

GOVERNMENT NOTIFICATION.—No. 259.

The following Reports of the Medical Officer of Health, the Sanitary Surveyor, and the Colonial Veterinary Surgeon for the year 1897, are published.

By Command,

T. SERCOMBE SMITH,
Acting Colonial Secretary.

Colonial Secretary's Office, Hongkong, 11th June, 1898.

REPORT OF THE MEDICAL OFFICER OF HEALTH OF THE COLONY OF
HONGKONG FOR THE YEAR 1897.

SANITARY BOARD.

Members :

HON. J. H. STEWART LOCKHART, *Registrar General.*

HON. R. D. ORMSBY, *Director of Public Works.*

HON. F. H. MAY, C.M.G., *Captain Superintendent of Police (Vice-President).*

J. M. ATKINSON, M.B., (Lond.), D.P.H., *Principal Civil Medical Officer (President).*

FRANCIS W. CLARK, M.B. ; D.P.H., (Camb.), *Medical Officer of Health.*

NATHANIEL J. EDE.

Secretary to the Board.

HUGH MCCALLUM.

To the Secretary of the Sanitary Board.

SANITARY BOARD OFFICES,
March 17th, 1898.

SIR.—I have the honour to submit, for the information of the Board, the following Report upon the health of the Colony of Hongkong during the year 1897.

AREA.

The island of Hongkong, upon which is situated the city of Victoria, and a number of villages, has an area of rather more than 29 square miles, while some $2\frac{3}{4}$ square miles of the opposite peninsula of Kowloon are also comprised within British territory.

The **domestic buildings** of the city of Victoria number 7,209 (exclusive of Barracks and Police Stations), of which 501 are European dwellings, while the total area at present built over is 580 acres ; these buildings extend along the sea-front for a distance of **four and a half miles**, and up the hillside to the city limit of 800 ft. above high water mark, while some 120 houses have been erected in the Peak district at altitudes varying from 900 to 1,400 ft. above sea level. The various villages on the Island contain 30 European and 1,575 Chinese houses, while British Kowloon contains 72 European and 1,785 Chinese houses, in addition to the Barracks for the Hongkong Regiment and 72 small houses used by this Regiment as married quarters.

CLIMATE.

The average monthly **temperature** throughout the year has been 71.7° F, as compared with 72° F during the year 1896 ; the maximum monthly temperature was attained in July, when it reached 82.1° F, as compared with a maximum monthly temperature in the same month of the previous year of 88.1° F ; the minimum monthly temperature was recorded in February, as in the previous year, being 54.2° F as compared with 53.1° F. The highest recorded temperature was 91.8° F in the month of September, and the lowest was 41.0° F in the month of February.

The total **rainfall** for the year was 100.03 inches, as compared with 71.78 inches during 1896, the wettest months being August with 25.55 inches and June with 23.355 inches ; while the driest months were December with 0.48 inch and March with 0.815 inch of rain ; no rainfall was recorded upon 193 days of the year, as compared with 208 days during the preceding year. The greatest amount of rain which fell on any one day was 6.03 inches on June 28th ; the relative humidity of the atmosphere throughout the year was approximately 80 per cent, the maximum occurring in March with 90 per cent, and the minimum in November with 65 per cent. The average daily amount of **sunshine** throughout the year was 4.78 hours as compared with 4.8 hours in the previous year ; on 71 days only was no sunshine recorded.

These figures have been calculated from the Monthly Reports issued by the Director of the Hongkong Observatory ; the temperatures were taken at 108 feet above mean sea-level and at 4 feet above the grass.

GENERAL SANITARY CONDITION.

Some little progress has been made during the past year towards the structural improvement of the sanitary condition of the Chinese dwellings in the Colony, although, as will be seen from Appendix A, a copy of which was submitted by me to the Insanitary Properties Commission, much yet remains to be done to render the houses of the Chinese reasonably habitable, and **legislation is urgently needed** to remedy some of the most glaring sanitary defects which are still permitted in the construction of house property in this Colony. The opposition, however, which the Board met with during the past year in its endeavour to prevent the obstruction of private streets and lanes would seem to indicate that the bitter lessons of 1894 and 1896 have already almost passed into oblivion, and that great difficulty will be experienced by the Government in securing such emendations of the laws of this Colony as are unquestionably necessary if any real attempt is to be made to render the Colony immune from devastating epidemics of such filth diseases as Bubonic Fever or Typhus.

The erection of **back to back houses** is still, I regret to say, permitted, notwithstanding the fact that this type of building was so strongly condemned by Mr. OSBERT CHADWICK in his report upon the sanitary condition of Hongkong of 1882, and in various subsequent Reports of Committees upon the housing of the working classes. It must be borne in mind that such back to back houses as are erected in this Colony cannot be in any way compared with back to back houses as erected in England, for in these latter the depth of the building rarely much exceeds the frontage, while in Hongkong almost all Chinese dwellings are about 13' wide (exclusive of the thickness of the party-walls) while they may extend in depth for some 30' to 50', and consist of one long narrow room, on each story, lit only by one or two small windows, except upon the ground floors where the whole front is more or less open during the daytime; at the back of this room is a cook-house with smoke-hole in the ceiling while the room itself is subdivided, by partitions of match-boarding 8' high, into a number of cupboards or cubicles, varying in size from 6' by 7' to 8' by 10', each of which constitutes the home of a family of two, three, four, or more persons. It can readily be imagined that the amount of light which penetrates the interior of these cubicles is indeed infinitesimal, and it is almost impossible for anyone who has not ventured into these dwellings to realize the amount of filth and rubbish that will accumulate in them even in a few weeks.

As stated in my Report for 1896 I am strongly of the opinion that the partition walls of these **cubicles** should not be permitted to exceed 6' in height, except in the case of very lofty rooms or on the top floors of dwellings, when roof lights are provided, for under ordinary circumstances it seems almost impossible to adequately light these cubicles.

In consequence of the insanitary condition of the large number of **matsheds** which are used by contractors for the housing of coolies employed in building operations, and upon the advice of the Acting Attorney General that they could not be legally dealt with as "domestic buildings" the late President of the Board and I drafted a number of Regulations providing for the preparation of the sites, the provision of adequate cooking accommodation, drainage and latrine accommodation, the prevention of overcrowding, and the proper scavenging of such of these temporary sheds as are intended to be used for a longer period than three months, and for the accommodation of a greater total number of persons than twenty; and these Regulations were duly approved by the Board and subsequently adopted by the Governor in Council, in accordance with section 58 of Ordinance 15 of 1889, with the result that a marked improvement is apparent in their sanitary condition, which will, I am sure, prove of great benefit to the health of the occupants.

The provisions of section 4 of Ordinance 15 of 1894, which require that the **ground surfaces** of all domestic buildings and of the cook-houses, latrines and yards attached thereto, should be properly **concreted**, have, during the year, been extended to the villages of Hunghom, Yaumati and Tai Kok Tsui on the Kowloon Peninsula, by the Governor in Council, as provided for in section 14 of the said Ordinance, and in consequence the condition of the Chinese dwellings in these villages has been vastly improved, and I hope shortly to see the same law applied to the important villages of Shaikiwan and Quarry Bay.

Another matter which has received attention during the past year is the insanitary condition of many of the **opium divans** in the Colony; these were found to be dark, exceedingly dirty and greatly overcrowded both by day and night, being in fact used at night as unlicensed lodging-houses, although unfortunately the Acting Attorney General advised that they could not be dealt with under the Regulations which govern common lodging-houses in the Colony. A Bill was accordingly drafted, and was subsequently passed by the Legislative Council under the title of "An Ordinance to further amend the Prepared Opium Ordinance, 1891," which transferred the right of granting Opium Divan licences from the Opium Farmer to the Colonial Secretary, and made certain other provisions for the due regulation of these places, while the Sanitary Board at the same time made Bye-laws under the Public Health Ordinance for their sanitary maintenance and for the prevention of overcrowding therein. This Ordinance comes into force upon the expiration of the present farm in March, 1898, and I anticipate a marked improvement in the sanitary condition of these places to result from this legislation upon the subject.

There is an urgent need throughout the Colony, and especially in the City of Victoria, for additional free **public latrines** and **urinals**; no provision is made in the great majority of Chinese dwellings for a closet or privy, and it is the custom for all men of the working class to use public latrines, many of which are owned by private individuals who charge a small fee for admission, and in addition derive revenue from the sale of the excreta to the conservancy contractor, who exports it to Canton for manurial purposes. Many of these privately-owned latrines are placed in most unsuitable positions, such as in narrow lanes and immediately contiguous to domestic buildings, and they should be replaced by free Government latrines, erected on suitable sites, and convenient of access to the people for whose use they are provided. There are at present only eleven Government latrines (including one matshe-l latrine for Hak-ka women), and three public urinals, in the City of Victoria, while the male Chinese population of the city numbers more than 115,000. In 1896 the Sanitary Board recommended the erection of a Government latrine near the old Slaughter-house site at West Point, while during 1897 they recommended the erection of latrines at Leighton's Hill (contiguous to the Race-course and the new Recreation Ground) and at the top of Ship Street, Wanchai, in addition to those it is proposed to erect in the Taipingshan resumed area; and it is to be hoped that the Government will be able to erect some at least of these during the forthcoming year.

POPULATION.

The population of the Colony at the Census taken in 1881 was 160,402 while at the 1891 Census it was found to be 221,441. Owing, however, to the great disturbances among the Chinese population occasioned by the outbreaks of Bubonic Fever in 1894 and 1896, and the resumption by the Government, and the demolition of the domestic buildings upon a comparatively large area of the City of Victoria, known as Taipingshan, it was deemed advisable for statistical purposes to take a **census** of the population in 1897, and this was accordingly done on January 20th.

The actual figures obtained by this Census were as follows:—

Chinese Civil Population.....	{ Land,	200,005
	{ Harbour,	33,275
Non-Chinese Civil Population,	{ Land,	8,034
	{ Harbour,	448
Total Civil Population,		241,762
Army,		2,850
Navy,		2,268
Total Population,		246,880

The following is the estimated population of the Colony to the middle of 1897:—

Non-Chinese Civil Population,.....	{ Hongkong,	7,388
	{ Kowloon,	716
	{ Harbour,	451
Total Non-Chinese Civil Population,		8,555
Chinese Civil Population, {	City of Victoria, including Peak and Stonecutter's Island,...	160,460
	Villages in Hongkong and Kowloon,	41,190
	Floating Population,.....	33,360
Total Chinese Population,.....		235,010
Total Civil Population of Colony,.....		243,565
Army,		2,880
Navy,		2,265
Total Population of the Colony,		248,710

The **total strength of troops** in Garrison on June 30th, 1897, was 65 British officers and 1,396 British Warrant Officers, N. C. O.'s and men, with 10 Indian Officers and 1,106 Indian Warrant Officers, N. C. O.'s and men, making a total strength of 2,577 as compared with 2,739 in the previous year. There were in addition 63 British women and 109 British children, and also 61 Asiatic women and 73 Asiatic childrens.

The **total strength of the British Fleet** on the China Station, at the middle of the year was 4,970 British Officers and men and 290 Chinese servants. Only a proportion of this number, however, are stationed here at any one time, and at the Census taken in January, the actual number of Officers and men of Her Majesty's Navy present in the Colony was 2,268; but it must also be remem-

bered that there is an important Naval Hospital in Hongkong to which invalids from the entire Fleet are sent during the greater part of the year, and that the deaths occurring in this institution necessarily influence the death-rate to a degree proportionate to the strength of the entire Fleet rather than to the mere strength of the local contingent.

The Chinese **boat population** of the Colony has been estimated to the middle of the year to have been 33,360; this, however, includes some 1,500 Chinese who are employed on board the various ships in the Harbour. These people make their homes upon the junks, cargo-boats, sampans, etc., and it is interesting therefore to note the differences in the incidence of various diseases upon them and upon the land population. The number of registered boats belonging to the Port is as follows:—

Fishing and Trading Junks,	5,922
Cargo-boats, Lighters, Sampans, etc.,	4,032
Total,.....	9,954

This gives an average of 3.2 persons to each boat.

It will be noted that the population of the Colony is classified primarily into Non-Chinese and Chinese; with these latter I have included the Eurasians, who were returned separately at the recent Census but only to the number of 251. The non-Chinese civil population includes British, who at the recent census numbered 2,374, Portuguese who numbered 2,267, Japanese to the number of 398, Germans 366, Americans 223, Malays 219, Philippine Islanders 216, with a sprinkling of Frenchmen, Spaniards, Jews, and a variety of other nationals both European, Asiatic and African. The total European and American population (exclusive of the Portuguese) to the middle of 1897 was 3656.

The **Population** of the Colony of Hongkong is essentially **an adult one**, for among the non-Chinese population no less than 52.6 per cent are between the ages of 20 and 45, as compared with 33.8 per cent at the same ages in Great Britain, while among the Chinese population 55.9 per cent are between these age periods.

The **preponderance of the male sex** is also most marked, especially among the Chinese, of whom no less than 70.9 per cent are males, while among the non-Chinese population the percentage is 58.6 of males. The explanation of this great preponderance of young male adults in the Chinese population is, as I have explained in previous Reports, that so many of them are attracted here from the neighbouring provinces of the mainland by the prospect of good wages and the protection of the British flag, and are content to leave their wives and families in China, during their sojourn here, for the facilities of transport to Canton and the neighbourhood are so great that it is a simple matter for them to visit their homes at frequent intervals.

This constitution of the population has a most important bearing upon the vital statistics of the Colony, for it should most certainly be associated with an abnormally low death-rate as well as a low birth-rate. This latter we undoubtedly have among the Chinese population, but I regret to say that instead of a death-rate of about 11 or at the most 12 per 1,000, such as should obtain in a population so largely composed of young adults we have a death-rate of no less than 18.85 per 1,000, the excess being, among the native population at least, largely due to the insanitary conditions under which the great bulk of them are at present compelled to live. A far more graphic but equally true expression of this fact would be that no less than 1,800 Chinese die annually in Hongkong, as the result of gross insanitary conditions, many of which are at present permitted by the laws of this Colony.

The **city of Victoria** is now divided into **ten Health Districts**, with an Inspector of Nuisances in charge of each, and the following table gives the number of houses and of floors (*i.e.*, separate Chinese dwellings in most cases), the population and the extent of each of these districts.

Districts.	Chinese Houses.	Floors.	Chinese Population.	Non-Chinese Houses.	Non-Chinese Population.	Acreege.	Total No. of persons per acre.
1	503	811	7,720	31	428	531	15.3
2	955	2,353	21,120	...	1,108	267	83.2
3	18	33	4,210	355	1,869	158	38.5
4	776	2,341	23,230	128	1,831	45	556.9
5	980	2,686	21,720	21	351	23	959.6
6	805	2,308	16,680	3	398	23	742.5
7	722	2,227	16,010	7	179	27	599.6
8	732	2,231	18,540	5	129	42	444.4
9	1,023	2,457	23,860	19	160	40	600.5
10	564	1,213	7,370	47	296	258	29.7
	7,078	18,660	160,460	616	6,752	1,414	

Health district No. 3 contains not only the great majority of the European residences of the city, but also the more important of the European shops and mercantile offices, to which are attached in many cases quarters for the office coolies and caretakers; in the other districts many of the European and other non-Chinese residents are compelled to occupy the upper floors of the better built Chinese houses.

The Inspector in charge of No. 3 Health District acts also as engineer in charge of the steam disinfecting apparatus.

It will be seen from the above table that the **surface crowding** of the population is very acute in No. 5 Health District, and to a slightly less extent in Nos. 6, 9, 7, and 4 Health Districts

BIRTHS.

The births registered during the year were as follows:—

Non-Chinese community,	130	113	243
Chinese community,	677	448	1,125
	807	561	1,368

This is equal to a general **birth-rate** of 5.5 per 1,000, as compared with 5.1 during the previous year. The birth-rate among the non-Chinese community alone was 17.7 per 1,000; and the nationalities of the parents were as follows:—British 88, Portuguese 74, Indian 49, German 15, natives of Malaya, and Manila 8, Jews 4, Japanese 3, French 1, and Spanish 1. It will thus be seen that the births among Europeans (exclusive of Portuguese) numbered 105, as compared with 113 during the previous year, and the birth-rate therefore among this community was 28.7 per 1,000 which compared very favourably with the birth-rate at home of 30 per 1,000.

The number of Chinese births registered does not, however, give a true record of the actual number of births which have occurred in the Colony for many of the infants that die during the first month or so of life remain unregistered, although of course the deaths of these infants are registered for the purpose of obtaining a burial certificate. It has accordingly been customary in the past, in estimating the birth-rate among the Chinese community, to add to the number of births registered the number of deaths of infants at or under 1 month old, which are recorded as occurring at the various Convents in the City, or whose bodies are discovered by the Police in the streets or in the Harbour. This makes the total Chinese births to have been 1,582 and the birth-rate among the Chinese to be 6.7 per 1,000, while the total birth-rate of the Colony will then stand at 7.3 per 1,000.

DEATHS.

The total number of deaths registered during the year was 4,688, as compared with 5,860 during 1896; but in that year, there were no less than 1,078 deaths from Bubonic Fever; discounting these latter deaths altogether however it will be seen that there has been a material reduction in the number of deaths recorded, and the **death-rate** for 1897 stands at 18.85 per 1,000 as compared with an average of 23 per 1,000 during the previous five years (exclusive of 1894). The total number of deaths among the Chinese was 4,484 which corresponds to a death-rate of 19.08 per 1,000, the rate during the previous year having been 24.73 per 1,000.

The deaths registered among the non-Chinese community were 204 as compared with 253 during 1896, and the mortality rate was therefore 14.89 per 1,000 as compared with 19 per 1,000 during 1896 and 17.6 per 1,000 during 1895.

I regret to say that nothing has yet been done in the direction of the control of Chinese doctors, by the Government, although my Report of January, 1896, recommending their registration was adopted by the Board and forwarded with a unanimous expression of opinion that the matter was one which deserved early attention. In view of the fact that poisonous preparations may be sold or administered at the present time by any ignorant and uneducated Chinaman, I certainly think that if no Ordinance for the proper control of these Chinese doctors and chemists is shortly adopted, the Sanitary Board should make a series of Bye-laws under section 13, sub-section 22, of Ordinance 24 of 1887 for regulating the sale of poisons.

DISTRIBUTION OF DEATHS.

The 204 deaths in the non-Chinese population were distributed among the following nationalities: British and American 77, Portuguese 47, Indian 38, German 13, Japanese 10, French 5, natives of Malaya and Manila 5, Negroes 5, Italian 2, Spanish 1, and Austrian 1. This gives a death-rate among the European and American civil community, including the mercantile marine, of 21.3 per 1,000; but if the Army and Navy be included, with this deaths, the rate stands at 10.1 per 1,000.

The number of deaths occurring in the **Army** was 20, of which 13 were British, the remainder being Indians. The average age of death was 24.3 years, and the causes of death were as follows.—

BRITISH.

Small-pox,	1	Phthisis,	1
Enteric Fever,	1	Heart disease,	1
Remittent Fever,	1	Alcoholism,	1
Intermittent Fever,	1	Fracture of Skull,.....	1
Enteritis,	1	Fracture of Femur,	1
Meningitis,	1	Drowning,	2

INDIAN.

Remittent Fever,	2	Diabetes,	1
Intermittent Fever,	1	Bronchitis,.....	1
Dysentery,	1	Hepatitis,	1

The death from Small-pox was that of a British officer of the Royal Artillery, who is supposed to have contracted the infection by visiting the shops in Chinatown in search of curios; the death from Enteric Fever was also that of a Gunner, but no information was furnished to me as to the probable source of infection. It will be noted that four of the deaths among the British troops were due to accidental causes.

Six deaths occurring in the **China Squadron** were registered, in this Colony, during the year, and of these no less than four were from accidental causes; the average age at death was 27.6 years, and the causes of death were as follows:—

Dysentery,.....	1	Injuries,	2
Pleurisy,	1	Drowning,	1
Embolism (wound of leg),	1		

The deaths of persons other than Chinese employed in the **Mercantile Marine** and in foreign Navies were 27 in number; of these 13 were British, 4 German, 1 French, 5 Japanese, 3 Negroes and 1 Malay.

The causes of death were as follows:—

Enteric Fever,	3	Apoplexy,	3
Enteritis,	1	Heat Apoplexy,	1
Appendicitis,.....	1	Heart Disease,	1
Dysentery,	1	Syncope,	1
Malarial Fever,	1	Phthisis,	1
Beri-beri,	3	Strangulated Hernia,	1
Bright's Disease,	1	Fracture of Skull,.....	1
Diabetes,	1	Cancer of Stomach,	1
Hepatic Abscess,	2	Unknown,	1
Alcoholism,	2		

All three deaths from **Beri-Beri** occurred in Japanese.

The total number of deaths therefore which occurred among the non-Chinese civil community during the year was 149, as compared with 199 during 1896 and 131 during 1895.

The principal causes of death among the European civil community were as follows:—

Small-pox,	9	Bronchitis,	8
Enteric Fever,.....	7	Pneumonia,.....	6
Measles,	1	Phthisis,	9
Apoplexy and Heat Apoplexy,	11	Bright's Disease,.....	3
Meningitis,	5	Hepatic Abscess,.....	2
Dysentery,	8	Hepatic Cirrhosis,	2
Diarrhoea,	6	Beri-Beri,	1
Enteritis,.....	4	"Sporadic" Cholera,	1
Sprue,	4		
Malarial Fevers,	7		
And among infants			
Trismus and Convulsions,	9	Dentition,	4
Atrophy and Marasmus,.....	3		

The one death from Beri-Beri occurred in a European who, however, was not a resident in this Colony. It will be noted that a large proportion of the deaths are due to such **tropical diseases**

as heat apoplexy, inflammatory diseases of the intestinal tract, diseases of the liver and malaria while pulmonary diseases also bulk somewhat largely in these returns. The death which was registered as due to Sporadic Cholera was that of a schoolboy who succumbed to an excess of unripe fruit and ice-creams with which he had gorged himself on a very hot day, and I certainly think that the term Cholera should never have been applied to such a case which was clearly one of acute non-infectious enteritis.

UNCERTIFIED DEATHS.

The scheme of inspection of the large number of Chinese bodies in which the deaths are not certified by a medical man, which was organised by me in the early part of 1896, has been carried on throughout the year, and this work was greatly facilitated by my appointment, last year, as Superintendent of Statistics in the Registrar General's Department; during the year, 485 dead bodies have been inspected, many of them by myself, and six deaths from Small-pox were thus discovered. Moreover, by a personal interview with the relatives of the deceased in every case, I have endeavoured to arrive at a reasonably accurate cause of death, and the general mortality statistics may therefore, I hope, be regarded as somewhat more accurate than in former years, when it was the custom to enter as the cause of death, in these uncertified cases, whatever disease the person who came to register might choose to name. I should be glad, however, to see the scheme completed by the appointment of a Chinese doctor, well trained in Western medicine, to the Sanitary staff, as suggested in my Report for 1896, who would personally inspect all these bodies and interview the relatives in their own houses, with a view to arriving at the real cause of death, for I believe that he would be able to secure far more accurate and reliable information from his own countrymen than either I or the Inspectors can hope to obtain. He would, moreover, prove a most useful ally in detecting the commencement of any outbreaks of infectious disease among the Chinese.

AGE DISTRIBUTION OF DEATHS.

The death-rate among the **infant population** still remains high, for these deaths represent no less than 20.7 per cent of the total mortality, as compared with 20 per cent during 1896 and 28 per cent during 1895. The **infant death-rate** among the non-Chinese inhabitants of this Colony during the year was only 120 per 1,000 which does not exceed the rate in England, but amongst the Chinese population this rate was no less than 593 per 1,000, which although still very high shows a marked improvement upon former years for in 1896 this rate was 745 and in 1895, 759 per 1,000. As stated in previous Reports these infant deaths are mostly due to diseases of a convulsive type, induced by the foul atmosphere which they are compelled to breathe in the dark and ill-ventilated dwellings of the poor, and although a material reduction in the number of these deaths has been effected by the sanitary improvements which have been carried out in the Colony during the past three or four years, yet a comparison of the infant death-rates of the Chinese and the non-Chinese communities will show that much yet remains to be done to improve the conditions of life under which the former are compelled to exist.

The following is a table of the age periods at which the several deaths occurred:—

	Under 1 month.	1-12 months.	1-5 years.	5-15 years.	15-25 years.	25-45 years.	45-60 years.	60 years and over.	Ages unknown.
Chinese,	483	455	648	321	382	1,062	614	511	8
Non-Chinese,	13	20	14	6	26	67	34	21	3
Totals,	496	475	662	327	408	1,129	648	532	11
Percentages,	10.5	10.2	14.1	6.9	8.8	24.1	13.8	11.4	0.2

DEATHS AMONG THE CHINESE COMMUNITY.

CHEST DISEASES.

The total number of deaths among the Chinese from respiratory diseases was 1,116, as compared with 1,185 during the previous year: this represents a death-rate from these diseases of 4.7 per 1,000. As observed last year, the mortality from respiratory diseases is far heavier among the boat population than among the shore population, the rate amongst the former alone being 6.5 per 1,000, and amongst the latter 4.4 per 1,000.

More than fifty per cent. of the total deaths from chest diseases are due to **Phthisis**, and the causes of this high mortality from this disease are doubtless those which are found to operate in a similar manner elsewhere, namely, overcrowding, inefficient ventilation and poverty; as observed last year, however, this disease is far more prevalent among the shore population than among the floating population, for while the proportion of deaths from Phthisis is only 47 per cent. of the total deaths from chest diseases among the latter, it was no less than 61 per cent. among the former.

NERVOUS DISEASES.

The deaths recorded under this heading amount to 762, but no less than 655 of these were due to Convulsions, Tetanus and Trismus occurring in infants. I have already referred to these latter deaths in speaking of the infant death-rate of the Colony and need only add that no better evidence could be adduced of the slow but gradual improvement in the sanitary condition of the Colony than the fact that, with our increasing population, the deaths from this cause are gradually diminishing, for in 1895 they were 1,107, in 1896 they were 711, and in 1897 they were, as already stated, 655.

MALARIAL DISEASES.

The total number of deaths among the Chinese from Malarial diseases was 712 as compared with 655 during 1896 and 757 during 1895; this is equal to a death-rate, from this cause alone, of 3.03 per 1,000, the rate in the previous year having been 3.3 per 1,000.

As showed in 1895, although not in 1896, the death-rate for this cause among the boat population was far greater than among the land population, for among the former it was 4.3 per 1,000 and among the latter 2.8 per 1,000. I am unable at present to explain satisfactorily why the boat population should have suffered so severely from this cause in 1895 and again in 1897 and have escaped in 1896, although doubtless climate has much to do with the relative incidence of the disease upon these two classes of the population.

There were 173 deaths recorded as due to **Beri-Beri** during the year, but no less than 52 of these occurred on board vessels in the harbour and in persons who had recently arrived in the Colony. Owing to extensive outbreaks of this disease at the Richmond Asylum Dublin during the years 1894, 1896 and 1897 considerable attention has of late been directed to its aetiology, and although there is much to be said in favour of the theory of its causation by food obtained from countries where Beri-Beri is endemic, yet the general consensus of medical opinion seems at present to be in favour of a "place infection." The disease certainly appears to show a distinct partiality for certain ships and even, it is said, for particular berths; thus one death from the S.S. *Zafiro* was recorded on January 21st, another on August 31st, and a third on November 18th of last year; one death from the S.S. *Cheong Chow* was recorded on March 20th and another on October 7th; one death from the S.S. *Cheong Fukien* was recorded on January 26th and another on March 18th. On the other hand, however, very few houses seem to exhibit these "repeat" cases of the disease, for out of the 121 deaths of Chinese residents in the Colony, from this disease during last year, I found that one occurred at 43 Praya Central on November 30th and another on December 27th, and at 191 Wing Lok Street one death occurred on May 24th, another on June 30th and a third on August 29th; but in these cases the dates of infection may well have been the same for cases in the same house, while all of the remaining 116 deaths occurred in separate premises, and not one of them occurred in any of the 103 houses in which deaths from Beri-Beri had occurred during 1896. It would appear therefore that the infection of Beri-Beri cannot be said to cling to domestic dwellings, whatever may be the facts with regard to the retention of infection by ships, and in view of the great probability of successive tenants in any dwelling obtaining their food supplies from different sources, while in ships the successive crews are more likely to be fed with cereals, etc. from the same source, the question of "place-infection" versus "food-infection" must, I think, be fairly regarded still as a debateable one, and personally I am inclined to give my adherence to the latter theory.

INFECTIOUS DISEASES.

The total number of cases of infectious disease reported by registered medical practitioners during the year, in accordance with the Bye-laws made by the Board for their compulsory notification, was 389, and they were distributed as follows:—

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.	Rate per 1,000 of Population.
Bubonic Fever,.....	...	4	13	4	21	0.08
Small-pox,	200	69	6	18	293	1.18
Enteric Fever,	30	17	13	5	65	0.26
Diphtheria,	2	...	...	...	2	...
Puerperal Fever,	2	...	3	2	7	0.03
Scarlet Fever,.....	1	...	...	...	1	...

Of the above 389 cases, 67 are known to have been imported into the Colony from the mainland or by the shipping, but in most of the cases of Small-pox no information whatever could be obtained concerning their origin, owing to the desertion of the sick and dead by their relatives. I regret to say, moreover, that nothing has been done during the past year to protect the Colony from the **introduction of infectious diseases, by the shipping**, as recommended in my Annual Report for 1896, although a striking illustration of the danger to which the Colony is exposed from this cause was afforded by the cases of Small-pox arriving with the Willison Circus Troupe in the month of February, and which were landed and distributed in various Hotels in the city, before the disease was officially recognized.

It is in my opinion absolutely necessary, in a Colony so situated as this, that every vessel arriving in British waters should be boarded by a medical man and all persons thereon inspected before any communication is permitted with the shore, and this was also the opinion of the Sanitary Board as evidenced by the following motion, which was moved by the late President, and carried unanimously at a regular meeting held on April 8th, 1897 :—

“ That a letter be addressed to the Colonial Secretary pointing out the desirability of arrangements being made, at as early a date as practicable, for the medical inspection of all vessels entering the waters of the Colony, and for the notification of the intended place of destination of those landing from an infected port or vessel, in the manner provided for in the Regulations issued by the Local Government Board, dated the 9th day of November, 1896.”

Unfortunately, however, owing to a change in the constitution of the Board, and the temporary absence of the unofficial member, this decision was reversed, on the 19th day of August, of the same year, by a motion of the President, seconded by the Captain Superintendent of Police, opposed by the Acting Director of Public Works and myself, and carried by the casting vote of the President, to the following effect :—

“ That the medical inspection of the shipping in this Colony be carried on as at present, but, in order to bring the practice here more into accord with that at home, that Part II of the Regulations issued by the British Local Government Board on the 9th November, 1896, be incorporated, as far as practicable, into the present Quarantine Regulations, an officer of the Police Force or of the Harbour Department being substituted for an officer of Customs.”

It may be explained that **“ the medical inspection of the shipping in this Colony as carried on at present ”** permits of free communication with the shore and the landing of passengers before the visit of the Health Officer of the Port, and is therefore, in my opinion, of absolutely no value as a means of protection of the Colony from the importation of infectious disease. The only circumstances under which a vessel may not establish communication with the shore before the visit of the Health Officer is when such vessel arrives from a port or place which has been declared by the Government of this Colony, by a proclamation in the *Gazette*, to be infected—a procedure which is very rarely adopted—or when the master of any vessel is so sure of the existence of a case of infectious disease on board that he flies the Quarantine flag on arrival—an almost equally rare occurrence.

The not unnatural result of the action of the Board has been that the question has remained since then *in statu quo*, the last paragraph of the later resolution not having been carried into effect, probably because the cost of providing Police boarding officers in lieu of medical boarding officers would be almost as great, whereas the results would be most unsatisfactory and the delay to shipping would be far greater. It must be remembered, of course, that there are no Customs dues in Hongkong, and hence there is no staff available for the assistance of the Port Medical Officers as at home.

My own scheme for the proper working of the medical inspection of the shipping, without any unnecessary delay, is that there should be three Assistant Medical Officers of Health, appointed exclusively for duties afloat, that they should form part of the Sanitary Board staff, and act generally under the instructions of the Medical Officer of Health for the Colony. Two residences should be provided, one at Kennedy Town and the other at North Point, both close to the shore, and these officers, who should be young single men, should be required to reside therein—that is to say, two of them at Kennedy Town and one at North Point, or *vice versa*. From sunrise until 9 a.m. there would be a boarding medical officer on duty at either end of the Harbour; from 9 a.m. until 3 p.m. the third medical officer would be on duty and would deal with all vessels entering the Harbour between these hours; from 3 p.m. till 5 p.m. one of those who had been on duty in the early morning would take charge while the other would be on duty from 5 p.m. until an hour after sundown. In practice it would probably be found that these hours of duty would need some modification to accord with the seasons, for they merely suffice to show that three boarding medical officers could readily accomplish the necessary inspection of the vessels without any undue interference with the shipping interests of the Port. A boat with four Chinese boatmen would have to be provided at either station, while the launch already in use would be needed during the time that one officer only was on duty.

The function of each of these boarding medical officers would be to board every vessel, whether steamer, sailing ship or native craft, entering the waters of Victoria Harbour while he was on duty and

make a sufficient examination of all persons on board, whether passengers or crew, to assure himself that none of them were suffering from any infectious disease, but such examination would not be deemed necessary if the Master of the vessel produced a certificate (somewhat similar to that furnished to the Customs Officers at home) signed by himself and countersigned by the Surgeon to the ship, to the effect that there had been no sickness of an infectious nature and no death during the voyage, and that the Surgeon had examined every person on board during the 12 hours previous to the arrival of the vessel in British waters, and was satisfied that they were then all in good health. Such Surgeon must in all cases be a person entitled to be registered in this Colony as a medical practitioner under Ordinances 6 of 1884 and 4 of 1893, and penalties should be provided to prevent the signing of such certificates by persons other than *bonâ fide* medical practitioners. When it is remembered that all the Mail Steamers, including P. & O., O. and O., N. P., C. P. R., M.M., N.D.L., and the Holt, Shire, Glen, and probably other lines carry Surgeons, it will be seen that not many of the thirteen steamers which enter this Port daily, will need a very prolonged visit from the boarding medical officer, and that the time of these officers will be largely occupied in supervising the Junk passenger traffic which is generally admitted to be largely responsible for the introduction of infectious disease into this Colony. There is no reason why these boarding Medical Officers should not also carry out the medical inspection of Chinese emigrants which is required by section 41 of Ordinance 1 of 1889, or at least such of this work as must be done afloat, for the number of persons to be examined averages only 230 per day.

It would be necessary for a Chinese Interpreter to accompany each of the Medical Officers on his visits, and accommodation should be provided for them also, at the residences at East and West Point.

The Quarantine Regulation proposed by me to provide for this medical inspection of all vessels was as follows :—

“ All other vessels arriving at the port of Victoria, or entering the waters of the Colony
 “ on the north side of the island of Hongkong shall remain outside the following limits, namely,
 “ on the East, the Eastern boundary of the Harbour of Victoria, and on the West, a line
 “ drawn due North and South from the West end of Stonecutter’s Island, and shall not com-
 “ municate otherwise than orally with the shore, until a general medical inspection of the
 “ passengers and crew and of all other persons on board such vessels, has been made by the
 “ Boarding Medical Officers: and the Master of every such vessel shall not permit any person
 “ to leave such vessel, or any cargo to be landed therefrom until he has obtained a certificate
 “ granting pratique from the said Boarding Medical Officer.

“ The Master of every vessel shall furnish the Boarding Medical Officer with all such
 “ information as he may require, and if, in the opinion of such Medical Officer, there has been
 “ during the voyage, or there is at the time of his visit, any case of, or any death from, an
 “ infectious or contagious disease on board, or any person whom he suspects to be suffering
 “ from any such disease, he may require the Master to at once proceed to the Quarantine
 “ anchorage; and any such vessel shall be deemed to be ‘ a vessel arriving in the waters of
 “ this Colony having at the time of arrival, or having had during the voyage, a case of any
 “ infectious or contagious disease on board’ and shall comply with all the Quarantine
 “ Regulations relating to such vessels :

“ Provided always that Her Majesty’s Mails may be landed from any vessel at any time
 “ after her arrival in the waters of the Colony, and that such mails may be accompanied
 “ ashore by a mail officer or officers, but the names of all such officers must be given to the
 “ Boarding Medical Officer by the Master of the vessel, at the time of his visit of inspection ;

“ And provided also that the Boarding Medical Officer may, in his discretion, omit such
 “ general medical inspection of the passengers and crew and of all other persons on board,
 “ upon the production of a certificate in the form set forth in the Schedule attached hereto,
 “ duly signed by the Master of the vessel and countersigned by the Surgeon to the effect
 “ that there has been no case of sickness of an infectious nature during the voyage, and that
 “ the said Surgeon has seen every person on Board during the twelve hours immediately
 “ preceding the visit of the Boarding Medical Officer and is satisfied that they are all in
 “ good health.”

The Governor in Council should have power to extend this Regulation to any other port in the Colony, by proclamation in the *Gazette*, and should ensure that the certificates of duly qualified medical practitioners only are accepted.

BUBONIC FEVER.

As will be seen from the foregoing table the Colony was happily spared, during 1897, a repetition of the outbreaks of this disease which characterized 1894 and 1896. Only 21 cases of Bubonic Fever were discovered during the year, all of them being of Chinese nationality, and these were distributed over the three later quarters. Two of the cases are known to have been **imported** from the mainland, four were found in the streets and could give no addresses, and of the remaining 15, no less than 8

occurred in **narrow lanes** and in houses in which cases had occurred during 1896. This appears to me to suggest that the infection of the disease adheres most tenaciously to dwellings which have once become infected, and in view of much of the experimental evidence concerning the vitality of the Bubonic Fever bacillus under certain conditions, I am strongly inclined to apply, tentatively, Sanarelli's theory concerning the bacillus of Yellow Fever, namely, that the vitality of the bacillus, outside the living bodies of man and animals, depends largely upon the co-existence of vegetable moulds by which it is nourished, to the infective material of this disease also. It is already well known that a moist atmosphere, defective ventilation, a moderate amount of heat, and the absence of sunlight, are the most favourable conditions for the development of the Bubonic Fever bacillus, while they are also the conditions which encourage the free growth of the vegetable moulds, and it is not unreasonable therefore to surmise that this property of symbiosis, which has also been observed by Metchinkoff in connection with the bacillus of cholera, may have not a little to do with the persistence of the bacillus of Bubonic Fever in damp and ill-ventilated dwellings. This theory may perhaps also serve to throw a side-light upon the origin of the recent epidemic of Bubonic Fever in Bombay and other parts of India, for one of the causes to which the outbreak was freely attributed by scientific authorities on the spot was the consumption of inferior qualities of **mouldy grain**, which if imported from a district in which the disease is endemic, such as parts of China or North-west India, might well have conveyed the specific bacillus. The following extract from the Indian press bears out this point. "In a public lecture in the Sassoon Institute, Bombay, Dr. G. WATERS disposed of the theory that Bubonic Fever had been imported into Bombay from Hongkong by rats in ships. He inclined to the belief that it was not introduced from other ports, but had its **origin in the large granaries** of the Mandvie quarter of the town. The first outbreak was among the granary employes, and rat murrain was first discovered there. Surgeon-Colonel CLEGHORN, who has made a special investigation for the Indian authorities, holds the same opinion. It is stated as a curious fact by both doctors that wheat and rice eaters have enjoyed almost complete immunity from the disease, which has been most prevalent among the millet eaters (Hindoos)—millet being a generic term for various kinds of inferior grain." The grain would probably in such a case be primarily infected by **rats** suffering from the disease, but such infection would only be retained by the inferior and mouldy grain, the bacilli deposited with the excreta in sound, dry grain being unable to retain their vitality during exportation from the infected to uninfected areas. It is an important fact, in this connection, that many of the historical outbreaks of Bubonic Fever have been associated with a **failure of the cereal crops** and occasionally also with outbreaks of **ergotism**. It is true that the Asiatic races do not eat their rice and other grain uncooked, but most of the inferior grain is ground into flour, which is made into cakes, and the heat necessary to cook these cakes, which are just browned on the outside, is not sufficient to destroy any bacilli there may be in the flour. I do not wish to suggest, however, that diet is the only, or even necessarily the most important factor in the dissemination of this disease, for I am still of the opinion that the atmosphere in the immediate neighbourhood of a patient suffering from the disease, where such patient is confined in a dirty, dark and ill-ventilated dwelling, is infective to very much the same extent as in **Typhus Fever**, and that when such atmosphere is breathed for any length of time by a healthy individual, the bacilli have every opportunity of gaining access to the lymphatic system of the respiratory tract by inhalation, and of the alimentary tract by swallowing the mucus and saliva of the mouth and pharynx, to which any particulate bodies in the atmosphere would naturally adhere. I certainly cannot subscribe however, for the reasons given in my Annual Report for 1895, to the theory which has been so freely canvassed in connection with the outbreak of this disease in Bombay, that infection is contracted, in the great majority of the cases, by **inoculation** through small abrasions of the skin. These reasons were that the inguinal and femoral buboes have been found to occur just as frequently among the European cases of the disease, who are carefully shod as among the natives who habitually go barefooted; the Europeans employed in house to house visitation and cleansing work during the Plague epidemics in this Colony of 1894 and 1896, who contracted the disease, all had femoral or inguinal buboes, although it can hardly be denied that their bare hands and arms were, by the nature of the work in which they were employed, far more exposed to any infection by inoculation than were their feet and legs; secondly, that only in very rare cases is there any evidence of a wound, of any local inflammation, or of lymphangitis, although in cases of experimental inoculation of animals these latter have always occurred, except (it is said) in a few cases in which a pure culture of the bacillus has been used, and in view of the fact that pus, blood, sputum and intestinal excreta are the natural media of transmission of the disease, it would be unreasonable to suppose, as is necessary to render this theory of infection by inoculation tenable, that contact of the supposed wound with a pure culture, is in the human subject the almost invariable rule. Another objection to this theory is that none of the diseases which are unquestionably transmitted by inoculation (*e.g.*, rabies, tetanus, charbon, etc.) have hitherto been known to occur in widespread epidemics, and the theory therefore commits us to an entirely new phase in the aetiology of the communicable diseases, and one which certainly ought therefore to be fully substantiated by facts before its advocates can expect it to meet with general acceptance.

It is difficult, I admit, to explain, with any other theory, why the inguinal and femoral glands should be so frequently the first to betray the disease, but I must confess that I still adhere to the explanation of this fact given by me in my Annual Report for 1895, namely, that the disease is essen-

tially one of the lymphatic system generally, and that, as can be seen at any *post-mortem* examination, most of the lymphatic glands of the body are in a more or less inflamed and irritable condition, while the special enlargement of any particular group of superficial glands (which does not by any means always occur) is due to purely accidental circumstances, such as by the carrying of heavy weights upon one's shoulder (as is invariably done by Asiatics) during the initial period of the disease, great strain being thus thrown upon one leg, by climbing up and down narrow flights of stairs as was done by the Europeans employed in house to house visitation and cleansing (most of the arduous manual labour was performed by coolies acting under the direction of these Europeans) or in fact by any of the ordinary daily avocations of life which happen to be of a laborious nature.

Murchison's opinion, although not perhaps scientifically accurate in the light of modern bacteriological research, yet indicates the close resemblance of Typhus Fever and Bubonic Fever, for he wrote: "Plague is perhaps the Typhus of warm climates, the two diseases being generated from similar causes and differing only in intensity from the effects of climate and other collateral circumstances."

The marked recurrence of cases in houses previously infected, even after an interval of more than twelve months, has convinced me that only the **most thorough disinfection**, and even in some cases the removal of all existing unsound woodwork, will eradicate the disease from an infected dwelling, and I have decided to abolish the processes of disinfection by burning sulphur and by washing the floors with some coal tar preparation, which have hitherto been in vogue in this Colony, and to adopt the system of disinfection which has proved so successful in Paris of spraying floors, walls, etc. with a 1 in 1,000 solution of Perchloride of Mercury; the rooms will subsequently be exposed as far as it is practicable in the ill-ventilated and mostly back to back dwellings in which these cases occur, to a **free current of air** by opening all doors, windows and ventilators as fully as possible, and keeping the premises unoccupied for a few days. There is, however, but one course for the Government to adopt, if this Colony is to be kept free from this and other filth diseases, and that is the absolute prohibition of **back to back houses**, and the compulsory provision of an adequate amount of light and ventilation in all the Chinese dwellings in the Colony.

SMALL-POX.

No less than 293 cases of this disease were reported during the year, of these 200 occurred during the first quarter. The number of **imported** cases was 37, of which 35 were imported during the first quarter of the year, and I certainly consider that the extensive outbreak of Small-pox during that quarter was largely attributable to the importation of these 35 cases, many of which would have been prevented from landing, if there had been a systematic medical inspection of all persons entering the Colony. The number of cases among the Chinese was 234, while 49 cases occurred among Europeans, 6 were Japanese, 2 Portuguese and 2 Indian. The European cases occurred mostly in groups—thus there was an outbreak of eight cases on board H.M.S. *Grafton*, which was clearly traceable to infection introduced to the ship by certain Chinese day-labourers who were working at the time in the stoke-hole; there were also four cases on board H.M.S. *Aeolus*, two cases on board H.M.S. *Centurion*, two cases on board H.M.S. *Humber* and one case on board H.M.S. *Hart*, while the sick berth attendant on board the hospital ship H.M.S. *Midge*, where these naval cases were treated, also developed the disease. I have already ventured to suggest to the Commodore that a daily medical inspection of all day-labourers employed in the Naval Yard, during the prevalence of Small-pox in the Colony, coupled with the **re-vaccination** of the crews whenever necessary would probably be the best means of protecting the Fleet from such outbreaks as that which occurred on board H.M.S. *Grafton*, and arrangements have been made to supply the Commodore with a weekly return of all cases of infectious disease notified to this Department, while a similar return is forwarded each week to the Principal Medical Officer of the Army Medical Staff on this station. It seems strange, however, in the light of the statistics furnished by Germany as to the efficacy of re-vaccination in protecting the community from Small-pox, that the Naval Authorities are not able to confer sufficient immunity on their men by careful vaccination and re-vaccination to protect them from this disease, even when it exists among the Chinese community of this Colony.

Reference has already been made to a group of cases (seven in all) occurring in the Willison Circus Troupe in the month of February, on their arrival from Saigon, while, of the remaining European cases, two developed the disease in the Garrison Female Hospital and one was an officer of the Royal Artillery whose death has already been commented on in this Report.

It may be added that the **vaccination of infants** has been compulsory in this Colony since 1890; but as it appears from the Report on the recent census that only 7 per 1,000 of the Chinese population are born in the Colony, it is evident that the protection afforded to the public health by this enactment is infinitesimal, and one is thus compelled to consider whether the compulsory vaccination or re-vaccination of adults, which has been so successfully carried out in Germany since 1874, is yet within the range of practical politics in this Colony. I must confess, however, that I am unable to suggest any scheme whereby this most desirable object could be attained without considerable interference with the liberty and comfort of the community, and we must therefore be content to rely

upon its more intelligent members protecting themselves from this most loathsome disease by judicious re-vaccination and the adoption of such other precautions as will readily suggest themselves during periods of epidemic. I would suggest, however, that the Government might undertake to supply the Tung Wah Hospital authorities with an ample supply of vaccine lymph throughout the year and offer a small bonus of, say, 20 cents to the Chinese House Surgeons at that Hospital for every successful vaccination performed by them, the results to be certified by the Government Medical Officer attending that Hospital. A similar offer might be made to the Chinese House Surgeons of the Alice Memorial and Nethersole Hospitals if the Medical Superintendent would consent to certify the results. This principle of offering bonuses for successful vaccination has been in vogue in England for many years past, and would, I believe, prove a suitable method of largely increasing the number of vaccinated persons in the Colony.

While speaking of vaccination I may mention that a most interesting historical account of the **Vaccine Institute at Saigon**, by Drs CALMETTE and LEPIGNAY will be found in the Archives de Médecine Navale et Coloniale (vol. 61) 1894; great stress is laid therein upon the fact that vaccine becomes rapidly attenuated in this climate on transmission from calf to calf, so much so that it was found necessary to obtain fresh supplies of lymph from Paris every fortnight for the inoculation of the calves until in 1892 young **buffaloes** were used experimentally in lieu of calves, and the results were so excellent, the tendency of the lymph being, in these animals, rather to become stronger than to attenuate, that buffaloes have since that date been invariably used in the Institute in lieu of calves. The practical application of this experience of our *confreres* in Saigon to our own Institute will, I am sure, appeal to the Superintendent of the Vaccine Institute, for there appears to be, at present, a general consensus of opinion among medical practitioners in this Colony that the Saigon lymph is more reliable than that prepared in Hongkong, and the use of buffaloes in lieu of calves is, no doubt, the scientific explanation of this circumstance.

ENTERIC FEVER.

Sixty-five cases of Enteric Fever were reported during the year, and no less than 51 of these were Europeans, while the remainder comprise 7 Chinese, 5 Japanese, 1 Portuguese and 1 Indian. Of the 51 European cases, however, 21 are known to have contracted the infection at neighbouring Ports while 2 others probably did so, thus leaving 28 of these cases to be accounted for locally.

During the month of June six cases occurred within a few days of one another, and as they all obtained their **milk** from the same Dairy, it is reasonable to suppose that the infection was conveyed to them by this medium. Fortunately, however, the source of contamination appears to have been promptly, although perhaps unconsciously removed, as no further cases were traceable to this cause. Many of the cases which occurred during the earlier part of the year were of so mild a type as to occasion considerable doubt in the minds of their medical attendants as to the genuineness of their infectious nature, and it would no doubt be as well if in future the diagnosis could be checked by **Widal's serum test** which seems to have established a good claim to reliability. This test consists in adding to the serum of a drop of the patient's blood ten times the quantity of a 24 hour old broth culture of the bacillus typhosus, and examining a portion of this mixture under the microscope, when in genuine cases of Enteric Fever it will be found that the bacilli, which in the broth culture are exceedingly active and uniformly distributed over the field, become motionless and clumped in masses, the intervening portions of the field being quite clear. This change takes place immediately or within a few minutes in the great majority of cases, but in those doubtful cases of Enteric Fever in which the application of the test would naturally be of most value, the change is not always so pronounced, for some of the bacilli may retain for a time a sluggish movement, while again the clumping will not be so perfect as in typical cases of the disease, but yet the influence of the serum upon the bacilli will be readily apparent, while with blood serum other than that from a typhoid patient no reaction whatever takes place, Bates Black's statement that cases of Malaria react to the test having been disproved by subsequent observers. In many cases a first test, especially if applied early in the course of the disease (*i.e.* before the tenth day), may prove negative, while a further test a week later, if the clinical symptoms continue to be suspicious, may result in producing the typical reaction.

The importance of an accurate diagnosis in all such doubtful cases cannot well be exaggerated even apart from scientific grounds, for the welfare and comfort of the patient, and of those residing under the same roof, must of necessity be largely influenced by the circumstance of the infectious or non-infectious nature of the illness, and I would venture to hope therefore that some attempt may be made by local medical practitioners to adopt this test in all doubtful cases of Enteric Fever, and I think that the Government would be wise to make use of the valuable experience of the Colonial Veterinary Surgeon in bacteriological work and instruct him to prepare the necessary cultures for such tests as that of Widal. An excellent laboratory might be fitted up at the Vaccine Institute at a comparatively small cost, and much valuable scientific work might be done there, on behalf of the Board, by its officers.

In the fifty-second issue of the Medical Reports of the Imperial Maritime Customs, just published, E. W. VON TUNZELMANN, of Chefoo, describes a **non-malarial remittent fever**, occurring among Europeans, which in many respects nearly resembles Enteric Fever, and which differs from Malarial remittent fever in the absence of initial chills or rigors, and of rigors accompanying the small daily exacerbations of temperature, and in the absence of an enlarged spleen, and which is characterized by the presence in the blood of two hitherto undescribed parasites, one of which he terms a *Medusa sanguinis hominis*, owing to its striking resemblance in form and movements to the medusae, while the other is an irregular-shaped organism, invested by a clear structureless double-contoured membrane having on the ventral aspect an orifice surrounded by a very mobile ridge or lip, and which is to be found both free, and contained within the red blood corpuscles. The presence of the medusae in the blood is, he states, invariably associated with considerable pyrexia of a remittent type, and they have hitherto been found by him to be always accompanied by the other form of parasite, but this latter may be found alone in the blood, even in enormous numbers, without producing any clinical symptoms. Whether further investigations will confirm this Report or not, it is impossible to say, but it is at least evident that a type of Fever may exist in this climate which, whether Malarial or not in origin, closely resembles in clinical features, Enteric Fever, and appears in fact to have been hitherto diagnosed as such, rather by the process of exclusion than from full conviction of its genuine enteric character. Some of these doubtful cases, reported last year as Enteric Fever, were characterized by an almost entire absence of Diarrhœa, the opposite condition being in fact more generally present, an absence of any roseolous eruption, and of gurgling in the iliac fossae, while the patients have not infrequently complained of severe neuralgic headaches, without delirium, or mental obscurity, and it is such cases as these that may eventually prove to be a type of remittent fever, possibly non-malarial, rather than a modified Enteric Fever.

It is interesting to note the small number of cases of Enteric Fever which occurred among the **Chinese** during the year, an experience which accords with the **apparent immunity** of the native population of India from this cause, while the circumstances connected with these cases appear to suggest that the same explanation of this apparent immunity may apply to both races, namely, that they are so fully exposed to the infection throughout the whole period of their existence that they almost always contract the disease in infancy or early childhood, when if they recover, the disease will have been practically unnoticed, while if they succumb the death will be attributed to Diarrhœa, Convulsions, or some other symptom. Should they then happen to contract a second attack in adult life, it will be so modified by the previous one as to be again scarcely recognizable or at least to be insufficient to drive the patient to a Hospital under European control.

Of the seven cases which occurred among the Chinese in this Colony last year, one only was an adult, and he had contracted the disease in Saigon from which port he arrived by steamer, while the other six were children ranging from 6 to 17 years of age, resident in a Home under European management. These children obviously contracted the infection from a German pastor who was brought down to the Home from the Tung Kun province of China, in consequence of illness, and died of Enteric Fever a very few days after arrival; the children had been carefully protected from any infection of this nature while in the Home, which means practically from infancy, as the Home is a Foundling one, until the arrival of this European case, when they shewed that they were equally as liable to contract the disease as any European children would have been, and it appears to me therefore that we have, in the history of these cases, a very suggestive corroboration of the theory that the Asiatic is not naturally immune to Enteric Fever but that he is almost invariably protected by an attack in infancy.

Not a few of the cases of Enteric Fever which occur in the Colony are attributable to the infection of **raw vegetables in salads**, grown in native gardens, for the luxuriant and rapid growth of such vegetables is, in accordance with the usual Chinese custom, fostered by copious waterings with sewage, prepared by mixing night-soil with diluted urine in such a manner that the solid matter is uniformly distributed throughout the liquid in finely divided particles. This naturally constitutes a most admirable fertilizer, but unfortunately for the consumers of the products of this form of market gardening which is practically universal throughout China the germs of such diseases as Cholera and Enteric Fever are very liable to be transmitted thereby, and it is certainly wiser for Europeans in this Colony to abstain from raw vegetables unless grown under their own personal supervision.

I also had reason, in certain of the cases reported last year, to suspect that the infection had been conveyed by **oysters**, and this can hardly be wondered at when I state that it is no uncommon occurrence for baskets of oysters, imported into the Colony by Chinese compradores, to be kept alive and it may be perhaps fattened, by being suspended over the Praya wall in the immediate vicinity of the various sewer outlets, until some customer may send an order for the supply of these delicacies.

The **sewerage system** of the city of Victoria has, during the past year, come in for more than its usual share of opprobrium in connection with cases of this disease, and the discovery of certain old sewers, the outlets to which had been blocked by the Praya Reclamation works, while they were yet receiving a small and probably intermittent flow of sewage from some old private drains,

the existence of which was unknown, certainly came at an opportune moment for the advocates of this theory of the transmission of the disease, but although I will grant that foul emanations from choked sewers will undoubtedly produce Vomiting, Diarrhoea, profound depression and even slight fever, I am not prepared to admit that a genuine attack of Enteric Fever can be produced in this manner, except in those somewhat exceptional cases in which the blocked drain or sewer contains the excreta of some other typhoid patient. When, however, the sewer does contain the necessary infective material derived from some **antecedent case**, I certainly think that the emanations from such sewer are capable of transmitting the disease. Some years ago I suggested the probability of Enteric Fever germs retaining their vitality in a sewage-laden soil, for as long a period even as twelve months, and that such is actually the case has quite recently been experimentally proved by ROBERTSON and SIDNEY MARTIN, so that it may be no easy matter to trace the antecedent case in those instances that are attributable to choked or defective drains or sewers, but that such a case must have occurred is one of the first principles of the germ-theory of disease.

DIPHTHERIA.

Two cases only of Diphtheria were reported during the year, both of the patients being Europeans and one of them an imported case. The other was a child in the Italian Convent, but the source of infection could not be traced. A similar case occurred in this Convent just twelve months previously.

PUERPERAL FEVER.

Seven cases of Puerperal Fever were reported during the year, all of them being Chinese. There were, however, 11 deaths registered during the year as attributable to this cause while no less than 29 other deaths are recorded as due to child-birth, and it is probable that not a few of these latter are really deaths from Puerperal Fever.

SCARLET FEVER.

One case of Scarlet Fever was reported in a European living at Kowloon, but beyond the fact that the child was in the habit of frequenting the Docks, no information could be obtained as to the source of infection.

COMMON LODGING-HOUSES.

There are now 1,001 registered common lodging-houses in the Colony as compared with 840 during 1896 and 457 during 1895. These lodging-houses are licensed to accommodate 16,905 persons, but as pointed out in my Report for last year, there must be many more Chinese dwellings which come within the legal definition of common lodging-house seeing that there are more than 100,000 unmarried Chinamen in the Colony.

INTERMENTS.

The following number of interments of Chinese have been recorded during the year :—

Chinese cemeteries of city.....	2,376
.. Plague and Small-pox Cemetery.....	80
Protestant and Roman Catholic cemeteries.....	1,186
Shau-kiwan Cemetery	185
Aberdeen	99
Stanley	53
Shek-Ko	11
Kowloon	272
	4,262

The total number of deaths among Chinese during the year was 4,484, so that 222 bodies were removed from the Colony for burial, as compared with 180 during the previous year.

117 permits for the disinterment of human remains, in accordance with the usual Chinese custom, were issued during the year, but in no case is a permit issued until at least seven years have elapsed from the date of death, and disinterment of the bodies of persons that have died from any infectious disease is, under no circumstances, permitted.

PROSECUTIONS.

The following is a return of the prosecutions that were instituted during the year by myself and the Inspectors of Nuisances acting under my instructions:—

Offences.	Summons.	Convictions.	Penalties.	Remarks.
Occupation of Basements,.....	8	8	\$150.00	
Cocklofts and Cubicles,.....	32	29	339.00	2 cases dismissed, 1 withdrawn.
Unlicensed Common Lodging-Houses,.....	39	34	490.00	4 absconded, 1 case withdrawn.
Overcrowding Common Lodging-Houses,...	2	1	25.00	1 case withdrawn.
Causing Nuisances:—				
On Private Premises,.....	38	35	194.00	1 absconded, 1 dismissed, 1 withdrawn.
In Pigsties,.....	13	13	13.00	
In Common Lodging-Houses,	1	1	5.00	
In Public Latrines,.....	3	3	35.00	
In Public Streets,	5	5	22.00	
On Crown Land,.....	1	1	3.00	
In Harbour,	2	2	4.00	
Neglect to notify infectious disease,.....	6	6	57.00	
Keeping Swine without Licence,	142	128	307.25	2 cautioned, 1 absconded, 11 withdrawn.
Keeping Cattle without Licence,	2	2	27.00	
Sleeping in Public Laundry,.....	3	3	35.00	
Sleeping in Fat-boiling Premises,.....	2	2	20.00	
Adulteration of Milk,.....	1	1	100.00	
" Whisky,	2	1	50.00	1 cautioned.
" Coffee,	1	1	50.00	
Overcrowding Tenement Houses,.....	6	3	30.00	In the other cases, order to abate forthwith made by Magistrate.
Not concreting ground surfaces,	4	4	99.00	
Keeping Unregistered Laundry,	1	1	10.00	
" " Bone-boiling Premises,...	2	2	20.00	
Total,.....	317	286	2,085.25	

DISINFECTING STATION.

The following is a return of the number of articles which have passed through the steam disinfecting apparatus during the year:—

Articles removed from private houses,	11,563
" " " Government Civil Hospital,.....	3,518
" " " Victoria Gaol,	13
" " " Tung Wah Hospital,	2,243
" " " Military Barracks,	198
	17,535

Inspector GRIMBLE, of No. 3 Health District, who has been in charge of the Machinery and has performed these duties in a satisfactory manner, reports that the boiler and fittings are in good working order, but as mentioned in my Report for last year, the building, which is a wooden structure, is in a most dilapidated condition. I understand that the plans of a new brick building have already been drawn and that this will be erected, and the machinery removed thereto, during the present year.

The apparatus was in use on 184 days of the past year.

STAFF.

A few changes have taken place on the staff during the year; Inspector HORE was dismissed and Inspector McDONALD was appointed to fill the vacancy; the two additional Inspectors who were to have been appointed from England could not be obtained at the salary offered by the Government and Inspectors ALLEN and PHILLIPS were accordingly appointed locally.

Inspector GERMAIN went to England on leave on March 20th, 1897, and his leave has been extended to September 20th, 1898, while Inspector RENNIE was also granted home leave on December 7th last, so that the staff is at present somewhat short-handed.

No serious epidemic has occurred during the year, and the staff have therefore been able to press forward the various sanitary improvements which had been already legislated for but which in many cases had not been carried out by property owners, such for instance as the concreting of ground surfaces, the regulation of cubicles and cocklofts, the registration of common lodging-houses, the occupation of basements, etc., and the good results of such general improvement in the sanitary condition of the Colony will be found in the reduced death-rate which has already been recorded in this Report. These duties have been performed in an efficient and at the same time, I venture to think, in a judicious manner, and I consider that the Sanitary Board has every reason to be satisfied with the work which the staff has performed during the past year.

The following is a list of the Inspectors of Nuisances at present employed by the Board:—

Senior Inspector.

Mr. J. R. GERMAIN.

No. 1 Health District,.....	Mr. L. BRETT.	No. 9 Health District,.....	Mr. F. FISHER.
" 2 " "	J. T. COTTON.	" 10 " "	J. J. CLERHEW.
" 3 " "	J. R. GRIMBLE.	" 11 " "	W. McDONALD.
" 4 " "	GEO. BURNETT.	" 12 " "	JOHN RENNIE.
" 5 " "	JOHN REIDIE.	" 13 " "	H. BAKER.
" 6 " "	W. PHILLIPS.	" 14 " "	P. McNAB.
" 7 " "	F. ALLEN.	" 15 " "	W. WITHERS.
" 8 " "	J. McALLISTER.		

Each Inspector is provided with a Chinese Interpreter and a Foreman of Street Cleansers, the latter of whom controls the contractor's coolies and assists the Inspector in seeing that the cleansing of the streets, lanes, etc. is properly carried out, while he also assists in disinfecting infected premises and in carrying out the general sanitary work of the district.

I append a copy of the mortality tables which have been duly checked by myself as Superintendent of Statistics, and a series of diagrams which have been prepared by Mr. HUGH McCALLUM in continuation of the former series,

and have the honour to be, Sir,

Your most obedient Servant,

FRANCIS W. CLARK.

Appendix A.

The following is a tabular statement of the sanitary condition of former Health Districts 5 and 6 (now practically 5, 6, 7 and 8) prepared for the use of the Insanitary Properties Commission. By "insufficient open space in the rear," heading C, is meant every house in which the backyard is obstructed by a bridge more than 3' 6" in width or by any other structure, and every back to back house (*i.e.*, having no backyard) in which the kitchen has not been opened out to the extent of at least one-half of the width of such house, and for the entire depth of such kitchen.

A. Back to back houses.	166
B. Houses fronting on narrow lanes	68
C. Houses with insufficient open space in the rear,	228
D. Houses abutting against the hillside to a depth of more than 4 feet,	114
A + B.....	90
A + C.....	1,193
A + D.....	40
A + B + C	78
A + B + D	4
A + C + D	158
A + B + C + D	57
B + C	33
B + D.....	9
B + C + D.....	9
C + D.....	288
Total,.....	<u>2,530</u>
Total number of houses in these districts,	<u>3,095</u>
Number of houses in fairly good sanitary condition (=18%),	565

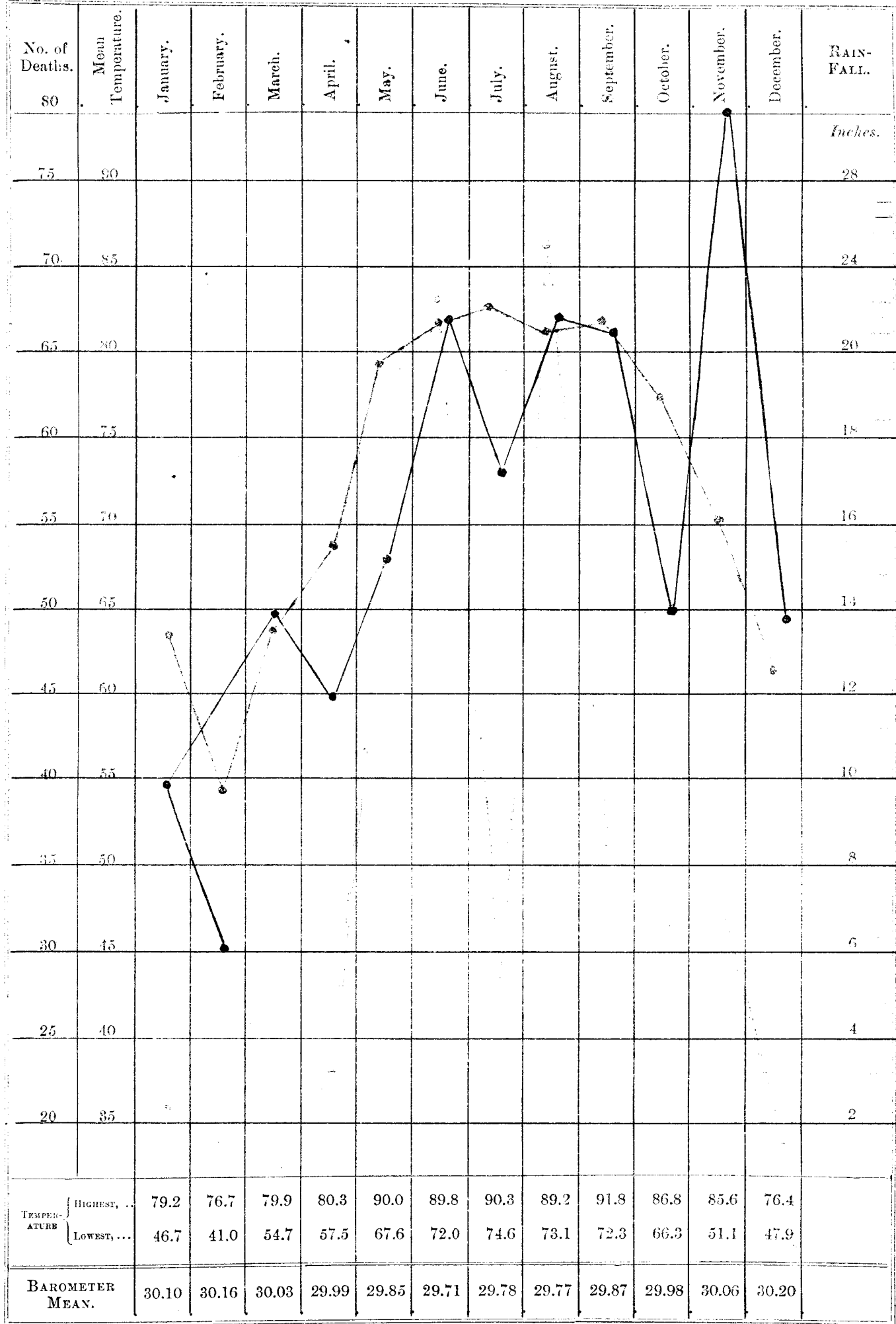
FRANCIS W. CLARK,
Medical Officer of Health.

May 1st, 1897.

Appendix B.

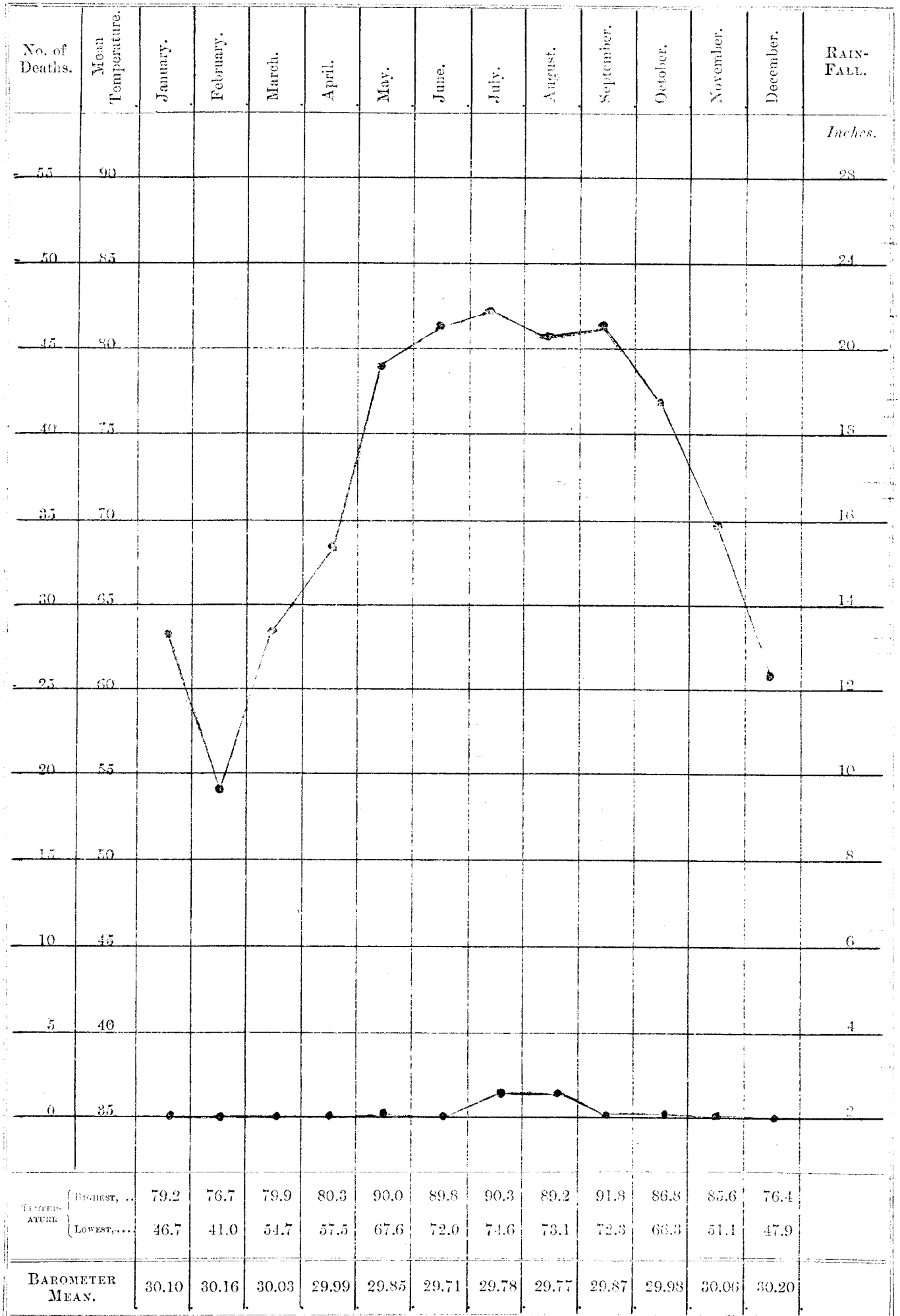
DIAGRAMS.

DEATHS FROM INFANTILE CONVULSIVE DISEASES.
1897.



NOTE.—Black line indicates the number of deaths, the Red line mean temperature, and the Blue line rain-fall in inches.

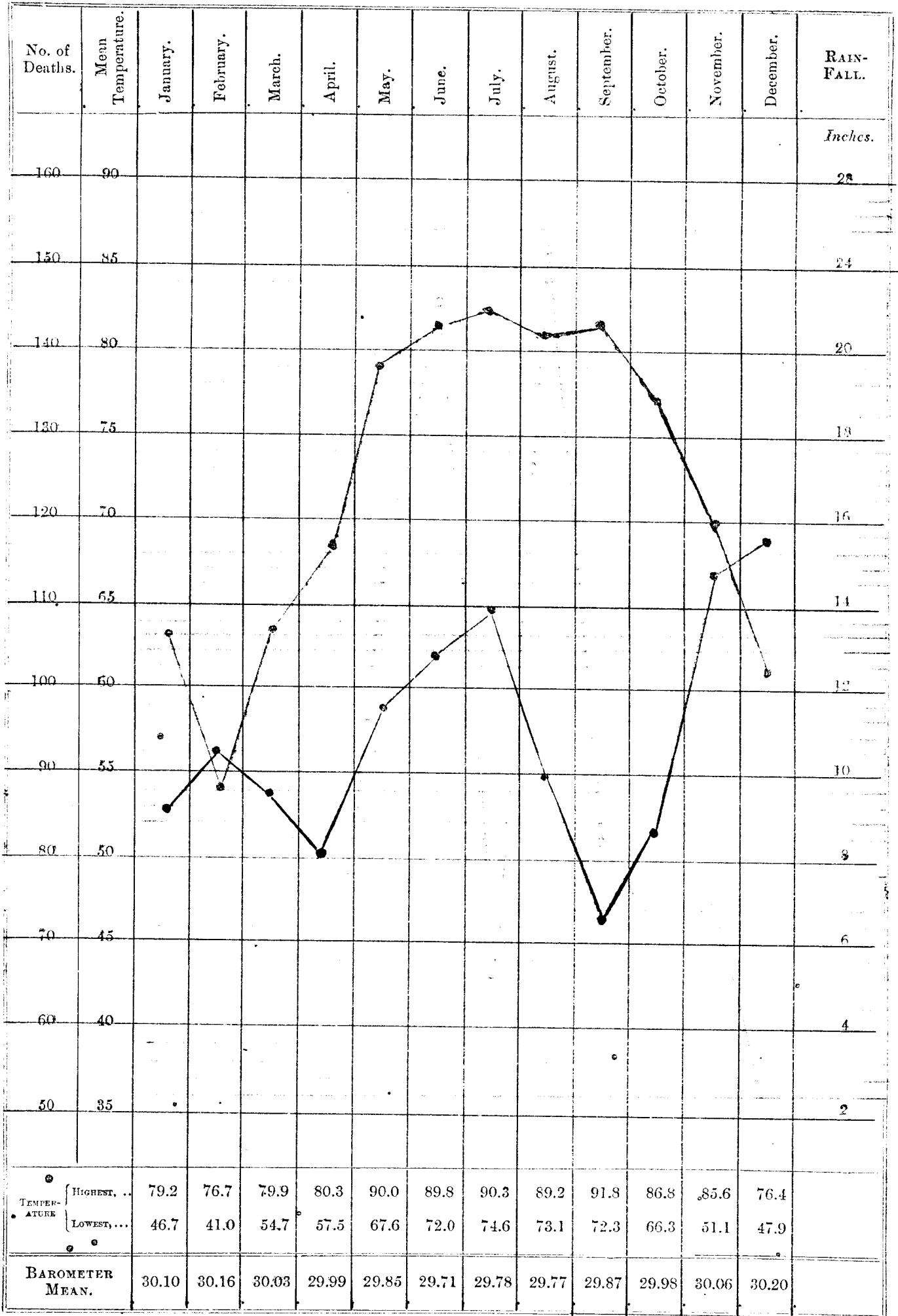
DEATHS FROM THROAT AFFECTIONS. 1897.



NOTE.—Black line indicates the number of deaths, the Red line mean temperature, and the Blue line rain-fall in inches.

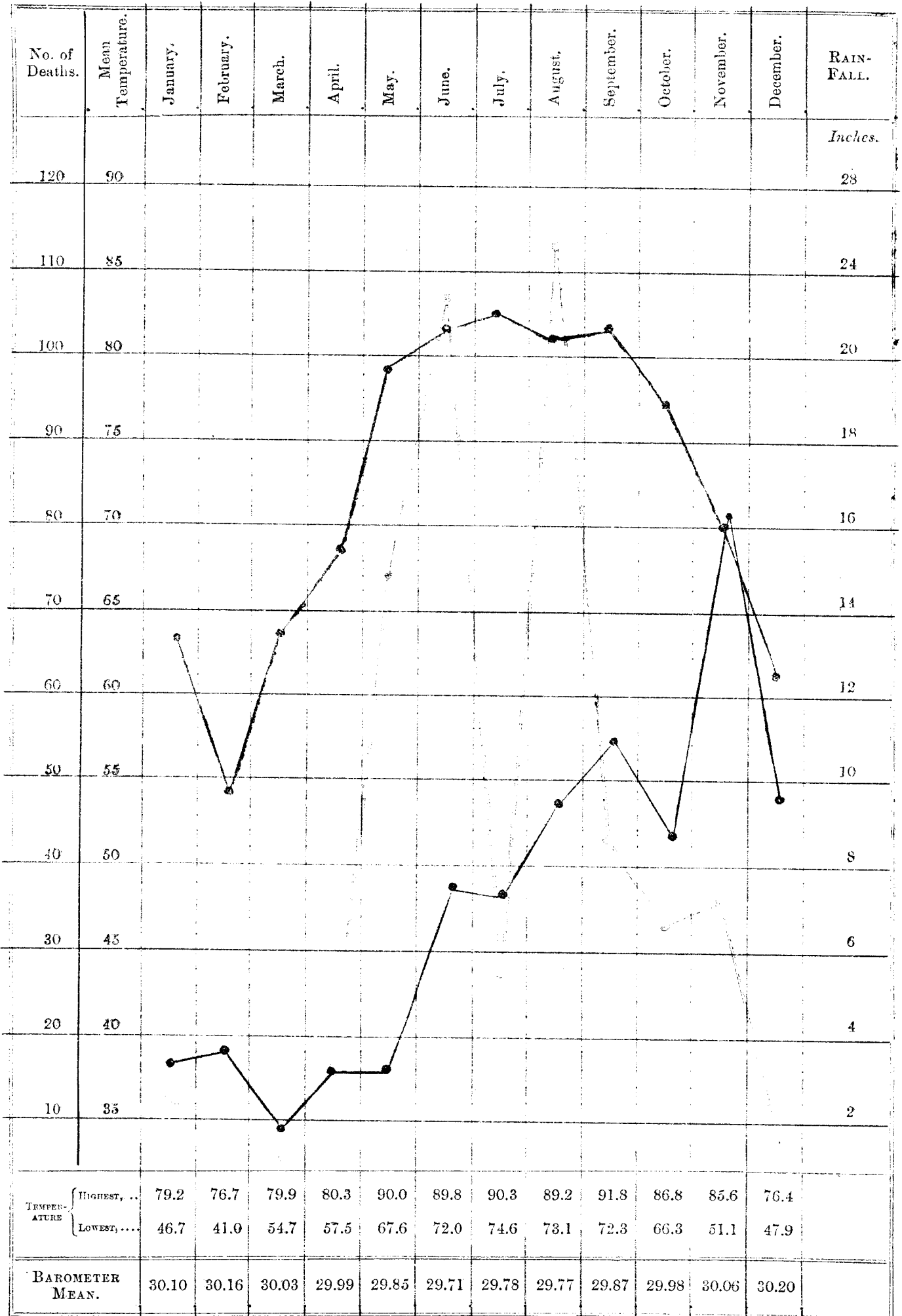
DEATHS FROM CHEST AFFECTIONS.

1897.



NOTE.— Black line indicates the number of deaths, the Red line mean temperature, and the Blue line rain-fall in inches.

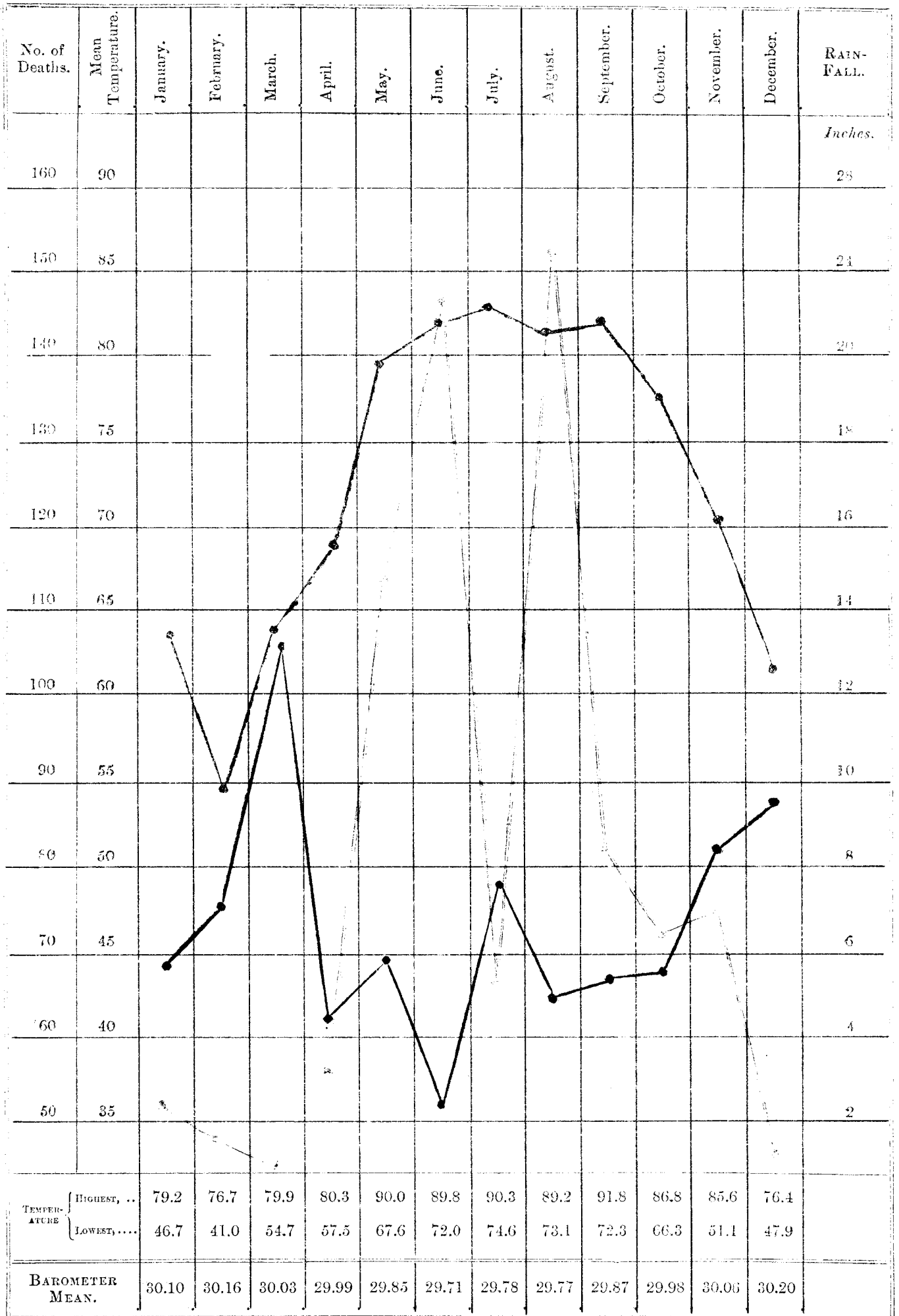
DEATHS FROM BOWEL COMPLAINTS. 1897.



NOTE.—Black line indicates the number of deaths, the Red line mean temperature, and the Blue line rain-fall in inches.

DEATHS FROM FEVERS.

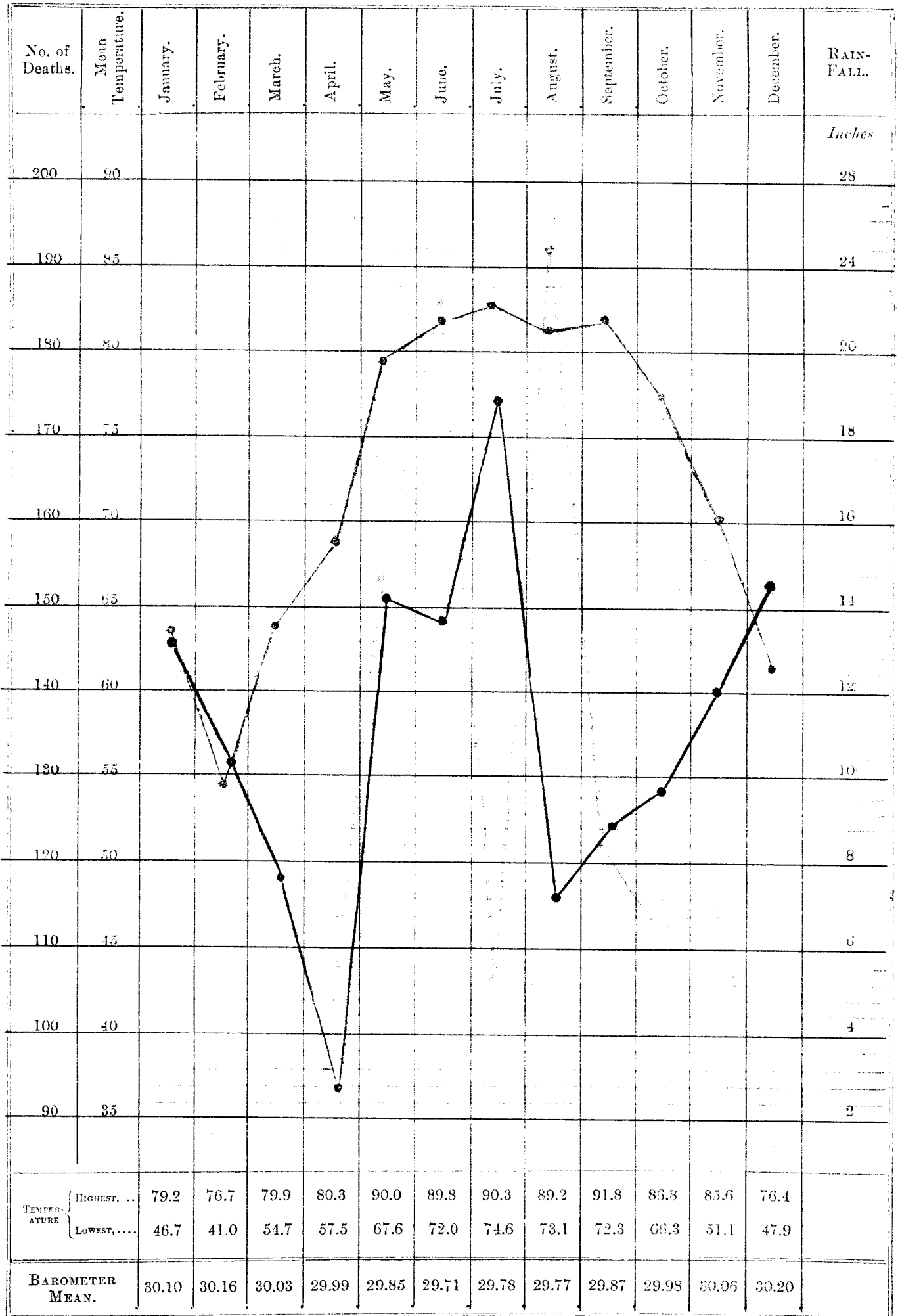
1897.



NOTE.—Black line indicates the number of deaths, the Red line mean temperature, and the Blue line rain-fall in inches.

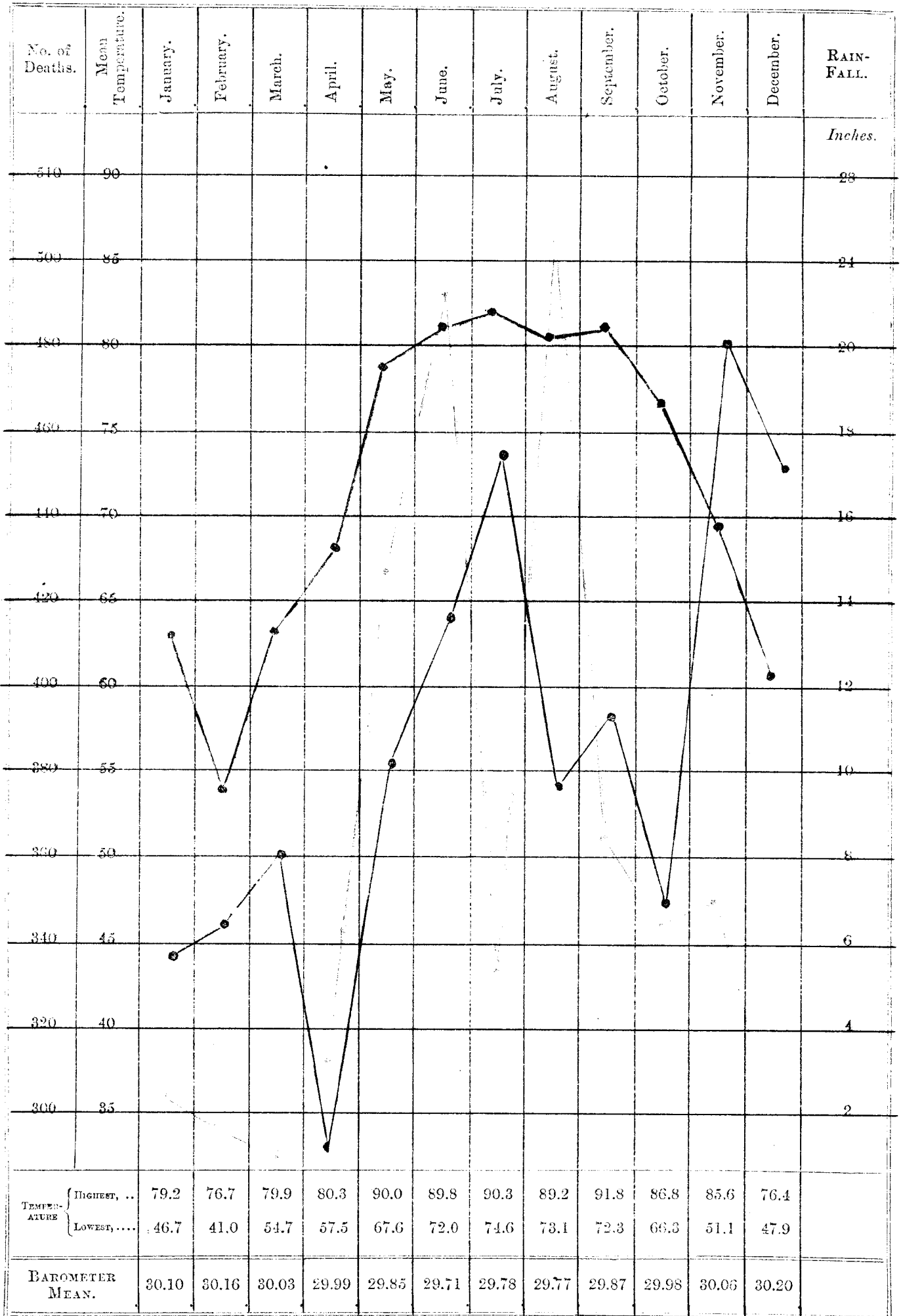
DEATHS FROM CAUSES OTHER THAN CONVULSIONS, THROAT AFFECTIONS, CHEST AFFECTIONS, BOWEL COMPLAINTS, FEVERS AND BUBONIC PLAGUE.

1897.



NOTE.—Black line indicates the number of deaths, the Red line mean temperature, and the Blue line rain-fall in inches.

DEATHS FROM ALL CAUSES. 1897.



NOTE.—Black line indicates the number of deaths, the Red line mean temperature, and the Blue line rain-fall in inches.

Appendix C.

—
RETURN OF DEATHS.

RETURN SHEWING THE NUMBER AND CAUSES OF DEATHS REGISTERED

CLASSIFICATION OF CAUSES OF DEATH. (IN GROUPS.)	BRITISH AND FOREIGN COMMUNITY.			CHINESE COMMUNITY.												
				VICTORIA.												
				HEALTH DISTRICT.												
	Civil.	Army.	Navy.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	Unknown.	Peak.	Harbour.
I.—General Diseases.																
A.—Specific Febrile Diseases.																
(1)—Zymotic.																
Small-pox,	9	1	...	17	22	8	6	8	14	7	21	52	14	1	...	5
Measles,	1	...	...	...	...	...	...	...	...	1	4	...	...	...	...	...
Typhoid Fever (Enteric),	9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Simple Continued Fever, .....	...	...	...	...	...	...	11	1	...	...	...	...	...	...	...	...
Sporadic Cholera,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery,	7	1	2	3	8	...	4	5	6	6	9	20	...	3	...	13
Bubonic Fever (Plague), .....	...	...	...	...	2	...	...	4	2	2	3	4	2	...	...	...
	27	3	2	20	32	8	21	18	22	16	37	76	16	4	...	19
(2)—Malarial.																
Fever, Intermittent,	6	2	...	11	30	2	17	9	3	12	12	22	5	1	...	15
„ Remittent,	4	3	...	8	24	2	14	23	10	13	18	37	6	1	1	9
„ (Undefined), .....	...	...	...	...	21	...	...	...	...	...	1	...	...	...	...	...
Beri-Beri,	4	...	...	...	13	3	13	14	7	15	22	17	3	1	...	56
	14	5	...	19	88	7	44	46	20	40	53	76	14	3	1	80
(3)—Septic.																
Pyæmia, .....	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...
Septicæmia, .....	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...
Puerperal Fever, .....	...	...	...	...	1	...	1	1	1	...	...	1	...	...	...	1
	...	...	...	1	11	...	2	1	1	1	...	1	...	...	...	1
(4)—Venereal.																
Syphilis, .....	...	...	...	1	5	...	1	1	1	...	4	1	...	1	...	2
Total Group A,	41	8	2	41	136	15	68	66	44	57	94	154	30	8	1	102
B.—Diseases dependent on Specific External Agents.																
(1)—Parasites.																
Worms, .....	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
(2)—Poisons.																
Vegetable (Opium), .....	...	...	...	...	1	...	1	1	...	...	...	1	...	...	...	...
Gaseous, (suffocation in a fire), .....	...	...	...	...	...	...	...	...	...	...	...	15	...	...	...	...
„ (suffocation in hold of ship), ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	...	...	...	...	1	...	1	1	...	...	...	16	...	...	...	1
(3)—Effects of Injuries.																
Burns, .....	...	...	...	...	1	...	...	...	...	...	1	2	1	...	...	...
Sun-stroke,	2	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Heat-apoplexy,	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Drowning,	3	2	1	1	1	1	...	...	...	1	1	...	1	...	...	23
Injuries, .....	...	...	1	...	...	1	...	...	...	2	3	2	2	...	...	1
„ during birth, .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Surgical Injuries, .....	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Syncope from Shock,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fracture of Skull,	4	1	...	1	1	...	2	...	1	2	4	2	2	...	...	3
„ of Spine, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
„ of Tibia, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
„ of Ribs, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
„ of Femur and Clavicle, .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Strangulation by hanging, .....	...	...	...	2	2	...	2	...	...	...	1	...	1	...	...	...
Cut-throat, .....	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...
Asphyxia, .....	...	...	...	...	...	...	...	1	...	3	...	...	...	...	1	...
Rupture of Spleen, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
	12	4	2	5	6	2	7	1	2	10	13	6	7	...	1	29
Carried forward, (Group A), ...	41	8	2	41	136	15	68	66	44	57	94	154	30	8	1	102

DURING THE YEAR ENDED THE 31ST DAY OF DECEMBER, 1897.

CHINESE COMMUNITY.								TOTAL AT THE DIFFERENT AGE PERIODS.																GRAND TOTAL.		
KOW-LOON DISTRICT.		SHAUKI-WAN DISTRICT.		ABERDEEN DISTRICT.		STANLEY DISTRICT.		Under 1 month.		1 month and under 12 months.		1 year and under 5 years.		5 years and under 15 years.		15 years and under 25 years.		25 years and under 45 years.		45 years and under 60 years.		60 years and over.			Age Unknown.	
Land Population.	Boat Population.	Land Population.	Boat Population.	Land Population.	Boat Population.	Land Population.	Boat Population.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.		Non-Chinese.	Chinese.
5	14	...	...	4	...	1	...	...	1	1	13	1	72	...	51	1	23	6	32	...	5	1	...	...	209
...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	6
19	15	...	1	11	6	3	1	...	...	...	3	...	14	...	7	...	7	...	15	...	15	...	7	...	68
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
4	1	3	2	...	1	1	...	...	...	1	1	1	5	...	10	1	8	3	34	2	22	2	9	...	99
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	6	...	7	...	...	...	1	...	19
28	30	3	3	15	7	5	1	...	1	2	18	3	95	1	73	5	46	15	89	3	42	3	17	...	413	
25	13	30	9	4	4	7	...	1	...	2	13	...	22	...	33	1	29	4	65	...	34	...	35	...	239	
33	13	40	23	4	...	1	...	...	...	1	8	...	16	...	43	1	53	3	117	2	31	...	17	...	292
...	...	...	...	1	...	...	...	...	...	...	11	...	9	...	2	...	...	...	1	...	...	...	...	...	23
6	...	2	1	...	...	...	...	...	...	...	...	...	...	...	3	3	40	...	107	...	14	...	9	1	177
69	26	72	33	9	4	8	...	1	...	3	32	...	47	...	81	5	122	7	290	2	79	...	61	1	731	
...	...	...	...	...	...	...	...	...	...	...	8	...	1	...	...	...	...	...	1	...	...	...	...	...	10
2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	6
1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	3	...	...	...	...	...	11
3	4	1	...	...	...	...	...	...	...	...	8	...	1	...	...	...	9	...	8	...	1	...	...	...	27
1	...	1	...	...	...	...	...	...	...	...	3	...	1	...	2	...	...	...	11	...	2	...	...	...	19
101	60	77	36	24	11	13	1	1	1	5	61	3	144	1	156	10	177	22	398	5	124	3	78	1	1,190	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	...	4	...	5	...	1	...	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	...	9	...	6	...	1	...	21
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	2	...	...	...	...	1	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	3
...	14	1	1	...	...	...	...	...	1	...	6	...	7	...	5	3	5	2	17	...	1	...	...	...	51
1	...	3	...	...	1	...	...	...	...	...	...	...	...	...	1	1	5	...	4	...	4	...	1	...	17
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	5	4	8	...	4	...	1	1	25
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	...	...	...	5
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	...	...	6
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2
9	14	5	2	1	1	2	...	6	...	10	...	10	5	24	11	48	...	17	1	2	1	2	139
101	60	77	36	24	11	13	1	1	1	5	61	3	144	1	156	10	177	22	398	5	124	3	78	1	1,190	

RETURN SHEWING THE NUMBER AND CAUSES OF DEATHS REGISTERED

CAUSES.	BRITISH AND FOREIGN COMMUNITY.			CHINESE COMMUNITY.												
				VICTORIA.												
				HEALTH DISTRICT.												
	Civil.	Army.	Navy.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	Unknown.	Peak.	Harbour.
<i>Brought forward, (Group A.)...</i>	41	8	2	41	136	15	68	66	44	57	94	154	30	8	1	102
<i>General Diseases,—Continued.</i>																
<i>Effects of Injuries,—Continued.</i>																
<i>Brought forward,.....</i>	12	4	2	5	6	2	7	1	2	10	13	6	7	...	1	29
Wounds (Undefined), .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bullet Wound of heart (accident), .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Starvation, .....	...	...	...	1	1	...	...	1	...	...	3	1	1	2	...	...
Exhaustion,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	13	4	3	6	7	2	7	2	3	19	16	7	8	2	1	29
(4)— <i>Errors of Diet.</i>																
Alcoholism,	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delirium Tremens,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Group B,.....	15	5	3	6	9	2	9	3	3	10	16	23	8	2	1	30
<i>C.—Developmental Diseases.</i>																
Immaturity at Birth,	1	...	...	2	16	1	3	3	2	2	3	7	1	...	...	2
Debility,	2	...	...	9	11	4	1	13	4	7	6	12	3	...	...	3
Old Age, ..	2	...	...	4	9	2	7	2	2	3	2	11	1	...	...	8
Marasmus and Atrophy,	3	...	...	1	88	12	53	...	...	3	5	2	...	...	...	1
Cleft Palate, .....	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Hæmorrhage from Umbilicus, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Rickets, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Total Group C,.....	8	...	...	16	127	19	64	18	8	15	16	33	5	...	...	14
<i>D.—Miscellaneous Diseases.</i>																
Anæmia, .....	...	...	...	...	...	...	1	1	...	2	2	1	1	...	...	2
Tuberculosis,	1	...	...	...	1	1	1	2	...	...	4	1	...	...	...	...
Diabetes,	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scrofula, .....	...	...	...	...	2	...	...	1	1	...	1	1	...	...	...	...
Purpura Hæmorrhagica, .....	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Facial Abscess, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cancer (Undefined),	1	...	...	1	1	1	...	1	1	...	3	1	1	...	...	...
" of Mouth, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
" of Stomach,	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
" of Peritoneum, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" of Liver, .....	...	...	...	...	...	...	1	...	...	...	2	...	1	...	...	...
Sarcoma, .....	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...
" of Brain, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dermoid Cyst, .....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Leprosy, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epistaxis, .....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Lymphadenomata, .....	...	...	...	2	1	...	...	...	...	...	2	...	...	...	...	...
Total Group D,.....	5	1	...	1	6	6	3	6	2	4	10	8	3	2	...	4
II.—Local Diseases.																
A.— <i>The Nervous System.</i>																
Meningitis,	7	1	...	1	8	...	6	4	4	2	8	5	3	1	...	...
" Septic, .....	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...
Apoplexy,	11	...	...	1	1	...	2	4	3	6	1	8	3	1	...	3
Paraplegia, .....	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Hemiplegia, .....	...	...	...	...	...	...	...	1	2	...	...	1	...	...	...	...
Paralysis (Undefined), .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
" of Insane,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Infantile Convulsions,	5	...	...	4	130	11	40	8	4	5	14	3	4	...	...	4
Tetanus, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Trismus,	2	...	...	...	205	35	111	2	1	...	1	2	1	1	...	...
Epilepsy,	1	...	...	...	1	...	...	...	...	1	...	...	...	1	1	1
	27	1	...	6	344	48	160	19	14	14	26	26	11	3	1	9
<i>Carried forward, (General Diseases),...</i>	69	14	5	64	278	42	144	93	57	86	136	218	46	12	2	150

DURING THE YEAR ENDED THE 31ST DAY OF DECEMBER, 1897,—Continued.

CHINESE COMMUNITY.								TOTAL AT THE DIFFERENT AGE PERIODS.																GRAND TOTAL.		
KOW-LOON DISTRICT.		SHAUKI-WAN DISTRICT.		ABERDEEN DISTRICT.		STANLEY DISTRICT.		Under 1 month.		1 month and under 12 months.		1 year and under 5 years.		5 years and under 15 years.		15 years and under 25 years.		25 years and under 45 years.		45 years and under 60 years.		60 years and over.			Age Unknown.	
Land Population.	Boat Population.	Land Population.	Boat Population.	Land Population.	Boat Population.	Land Population.	Boat Population.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.	Non-Chinese.	Chinese.		Non-Chinese.	Chinese.
101	60	77	36	21	11	13	1	1	1	5	61	3	114	1	156	10	177	22	398	5	121	3	78	1	...	1,190
9	14	5	2	1	1	...	...	...	2	...	6	...	10	...	10	5	24	11	48	...	17	1	2	1	2	139
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
2	1	...	...	...	...	...	...	...	3	...	5	...	4	...	...	...	...	...	3	...	...	...	...	...	...	13
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
11	15	5	2	1	1	...	...	...	5	...	9	...	14	...	10	5	25	13	51	...	17	1	2	1	2	155
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	4
13	15	5	2	1	1	...	...	...	5	...	9	...	16	...	15	5	25	14	61	2	23	1	3	1	2	182
...	1	...	...	1	...	1	...	1	44	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	46
6	11	2	2	6	3	...	...	...	10	1	24	...	21	...	5	...	2	...	6	...	11	1	24	...	...	105
15	14	8	3	3	7	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	109	...	...	...	111
...	...	...	...	...	...	1	...	3	17	...	76	...	69	...	2	...	...	...	1	...	1	...	...	...	...	169
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
21	26	10	5	10	10	10	...	4	72	1	102	...	92	...	7	...	2	...	7	...	12	3	133	...	...	435
...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	...	6	...	4	...	...	...	...	13
...	...	1	...	...	...	...	...	...	...	...	1	1	4	...	3	...	2	...	1	...	...	...	...	...	...	12
1	...	...	...	...	...	...	...	...	...	...	1	...	2	...	3	...	...	...	2	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	6
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	3	...	1	1	3	...	...	11
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	...	...	...	1
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	...	...	...	5
3	1	3	1	1	...	...	...	...	...	...	2	1	7	1	9	...	10	2	21	1	10	1	5	...	...	70
...	...	1	...	...	...	...	...	1	...	2	5	2	25	1	11	1	...	1	1	...	1	...	...	...	...	51
...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	4	11	2	16	3	7	...	46
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	1	...	...	5
1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	2	...	...	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	...	...	...	5
22	3	7	7	8	5	3	...	1	14	4	97	...	160	...	15	...	1	...	1	...	...	...	...	...	...	1
2	...	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
2	...	1	...	1	...	...	...	2	354	...	7	...	...	...	2	...	...	...	...	...	...	...	...	...	...	365
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	3	...	...	...	...	...	...	5
30	4	13	8	10	5	3	...	4	369	6	110	2	185	1	29	4	6	6	21	2	23	3	11	...	...	782
138	102	95	44	36	22	23	1	5	78	6	174	4	259	2	187	15	214	38	487	8	169	8	219	2	2	1,877

RETURN SHEWING THE NUMBER AND CAUSES OF DEATHS REGISTERED

CAUSES.	BRITISH AND FOREIGN COMMUNITY.			CHINESE COMMUNITY.												
				VICTORIA.												
				HEALTH DISTRICT.												
	Civil.	Army.	Navy.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	Unknown.	Peak.	Harbour.
<i>Brought forward, (General Diseases),...</i>	69	14	5	64	278	42	144	93	57	86	136	218	46	12	2	150
<i>Local Diseases,—Continued.</i>																
<i>The Nervous System,—Continued.</i>																
<i>Brought forward,.....</i>	27	1	...	6	344	48	160	19	14	14	26	26	11	3	1	9
Mania, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Dementia, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Idiocy, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Chorea, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Spina Bifida, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Hydrocephalus,	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Myelitis, .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
	28	1	...	6	348	48	160	19	14	15	28	26	11	3	1	10
<i>B.—The Circulatory System.</i>																
Heart Disease,	7	1	...	6	11	5	8	9	5	10	15	19	3	3	...	11
Fatty Degeneration of Heart, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Cardiac Malformation,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aneurysm (Aortic),	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" (Undefined), .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Pericarditis, .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Embolism, .....	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Syncope, .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Ulceration of Femoral Artery (Hæmorrhage),...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	9	1	1	6	12	5	10	9	5	11	15	20	3	3	...	12
<i>C.—The Respiratory System.</i>																
Tracheitis, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Bronchitis,	6	1	...	21	49	2	17	22	15	16	23	43	13	2	...	25
Pneumonia,	7	...	...	1	5	1	4	2	4	3	9	6	2	2	...	2
Phthisis,	11	1	...	17	70	13	95	43	33	38	61	65	10	9	...	59
Pleurisy, .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Asthma, .....	...	...	...	...	...	1	1	...	...	...	...	...	2	...	...	...
Gangrene of Lungs, .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Hæmoptysis, .....	...	...	...	...	...	...	1	...	...	...	...	2	...	1	...	...
Catarrh, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Empyema, .....	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...
Pulmonary Atelectasis,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	25	2	1	39	126	17	119	67	52	57	95	116	27	14	...	87
<i>D.—The Digestive System.</i>																
Gangrene of Mouth, .....	...	...	...	...	2	1	...	...	...	...	1	...	...	...	...	...
" of Face, .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Necrosis of Jaw, .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Dentition,	3	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...
Quinsy,	1	...	...	...	...	...	2	...	...	...	1	...	...	...	...	1
Carbuncle, .....	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	1
Diarrhoea,	8	...	...	4	66	8	20	3	7	17	19	30	9	5	1	17
Melæna, .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Sprue,	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis,	3	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Appendicitis, .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Gall, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hernia,	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...
" (Strangulated), .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Peritonitis,	1	...	...	...	1	...	3	1	2	1	1	2	...	...	...	...
Hepatitis, .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ecterus, .....	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...
Cirrhosis of Liver,	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Abcess of Liver,	5	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Lardaceous Liver, .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Cholecystitis, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ascites, .....	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...
Gall Stones, .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
	25	2	1	4	74	10	26	11	9	22	27	37	10	5	1	19
<i>Carried forward, (General Diseases),...</i>	69	14	5	64	278	42	144	93	57	86	136	218	46	12	2	150

RETURN SHEWING THE NUMBER AND CAUSES OF DEATHS REGISTERED

CAUSES.	BRITISH AND FOREIGN COMMUNITY.			CHINESE COMMUNITY.												
				VICTORIA.												
				HEALTH DISTRICT.												
	Civil.	Army.	Navy.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	Unknown.	Peak.	Harbour.
<i>Brought forward, (General Diseases),...</i>	69	14	5	64	278	42	144	93	57	86	136	218	46	12	2	150
Local Diseases.— <i>Continued.</i>																
<i>The Digestive System,—Continued.</i>																
<i>Brought forward,.....</i>	25	2	1	4	74	10	26	11	9	22	27	37	10	5	1	19
Stricture of Pylorus,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hæmorrhage from Piles,.....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Ulcerative Colitis,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	27	2	1	4	74	10	26	11	10	22	27	37	10	5	1	19
<i>E.—The Urinary System.</i>																
Acute Nephritis, .....	...	...	...	...	5	1	...	...	...	...	...	...	...	...	...	...
Bright's Disease,	4	...	...	1	5	...	3	5	2	2	4	7	4	...	...	...
Albuminuria, .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Calculus in Bladder, .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Rupture of Bladder,.....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
„ of Urethra,.....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
	4	...	...	1	10	1	3	6	2	5	4	7	4	...	...	1
<i>F.—The Generative System.</i>																
Uterine Fibroid Tumour, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Abscess of Prostate,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ovariectomy,	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Menorrhagia, .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
	2	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...
<i>G.—Affections connected with Pregnancy.</i>																
Abortion, .....	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1
Premature Labour, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	2
<i>H.—Affections connected with Parturition.</i>																
Child-birth, .....	...	...	...	1	2	...	1	2	2	1	2	4	...	...	...	8
Rupture of Uterus, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Laceration of Perineum, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	...	...	...	1	2	...	1	2	2	1	2	4	...	...	...	9
<i>I.—The Skin.</i>																
Cellulitis of Neck, .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Carbuncle,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
<i>J.—Diseases of Organs of Locomotion.</i>																
Hip Joint Disease, .....	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Caries of Spine,	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Necrosis of Spine, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ of Bones, .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
	1	...	...	...	2	1	...	1	...	...	...	...	...	1	...	1
<i>III.—Undefined.</i>																
Dropsy,	1	...	...	1	...	1	2	1	...	...	...	1	...	...	...	1
Abscess (Undefined), .....	...	...	...	...	2	...	...	...	...	...	...	1	...	...	...	...
„ of Thigh, .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
„ of Foot, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tumour (Undefined), .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Sores, .....	...	...	...	...	...	1	...	1	1	...	3	1	...	...	...	...
Exposure,	9	...	...	12	80	8	6	6	3	3	7	6	3	2	...	12
Unknown, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	10	...	...	14	82	10	14	8	4	3	10	10	3	2	...	13
GRAND TOTAL,.....	176	20	8	135	934	135	478	217	147	200	319	438	104	40	4	304