medical Practitioners and Dentists.

The Registration Board consists of the Director of Medical and Sanitary Services, the Deputy Director of Sanitary Services and one registered medical practitioner not in Government service.

During the year the Board met on seven occasions, and four medical practitioners were registered and two licensed. One of those registered was a private practitioner; all the remainder were in Government service.

No dentist was registered during the year.

The name of one medical practitioner was struck off the register for unprofessional conduct.

APPENDIX II.

Leper Settlement.

Miss Philpot, whose work in the Funzi Settlement had done so much to improve the condition of the lepers there, went on leave on 18th April, 1926, prior to resignation.

An investigation into the state of the Leper Settlements was made in the month of May and a report submitted.

Medical records were made of all the patients on Funzi Island. Many of these patients had been in the Settlement in 1924, when specific treatment was begun and close observation of their condition at the time made. Apart from a decided mental change for the better and the absence of neglected ulceration, no improvement could be definitely discerned in the leprous state of these people. Nasal smears taken throughout the Settlement disclosed that, apart from the influence of type of case, only one factor greatly influenced infectivity of patients. This factor was length of stay upon Funzi independently of whether the patients had been receiving the treatment or not.

The number of lepers upon Funzi have increased through the year 1926 from 90 to 108. There have been 11 deaths.

Specific treatment, dressing of sores and the administration of general medicines has been ably continued at the hands of the U.M.C.A. Nursing Sister who has devoted two whole days a week to work on Funzi. The Nursing Sister has provided the Medical Officer with a complete record of all the injections of specific drugs

given. About 60 cases have been receiving multiple injections each time. Both Sodium Morrhuate and E.C.C.O. (Muir's Formula) have been being used, but the non-continuous observation of reactions precludes any opinion being given on the subject of specific treatment on Funzi at present.

Of the new permanent Settlement on Funzi Island the nine blocks of 20 houses each have been completed, together with communal kitchens, privies, and a dispensary. Occupation of the Settlement has been delayed pending the arrangements of a running water supply, a drainage system and possibly alterations of the dispensary building.

On the south-western plateau a nursing sister's house, to accommodate two people, is nearing completion.

The falling into disrepair of the huts of the existing Settlement, the collapse entirely of several, and the increasing number of lepers requiring to be isolated during the year, early compelled measures to be taken to augment the accommodation immediately available. The lepers were taken into confidence and after several visits to explain the situation, leper labour was obtained quite voluntarily but gradually to the extent of repairing 44 huts and building two lots of two semi-detached huts, nine single huts and a dispensary hut. For building the two double huts rupees 30 was paid for labour. For the Dispensary hut rupees 20 was paid. For one of the single huts rupees 15 was paid. All the rest of the building was done labour free, while volunteers were obtained in each case of 44 huts needing repairs, to accept the responsibility for the labour necessary. With the exception of the makuti for thatching, which was all purchased from the Nduni Leper Settlement and rope which also had to be brought, all the building materials were cut, shaped and provided by Public Health Department labour.

In this way the equivalent of 14 huts were built and 44 huts repaired for a total cost of less than rupees 300.

The year at Funzi has been characterised by concentration on the provision of a fair standard of material comfort, nursing attention, treatment of general illness, supply of goods and regular rations and improvement of houses.

Nduni Leper Settlement.

Only 16 lepers remain in this Settlement. They live in their own houses, which are very good, but they have received little specific treatment and their leprotic manifestation are very striking. They are allowed to come in their canoes to Funzi District Dispensary for treatment.

The following table compares particulars of **Funzi** Settlement with the previous year:—

Funzi Leper Settlement.

	1925.			1926.		
	M.	F.	Total.	M.	F.	Total.
Remaining on 1st January ...	37	36	73	51	39	90
Admitted during the year ...	18	7	25	22	12	34
Died during the year ...	4	2	6	5	5	11
Discharged during the year ...	—	1	1	4	—	4
Remaining on 31st December ...	51	39	90	62	46	108
Escaped during the year ...	—	1	1	4	—	4

The following table shows the number of lepers of each sex segregated in the different settlements at the end of 1925 and 1926:—

	1925.			1926.		
	M.	F.	Total.	M.	F.	Total.
Funzi	51	39	90	63	45	108
Nduni	12	7	19	11	5	16
Pujini	20	20	40	17	17	34
Kengeja	8	12	20	8	11	19
Fufuni	3	—	3	3	—	3
	94	78	178	102	78	180

APPENDIX III.

Control of Opium.

The number of registered habitues receiving the controlled issue of opium is now 109 as against 124 at the end of 1925, and the average monthly consumption has decreased from 2 lbs. 6 oz. 96 grs. to 2 lbs. 0 oz. 175 grains.

The following table shows the caste, race, community or religion and sex of those on the register at the close of 1926 compared with 1925.

Table.

Nationality	Males	Females	1926 Tolas	1925 Tolas
Ismaili Khojas ..	7	18	25	28
Sunni Mohamedan ..	20	8	28	30
Ithnasheri Khojas ..	5	4	9	9
Hindoo ..	1	..	1	3
Baluchi ..	2	..	2	2
Swahilis ..	29	2	31	34
Arab ..	9	..	9	14
Persian ..	1	..	1	1
Shihiri ..	1	..	1	..
Comorians ..	2	..	2	2
Total ..	77	32	109	123

APPENDIX IV.

Eighth Annual Report of the Zanzibar Maternity Association.

For the Year ending 31st December, 1926.

During the period under review the steady progress recorded in previous years has been well maintained.

General.—Two hundred and sixty-six maternity cases were attended by our midwives in and outside the new Maternity Home as compared with 252 cases in 1925. In 47 instances attendance was rendered free, and in 27 at reduced rates. Of the total number of cases treated, 70 were Arab or African and 196 belonged to other communities, which represents over 75 per cent of the former in the town and 50 per cent of the latter. Only 4,262 visits were paid by the staff as compared with 6,364 in the preceding year, but this is accounted for by the large number of women who attend the Maternity Home for out-patient treatment.

Staff.—The Association's midwives, Mrs. Neuman, Miss Locket and Mrs. Aranki, have rendered sterling work throughout the year, and it is hoped that the three pupils under training will pass their examinations in the near future, as their services are urgently required. In this connection it must be stated that only a lack of funds prevented the Executive Committee from further increasing the number of fully qualified midwives during the year.

The Home.—It will be remembered that the Mwembeladu Home came into existence in 1925 through the generosity of the Wakf Commissioners. This clinic is reserved for Arabs and Africans, and an outpatient department for the treatment of diseases in general was opened on the 10th of May on the ground floor under the supervision of the Matron, Miss Lockett, and a visiting Medical Officer. During the year 48 in-patients were admitted and 558 ante-natal and gynæcological cases treated in the out-patient section. It is interesting to note that the out-patient dispensary has actually registered 10,335 female attendances since its opening.

Financial Position.—This is far from satisfactory, and a comparison of the Association's recurrent revenue and expenditure shows the position to be precarious. The Executive Committee are confident, however, that, in view of the wonderful record of the out-patient dispensary and the large amount of charitable services rendered by the Association, both the Government and the Wakf Commissioners will be generous and afford substantial assistance in the near future.

Appendices are given below showing in detail the activities of the Association in 1926. These have been compiled by the Honorary Treasurer, Mr. Shavakshaw Talati, whose indefatigable services on the Association's behalf the Executive Committee wish to acknowledge and place on record. Mention must also be made of the generous

donations given to the Association by the Trustees of the late Dath Hemani, Messrs. Karimjee Jivanjee and Co., the Bhatia Mahajan and Messrs. Cowasjee Dinshaw and Bros.

A. M. GRIEVE,
Honorary Secretary.

Appendix I.

Births attended by the Association Midwives during 1926.

Nationality.	Association Records. Male.	Female.	Premature and unknown.	Total.	Births Registered at the Health Office.
Arabs	8	8	2	18	29
Swahilis	16	12	10	38	22
Comorians	4	6	2	12	6
Shihiris	—	2	—	2	10
Bohoras	22	26	3	51	60
Goans	7	10	1	18	32
Hindoos (other than Bhattias)	6	5	2	13	46
Bhattias	7	7	3	17	13
Ithnasheri Khojas	39	31	12	82	56
Other Indian Mohammedans	4	3	1	8	10
Parsees	2	—	—	2	3
Seychellians	—	2	—	2	1
Greeks	—	1	—	1	1
Anglo-Indians	1	—	—	1	1
Indian Christians	—	1	—	1	—
Total	116	114	36	266	290

Appendix II.

Comparative Statement of work done by the Zanzibar Maternity Association.

	Number of Cases.							
	1919	1920	1921	1922	1923	1924	1925	1926
Arabs ...	—	—	20	13	21	31	27	18
Swahilis ...	—	—	11	11	12	18	18	38
Comorians ...	—	2	6	6	4	6	7	12
Shihiris ...	—	—	—	1	4	2	3	2
Persians ...	—	—	—	—	—	2	—	—
Total ...	—	2	37	31	41	59	55	70
Foreign communities:	46	59	55	147	96	182	197	196
Grand Total ...	46	61	92	178	137*	241*	252	266

*Total cases including abortions, etc., in 1923 and 1924 were 151 and 253 respectively.

Appendix III.

Number of Visits paid by the Association Midwives in 1926.

Maternity Visits	3,396
Ante-Natal Visits	706
Gynæcological Visits	160
Total Visits	4,262

Appendix IV.

Comparative Statement of the number of Visits paid by the Association Midwives.

	1919	1920	1921	1922	1923	1924	1925	1926
Number of visits	353	697	1,854	3,549	2,853	4,806	6,364	4,262

Appendix V.

Statement showing number of cases treated free or at reduced rates under each nationality in 1926.

	Free.	Reduced Rates.
Swahilis	38	—
Arabs	4	5
Comorians	3	8
Goans	—	10
Hindoos	1	2
Indian Mohammedans	1	2
Indian Christians	—	1

Appendix VI.

Expenditure of the Association.

		Rs.	as.	p.
1920	...	5,969	6	6
1921	...	6,775	4	3
1922	...	7,405	4	3
1923	...	8,077	0	9
1924	...	13,472	12	9
1925	...	16,836	13	6
1926	...	24,621	12	6*

*Includes Rs. 9,592-5-2 paid towards the cost of construction of the building of the Maternity Home at Mwembeladu.

APPENDIX VII.

THE ZANZIBAR MATERNITY ASSOCIATION.

Statement of Receipts and Payments during 1926.

		Rs.	as.	p.	Rs.	as.	p.
Balance brought forward	...				14,283	4	3
Subscription	...	4,210	0	0			
Fees	...	2,788	0	0			
Donations	...	50	0	0			
Miscellaneous Revenue	...	752	15	0			
Government Grant for 1926	...	7,500	0	0			
Total Income	...				15,300	15	0
Total Receipts	..				15,300	15	0
Grand Total	...				29,584	3	3

			Rs.	as.	p.	Rs.	as.	p.
Salaries	...				11,976	2	0	
House rent	...				1,740	0	0	
Drugs and Dressings	...				175	1	9	
Servants	...				126	0	0	
Uniforms	...				39	3	6	
Contingencies	...				212	4	0	
Maternity Home : Maintenance.								
Servants		420	0	0				
Furniture		50	8	0				
Equipment		30	0	0				
Food		11	0	0				
Contingencies		249	4	0				
		760	12	0				
Building construction		9,592	5	3				
					10,353	1	3	
Total Expenses	...							24,621	12	6
Total Payments	...							24,621	12	6
By Balance	...							4,962	6	9
Grand Total	...							29,584	3	3

NOTE : Balance is made up as follows :

			Rs.	as.	p.	Rs.	as.	p.
Fixed Deposit Receipts	...							4,000	0	0
Cash : As per Bank Certificate	...				1,304	10	9			
Less uncashed cheques :										
Registrar, High Court		167	2	3						
Medical Department		175	1	9						
					342	4	0			
								962	6	9
								4,962	6	9

SHAVAKSHAW H. TALATI,
Hon. Treasurer.

15th January, 1927.

APPENDIX VII.—(*Continued.*)

THE ZANZIBAR MATERNITY ASSOCIATION.

Statement of Assets and Liabilities on 31st December, 1926.

LIABILITIES.

		Rs.	as.	p.	Rs.	as.	p.
Loss on year's working	...	9,320	13	6			
					9,320	13	6
Balance of Assets	...				4,962	6	9
					14,283	4	3

ASSETS.

		Rs.	as.	p.	Rs.	as.	p.
Assets	...				14,283	4	3
					14,283	4	3

SHAVAKSHAW H. TALATI,
Hon. Treasurer.

Zanzibar, 15th January, 1927.

APPENDIX VIII.

Mwembeladu Maternity Home.

Statement showing number of confinement and other cases treated at the Home in 1926.

In-patients.

Nationality.	Confinements.	Miscarriages.	Gynæcological.	Total.
Arabs	3	1	2	6
Swahilis	28	7	3	38
Comorians	3	—	1	4
Total	34	8	6	48

Out-patients.

	Ante-Natal.	Gynæcological.	Total.
	281	278	559

ANNUAL VETERINARY REPORT

FOR THE YEAR 1926.

SECTION I.—ADMINISTRATION.

A.—STAFF.

The Veterinary Staff of the Protectorate consists of:—

Veterinary Officer	1
Assistant Veterinary Officer	1
Veterinary Cadets	4
Attendants	22

Mr. Shah Mohammed Khan, Veterinary Officer, proceeded to Europe on 26th December, 1926, on nine months combined privilege and study leave to undertake a further course in Veterinary science at the Royal Veterinary College.

B.—FINANCIAL.

		Rs.	cts
A.	The Expenditure for the year totalled ...	17,219	00
B.	The Revenue for the year totalled ...	19,257	50
	Wharfage charged by the Customs on imported stock	1,088	00
	Rent for goat lairage	480	00
	Total Rs.	20,825	00

C.—LEGISLATION.

New rules were issued under the Diseases of Animals Decree, 1923 (Government Notice No. 23 of 1926), dealing with the release of animals from quarantine.

SECTION II.—DISEASES OF ANIMALS.

DISEASES OF CATTLE.

Rinderpest.—Pemba remained free from Rinderpest during the year.

Rinderpest Outbreak in the Cattle Quarantine Station.—On February 23rd rinderpest broke out in a herd of 24 cattle imported from Mogadiscio by dhow. Three animals were found sick and one died. The remainder were slaughtered in quarantine.

No rinderpest occurred elsewhere in the Island during the year.

Trypansomiasis.—No outbreaks occurred among local stock. Of 30 blood smears taken from camels, 14 proved positive on microscopical examination. These animals were slaughtered in quarantine.

East Coast Fever.—An outbreak occurred in a herd of 24 grade cows imported from Kenya. Eleven cows and seven calves died, the remainder recovered.

Diseases of Sheep and Goats.

Pleuro Pneumonia.—An outbreak occurred at the Quarantine Station in a herd of 700 goats imported from Mogadiscio. These goats were slaughtered in quarantine, and 108 were condemned as unfit for human consumption.

Scabies.—A few cases occurred in sheep imported from Somaliland.

Hæmonchiasis.—The majority of goats and sheep, local and imported, harbour the helminth of this disease.

Diseases of Equines.

No cases of Horse-Sickness, Glanders, or Epizootic Lyphangitis occurred during the year. One case of Tetanus occurred in a mile. The animal was destroyed.

Diseases of Canines.

Tick Fever.—Two cases occurred, both were successfully treated with injection of Trypan bule.

Urethritis.—A dog suffering from urethral discharge was brought for treatment. The cause of the discharge was B. Pyocyaneus infection. A few days urethral syringing with a mild antiseptic cured the disease.

Diseases of Birds.

There was considerable mortality among fowls due to chicken cholera in the months of June and July.

SECTION III.—MJI MPIA COWSHEDS.

There are ten sheds at Mji Mpya, with accommodation for 255 cows. The average number of cows during the year was 204 with numerous calves.

There is no doubt that cow keepers now appreciate the value of these sheds. Petitions have been received from six owners for temporary accommodation on the newly-acquired vacant land. All the stock at Mji Mpya is dipped at a five-day interval.

The total number of dippings during the year was 18,018.

Native owners in the neighbourhood also took advantage of the dip, and during the year 1,221 dippings of these cattle took place.

Extension on the lines laid down by the Veterinary Advisor should be continued as funds permit.

SECTION IV.—MEAT INSPECTION.

The Government abattoir is under the supervision of the Veterinary Officer.

All animals for slaughter are brought in at 3.30 p.m. and an ante-mortem inspection is made, when any animals whose condition is considered too poor for slaughter are rejected.

Slaughtering commences at 4 a.m. The dressed carcasses are examined by the Veterinary Officer. Particular attention is given to the examination for "Measles" in bullock carcasses. If the infection is slight, the meat is thoroughly boiled and sold at a cheap rate; if severe the carcass is burnt.

During the year 19,148 animals were slaughtered, of these 218 were wholly condemned and 7,174 partially condemned. Sanction is given in a few cases by the Senior Commissioner after consultation with the Sanitation Officer to slaughter animals, usually goats, in private houses for religious purposes. These animals are inspected by the Veterinary Officer prior to slaughter.

SECTION V.—PIGADURI QUARANTINE STATION.

All imported livestock undergoes a period of quarantine at this station.

Horses and mules imported from India, South Africa or Somaliland are tested with Mallein for Glanders and a blood film is taken.

Slaughter cattle from the Lamu and Somali coasts, and milch cattle from Kenya, are quarantined for a fortnight as a safeguard against the introduction of rinderpest. Blood films are taken, and any animals infected with Trypanomosiasis are immediately slaughtered. Slaughter cattle being non-immune to East Coast Fever are dipped at a three-day interval until sent to the abattoir. The total number dipped during the year was 10,839. Sheep and goats are quarantined for four days. Any suffering from Contagious Pleuro Pneumonia are slaughtered in quarantine.

Dogs are not allowed to land unless accompanied by a certificate from a qualified Veterinary Surgeon that the dog is free from rabies. All dogs are kept under observation for six months after importation.

SECTION VI.—IMPROVEMENT OF STOCK.

Five bulls immunized to East Coast Fever, Rinderpest and Contagious Pleuro Pneumonia were imported from Kavirondo. One was sent to Weti, Pemba, and others are being distributed to various cattle centres throughout the Island.

His Excellency the British Resident also presented three bulls. As these are not immune to East Coast Fever they are kept at Mji Mpya

SECTION VII.—ACCOMMODATION FOR SLAUGHTER GOATS.

Sheds capable of housing 500 goats were erected at Gulioni and leased to the butchers at a rent of Rs 10 per month. These were opened in October, 1926.

SECTION VIII.—RECOMMENDATIONS.

1. The building of a small dispensary at Mji Mpya. The average daily number of animals housed there is about 380 milch cows and calves. In case of emergency and accident no immediate help can be rendered to the sick animals. It is advisable, therefore, that there should be a place on the site where medicines and instruments are kept to carry out any necessary treatment.

2. Drainage works of a suitable nature should be installed at Mji Mpya. The present system of sullage pits does not function properly. Pure milk cannot be guaranteed under existing conditions.

3. Lairage for slaughter cattle.—These animals are at present penned three or four miles from the Town.

The new lairage should have accommodation for 200 animals and be situated close to the Abattoir.

TABLE I.

Comparative table of deaths in Zanzibar town and Quarantine Station during the three years 1924-1926:—

	1924	1925	1926
Milch Cows ex-Dairies...	64	57	59
Calves ex-Dairies ...	66	52	52
Cart Bullocks ...	3	21	5
Oxen ...	9	38	16
Goats ...	196	258	136
Sheep ...	13	5	21
Horses ...	1	4	3
Donkeys ...	35	31	19
Mules ...	6	7	8
Buffaloes ...	4	—	1
Camels ...	23	4	—
	420	477	320

TABLE II.

Comparative table of animals imported during the three years 1924-1926:—

		1924.	1925.	1926.
Oxen	...	3,959	4,455	3,195
Cows	...	170	121	91
Calves	...	99	113	37
Goats	...	16,053	17,931	12,100
Sheep	...	6,544	5,020	3,657
Horses	...	6	4	14
Mules	...	19	20	7
Camels	...	62	18	14
Dogs	...	4	4	2
Kids	...	23	—	—
		26,938	27,686	19,147

TABLE III.

Comparative table of animals exported during the three years 1924-1926:—

		1924.	1925.	1926.
Oxen	...	588	501	345
Cows	...	3	4	31
Calves	...	1	—	—
Goats	...	789	1,931	619
Sheep	...	17	305	20
Buffaloes	...	9	—	—
Camel	...	1	—	3
Kids	...	3	25	—
Donkeys	...	143	195	47
Horses	...	2	7	1
Mules	...	1	—	—
Dogs	...	2	1	1
		1,559	2,969	1,067

TABLE IV.

Table showng the number of animals treated at Veterinary Hospital, Kisiwandui, during the year 1926:—

Horses	...	131
Mules	...	4
Donkeys	...	53
Camels	...	9
Cows	...	24
Bullocks	...	2
Dogs	...	120
Cats	...	7
Fowls	...	10
Dick Dick	...	1
Goats	...	4
		365

TABLE V.

Table showing the number of animals examined and slaughtered in the Government Abattoirs during 1926 compared with the previous two years:—

	Slaughtered in Government Abattoirs.			Carcases Condemned.					
				Wholly.			Partially.		
	1924	1925	1926	1924	1925	1926	1924	1925	1926
Oxen	2,961	3,496	2,914	70	119	58	1,399	2,264	2,413
Cows	54	52	47	..	..	..	37	19	7
Calves	8	15	47	..	..	..	..	..	2
Goats	13,413	15,415	12,855	25	62	156	2,967	3,579	3,557
Sheep	4,461	3,470	3,282	21	18	4	1,793	1,363	1,195
Camels	58	9	3	..	..	..	..	48	4
Buffaloes	..	2	..	..	..	..	..	..	..
Total	20,955	22,459	19,148	116	199	218	6,196	7,453	7,178

TABLE VI.

Table showing the number of examinations carried out in the Veterinary Laboratory during 1926:—

	No. Examined.	Positive.	Negative.
Trypanosomiasis (local stock)—			
Donkeys	51	—	51
Horses	23	—	23
Mules	6	—	6
Cows	3	—	3
Oxen	6	—	6
Goat	1	—	1
Dogs	2	—	2

Trypanosomiasis (imported stock)—			
Donkeys	14	—	14
Horses	6	—	6
Mules	11	4	7
Camels	39	14	25
Cows	19	—	19
Oxen	2	—	2
Dog	1	—	1
East Coast Fever (local stock)—			
Cows	4	1	3
Calves	3	1	2
Ox	1	—	-
East Coast Fever (Imported stock)—			
Cows	28	14	14
Calves	14	4	10
Oxen	26	12	14
Tick Fever—			
Dogs	2	2	—
Coccidiosis—			
Rabbit	1	1	—
B. Pyocyaneus—			
Dogs	1	1	—

Table VII.

Table showing the number of Post-Mortems performed during the year 1926:—

Species.	No. Performed.	F.C. Fever.	Septicæmia.	Pneumonia.	Red-water.	Coccidiosis.	Strangulation.	Undiagnosed.
Cows ...	23	9	6	2	4	—	—	2
Bullock ...	2	—	—	—	2	—	—	—
Calves ...	2	2	—	—	—	—	—	—
Buffalo ...	1	—	1	—	—	—	—	—
Goat ...	1	—	—	—	—	—	1	—
Rabbit ..	1	—	—	—	—	1	—	—
	30	11	7	2	6	1	1	2