

GOVERNMENT NOTIFICATION.—No. 591.

The following Report on the Epidemic of Bubonic Plague in Hongkong in the Year 1898, which was laid before the Legislative Council on the 22nd instant, is published.

By Command,

T. SERCOMBE SMITH,  
*Acting Colonial Secretary.*

Colonial Secretary's Office, Hongkong, 24th December, 1898.

To The President

of the SANITARY BOARD.

SANITARY BOARD OFFICES,  
HONGKONG, 25th August, 1898.

SIR,—I have the honour to submit for the information of His Excellency the Officer Administering the Government the following Report upon the epidemic of Bubonic Fever (Plague) which has occurred during the current year.

The total number of cases reported has been 1,315, of which 75 were among non-Chinese; during the first quarter of the year 213 cases occurred (7 being non-Chinese), during the second quarter there were 1,094 cases (66 of which were among non-Chinese), while during July there were 7 cases (2 being non-Chinese), and during August one case was reported, but this was subsequently considered to have been one of Remittent Fever.

The following is a tabular statement of the non-Chinese cases:—

	January.	February.	March.	April.	May.	June.	July.	Total.
European, .....	...	..	1	8	15	...	2	26
Portuguese, .....	...	1	...	6	6	...	...	13
Indian, .....	...	..	3	9	8	4	...	24
Japanese, .....	...	1	1	3	5	...	..	10
Filipinos, .....	...	...	...	1	1	...	...	2
	...	2	5	27	35	4	2	75

The incidence of the disease upon the two sexes is shown in the following table:—

Chinese cases, .....	{ Male,.....775 } { Female,..465 }	=1,240
Non-Chinese cases, .....	{ Male,..... 52 } { Female,.. 23 }	=75

It is interesting to note that among the Chinese the females suffered in a much less proportion during the first quarter of the year than during the second quarter; thus during January-March there were 206 Chinese cases of which 59 were females or 28.6 per cent., while during April-June there were 1,028 Chinese cases of which 383 were females or 37.2 per cent.

The proportion of females in the Chinese population is 29.9 per cent., and I think that the much higher proportion of female cases during the second quarter suggests that many of the earlier cases were imported by males (who are naturally the greater travellers) and that, when the infection had thus become again located in the houses, the women suffered more severely, as would be expected, from the fact that they are more confined to the houses than are the men.

A consideration of the ages of the patients shows that Chinese children suffered very considerably, for there were 299 Chinese cases at ages under 15 years, which is equal to more than 24 per cent. of the total cases whereas the proportion of children under that age in the Chinese population is only 18 per cent.

The death-rate among the Chinese was considerably higher than among the non-Chinese; for of the 75 non-Chinese cases 49 died or 65.3 per cent., whereas of the 1,240 Chinese cases 1,111 died or 89.6 per cent.; the determining causes of this higher mortality being, no doubt, inferior physique, less healthy surroundings and lack of the necessary medical treatment of the disease.

The City of Victoria is divided into ten Health Districts, and the first of these to be declared infected with Bubonic Fever were Districts 2, 4, 5, and 6, on March 24th; the remaining districts of the City were subsequently declared infected as were also the districts in the Kowloon peninsula, comprising the villages of Yaumati, Taikoktsui, Mongkoktsui and Hunghom.

With a view to combating the epidemic the following officers were appointed by His Excellency the Officer Administering the Government, in accordance with bye-law 25 made under section 13 of Ordinance 15 of 1894, to assist the Medical Officer of Health in inspecting and reporting upon dirty or insanitary premises:—

HONOURABLE F. H. MAY, C.M.G., Captain Superintendent of Police;  
 Mr. FRANK BROWNE, Acting Government Analyst;  
 Mr. JOSEPH J. BRYAN, Assistant Sanitary Surveyor.

And the following additional staff was placed at our disposal:—

13 European Police Officers.  
 1 Naval chief petty officer.  
 24 Sappers and Privates.  
 16 Chinese Constables.  
 About 300 coolies.

The various duties performed by these officers and men, in association with the Board's permanent staff, were as follows:—

1. Removal of the sick and of dead bodies.
2. Detention of persons who had been in contact with the sick, pending the disinfection of their clothing.
3. Disinfection of infected clothing.
4. Disinfection of infected premises.
5. Temporary accommodation of persons displaced during the disinfection of infected premises.
6. House to house visitation, and inspection.
7. House to house cleansing and lime-washing.
8. Disinfection of Public Latrines.
9. Extra flushing of sewers.

(1.) The removal of sick persons and of dead bodies was undertaken by the Inspectors of Nuisances in charge of the several districts, information of the existence of such cases being conveyed to them by messages sent from the Police Stations nearest to their residences; after May 5th, however, it was found more convenient for these removals to be effected by the Police, and this was arranged accordingly. Ambulances and dead boxes are kept at the Board's matshed shelters at Praya East, Taipingshan and Praya West, at Hunghom and Yaumati, and also at the Tung Wah Hospital. Patients were taken direct to Kennedy Town Hospital and placed in observation wards there until seen by the Medical Officer in charge, until the Native Plague Hospital was opened on May 2nd, (*vide infra*) after which date all Chinese patients were taken to the Tung Wah Hospital and there examined by Dr. CHUNG, whence those certified to be suffering from Bubonic Fever were drafted to the Native Hospital, or to the European Hospital, as they desired.

Dead bodies were all taken direct to the Public Mortuary at West Point, and were there examined by the Medical Officer in charge, and such as had died of Bubonic Fever were removed to the Plague Cemetery at Kennedy Town under the superintendence of a private of the Royal Engineers, and interred there, chloride of lime or carbolized sawdust being placed in the coffins.

(2.) The detention of persons who had been in contact with the sick, pending the disinfection of their clothing and bedding, was effected by Chinese lukongs obtained from the nearest Police Stations by the Inspector of Nuisances of the district in which the infected premises were situated.

(3.) The Inspector furnished the occupants so detained in their own dwellings with suitable clothing, obtained from one of the aforesaid matshed shelters or from the disinfecting station in High Street, and sent the clothing of the persons so detained in baskets, accompanied by a list of the articles sent, to the disinfecting station in charge of a Chinese or Portuguese foreman, who waited at the station while the clothing was disinfected and then returned with it to the house; the period of detention thus did not exceed some two or three hours.

(4.) This clothing was then returned to the owners who were then required to vacate the house for a few hours while the Inspector disinfected, and

(5.) Cleansed it; during this time they were at liberty to go to the Board's matshed shelters and had occasionally to spend one night there pending the proper disinfection of their premises, but were not detained there, being at liberty to go about their daily avocations. When this cleansing and disinfection of the premises was complete the people were permitted to return to their houses.

(6.) A house to house visitation, in search of cases of the disease and of dead bodies, was performed by Police and Soldiers under the control of the Captain Superintendent of Police, (*vide* also Appendix B.), and these search parties succeeded in discovering 106 cases and dead bodies, while another fifteen cases were brought to light by Chinese detectives. A house to house inspection was at the same time made, in the infected districts, by the Medical Officer of Health and the officers especially appointed by the Board with the approval of the Governor, in accordance with Bye-law 25 made under section 13 of Ordinance 15 of 1894 who certified in writing what premises were to be

(7.) Cleansed and lime-washed; and this cleansing was done by gangs of coolies in charge of Police and Soldiers, while the lime-washing was done by contract and had to be done to the satisfaction of the Inspecting Officer.

(8.) The disinfection of the public latrines was effected by means of chloride of lime which was supplied to each latrine by the Board and was used under the direction of the Inspectors of Nuisances.

(9.) The extra flushing of the sewers was arranged by the Director of Public Works and was effected by increasing the frequency of the discharges of the flushing tanks which are placed at the heads of all the main sewers.

The care of the sick was undertaken by the Medical Department, but, in consequence of the difficulty experienced in getting the Chinese to submit to Western treatment, it was decided by the Government to permit the opening of a Native Plague Hospital, under European supervision, and on May 2nd such a hospital was opened at Kennedy Town, within the compound of the Government Infectious Diseases Hospital, and Dr. THOMSON was placed in charge of the sanitary arrangements. This hospital remained open until June 27th, and during that time 224 patients applied for treatment, of whom 209 were suffering from Bubonic Fever; the total number of deaths that occurred there was 173, giving a rate of mortality of 82.8 per cent., as compared with the general rate among the Chinese of 89.6 per cent. which shows, as might be expected, that hospital treatment even by Chinese doctors, under European supervision, produces slightly better results than obtain when the patient is treated by Chinese in his own home. The night-soil from the patients at both Hospitals was burnt, by mingling it with sawdust, sprinkling this with paraffin oil, and placing it on the top of a wood pyre erected on an improvised incinerator within the Hospital compound. The incinerator was of the simplest description, consisting of a couple of parallel walls about 2 feet 6 inches high and 6 feet long, with a grating of iron bars across the top, the ground surface between the walls being concreted.

Owing to the proximity of the mainland of China, a considerable number of sick Chinese escaped daily from the Colony, and made their way to Chinese Kowloon (where a small matshed hospital, free from European control, was established) or to the delta of the Canton river, and thus endangered the future welfare of this Colony by infecting neighbouring rural districts which had hitherto kept free from the disease. With a view to restricting this exodus of infectious persons, the police patrol in the harbour was increased, and the following regulations were adopted by the Board:—

CONDITIONS SUBJECT TO WHICH PERSONS SUFFERING FROM BUBONIC FEVER WILL BE  
PERMITTED TO LEAVE THE COLONY.

Any person suffering from bubonic fever who wishes to leave the Colony may embark between the hours of 6 a.m. and 6 p.m. at a wharf to be erected off the new Reclamation in front of Bonham Strand West subject to the following conditions:—

- (1) The patient or his friend shall notify the patient's name and address or addresses at which he has been residing during the last ten days to an officer of the Sanitary Board on duty at the wharf.
- (2) The destination to which the patient is to be removed shall be notified to the officer on duty at the wharf.
- (3) The patient or his friends must provide a licensed junk, or licensed boat (the latter to be towed by a launch) in which the patient is to be removed, and must furnish the officer on duty with the number of such junk or boat and the name of such steam-launch.
- (4) No removals will be permitted to places within a radius of 40 miles of the Colony.
- (5) The junk or boat used for the conveyance of the patient must on its return to the Colony at once proceed to the Water Police Station at Tsim Sha Tsui for disinfection.

Very few sick persons, however, availed themselves of this official permission to leave the Colony, but a considerable number were still smuggled away, the object being to get out of the Colony without furnishing the addresses at which they had been residing, and it is this suppression by the Chinese of the addresses of infected premises that has necessitated, in each epidemic, a general house to house cleansing and disinfection. A certain number of dead bodies were removed from the Colony under similar restrictions, but, with regard to these also, smuggling was not uncommon, dead plague bodies being even conveyed to Canton in ordinary boxes as cases of hardware, etc., so as to avoid their interment at the Plague Cemetery.

Considerable assistance was rendered to the Board by Mr. H. M. HILLIER, Commissioner of Customs, and the Chinese Officials on the mainland, by furnishing the addresses of fugitives from the Colony who landed in the neighbourhood, thus enabling the Officers of the Board to disinfect the premises whenever there appeared to be any reason to suppose that a case of Bubonic Fever had occurred therein.

I attach a list of the addresses of all cases which occurred in the City of Victoria during 1896 and a parallel list of the addresses of cases which occurred this year, and from these lists it will be seen that in no less than 77 houses out of a total of 599 houses known to have been infected, cases occurred during each of these years. The total number of houses in the city of Victoria is roughly 7,000 (exclusive of Barracks and Police Stations) so that the presumption is that many of these 77 houses had retained the infection of the disease since 1896, and not that they were re-infected afresh this year.

I have already somewhat fully discussed the aetiology of the disease in my Annual Report for 1897, but for convenience of reference and to render this report more complete, I append herewith a reprint of the remarks made by me at that time: "This (*i.e.*, the occurrence of cases in houses previously infected) 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 employés, 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 essentially one of the lymphatic system generally, and that, as can be seen at any *post-mortem* examination, most of 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."

I have the honour to be,

Sir,

Your obedient Servant,

FRANCIS W. CLARK,

*Medical Officer of Health*



Addresses of all Cases of Bubonic Fever, &c.,—Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
1898. No. 2 Health District,—Contd. <i>Brought forward,</i> .....			1898. No. 2 Health District,—Contd. <i>Brought forward,</i> .....		
Fletcher Street,...	5	1	*Cross Street, ...	26	1
" " ...	7	2	" " ...	31	1
" " ...	9	1	Fletcher Street, ...	30	1
* " " ...	35	2	" " ...	32	1
" " ...	10	2	* " " ...	35	1
" " ...	11	2	Garden Road, (Dairy Farm),	...	1
" " ...	17	1	Hau Fung Lane, ...	3	2
" " ...	19	1	Hill-side, ...	...	1
" " ...	21	1	Holy Infant Lane, ...	4	1
" " ...	22	1	Kennedy Road, (Laundry),	9	2
" " ...	23	1	" " ...	...	10
" " ...	28	1	" " Street, ...	2	1
" " ...	31	2	* " " ...	20	1
" " ...	39	2	*King Sing Street, ...	11	1
" " ...	...	1	Lung On Lane, ...	1	1
Garden Road, ...	...	1	McGregor Barracks, ...	...	2
Hau Fung Lane, ...	8	1	" " Street, ...	21	1
" " ...	7	1	" " ...	34	1
Hill-side, ...	...	3	" " ...	...	7
Kennedy Road, ...	...	4	*Murray Barracks, ...	...	1
" " Street, ...	14	1	Naval Yard, ...	...	1
" " ...	5	1	Nullah Lane, ...	17	1
King Sing Street, ...	11	1	" " ...	18	2
* " " ...	8	2	" " ...	26	1
Lung On Street, ...	...	4	" " ...	27	1
*Murray Barracks, ...	2	1	" " ...	40	1
Nullah Lane, ...	6	1	" " ...	41	1
" " ...	8	1	* " " ...	45	1
" " ...	12	1	" " ...	52	1
" " ...	16	1	* " " ...	65	1
" " ...	13	2	" " ...	68	3
" " ...	21	1	" " ...	...	3
" " ...	23	1	Praya East, ...	9	1
" " ...	35	1	" " ...	36	1
" " ...	43	1	" " ...	45	1
* " " ...	45	1	" " ...	47	1
" " ...	47	1	" " ...	...	5
" " ...	49	1	Queen's Road East,	9	1
" " ...	53	1	" " ...	21	1
* " " ...	65	1	* " " ...	27	1
" " ...	...	4	" " ...	71	1
" " (Temple), ...	...	1	" " ...	106	1
Praya East, ...	20	1	" " ...	112	1
" " ...	...	8	" " ...	118	1
Queen's Road East,	4	1	" " ...	124	1
" " ...	80	2	" " ...	148	1
" " ...	84	2	* " " ...	151	2
" " ...	86	1	* " " ...	153	1
" " ...	114	1	" " ...	154	1
" " ...	116	1	* " " ...	161	1
" " ...	126	1	" " ...	164	2
* " " ...	27	1	" " ...	171	1
" " ...	47	1	" " ...	177	2
" " ...	85	3	" " ...	180	1
" " ...	121	1	" " ...	203	1
" " ...	143	1	" " ...	213	1
* " " ...	151	1	" " ...	223	1
* " " ...	153	5	" " ...	225	1
" " ...	157	1	" " ...	261	1
" " ...	159	1	" " ...	265	1
* " " ...	161	1	" " ...	...	6
" " ...	229	1	Rock Lane, ...	2	1
" " ...	237	1	Sban Ping Lane, ...	4	2
" " ...	259	1	" " ...	8	1
" " ...	...	3	Ship Street, ...	7	1
Rock Lane, ...	2	1	* " " ...	11	1
Ship Street, ...	2	1	* " " ...	21	1
" " ...	25	2	" " ...	32	1
" " ...	3	1	" " ...	...	6
* " " ...	11	1	Sow Wah Fong, ...	10	1
" " ...	15	1	" " ...	14	1
<i>Carried forward,</i> .....		133	<i>Carried forward,</i> .....		134



Addresses of all Cases of Bubonic Fever, &c.,—Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
<b>1896.</b>			<b>1898.</b>		
<i>No. 3 Health District,—Contd.</i>			<i>No. 3 Health District,—Contd.</i>		
<i>Brought forward,</i> .....			<i>Brought forward,</i> .....		
Queen's Road Central, .....	10	1	Praya Reclamation, .....	...	1
" " .....	16	1	Queen's Road Central, .....	5	1
" " .....	17	1	" " .....	17a	1
" " .....	21	1	" " .....	19	1
" " .....	24	1	Rednaxella Terrace, .....	6	1
Seymour Terrace, .....	6	2	Robinson Road, (Mr. Lemm's House), .....	...	1
Upper Albert Road, .....	...	1	Robinson Road, .....	...	1
West Terrace, ... ..	2	1	St Paul's College Pathway, .....	...	1
			West Terrace, ... ..	1	1
			Woodland Terrace, .....	1	2
			" " .....	2	2
			" Villa East,.....	...	1
			Zetland Street,...	...	1
		26			41
<i>No. 4 Health District.</i>			<i>No. 4 Health District.</i>		
*Chinese Street, .....	11	2	Arbuthnot Road, .....	14	1
" " .....	20	1	Caine Road,.....	7	1
*Central Police Station, ...	...	1	" " "Kingsclere," .....	21	1
*Cheuk On Lane, .....	3	2	*Central Police Station,...	...	3
Chuk Hing Lane, .....	...	1	Central Market (Fish Stall No. 134),	...	1
Cochrane Street, .....	32	1	Chinese Street, .....	9	1
" " .....	34	1	* " " .....	11	2
" " .....	39	1	" " .....	13	1
D'Aguiar Street, .....	34	1	" Hing Lane, .....	1	1
" " .....	37	1	Chuk On Lane, .....	1	1
" " .....	40	1	* " " .....	3	1
" " .....	...	1	Cochrane Street, .....	29	1
Ezra Lane, .....	2	1	D'Aguiar Street, .....	24	2
" " .....	3	1	" " .....	38	1
" " .....	6	1	" " .....	52	1
" " .....	7	1	Elgin Street, ... ..	18	1
Elgin Street, .....	9	1	" " ... ..	48	1
" " .....	19	1	" " ... ..	50	1
" " .....	...	2	" " ... ..	5	1
Gage Street, .....	7	1	" " ... ..	9	1
" " .....	...	2	" " ... ..	11	1
Graham Street, ... ..	54	1	" " ... ..	12	1
Gutzlaff Street, ... ..	8	1	" " ... ..	23	1
" " " " .....	...	1	Graham Street, .....	43	1
*Hing Lung Street, .....	1	1	" " " " .....	4	1
Hollywood Road, .....	19a	1	Gutzlaff Street, .....	4	1
* " " .....	19b	1	*Hing Lung Street, .....	1	1
" " " " .....	...	1	Hollywood Road, .....	3	1
*Jubilee Street, ... ..	13	1	" " .....	5	1
Li Yuen Street East, .....	4	1	" " .....	8	1
* " " " " .....	25	1	" " .....	12	1
" " Street West, .....	1	2	" " .....	13	1
" " " " .....	...	1	" " .....	18	1
Lok Hing Lane, .....	1	1	* " " .....	19b	1
" " .....	2	1	" " .....	21	1
" " .....	10	1	" " .....	25	1
Lyndhurst Terrace, .....	6	1	" " .....	26	1
" " " " .....	...	1	" " .....	46	1
Old Bailey Street, .....	9	1	" " .....	65	1
*Pottinger Street, .....	13	1	" " .....	...	2
" " .....	16	1	*Jubilee Street, .....	13	1
" " .....	37	1	" " .....	14	1
" " .....	...	4	" " .....	15	1
Peel Street, .....	12	1	" " " " .....	...	1
" " .....	60	1	Ku Yau Lane, ... ..	1	1
" " .....	...	1	Li Yuen Street East, .....	1	1
Praya Central, ... ..	17	1	" " " " .....	3	1
" " " " .....	51	1	" " " " .....	5	2
" " " " .....	...	5	" " " " .....	12	1
Queen's Road Central, .....	33	1	* " " " " .....	25	1
" " " " .....	63	1	" " " West,.....	8	1
			" " " " .....	11	1
		63			57
<i>Carried forward,</i> .....			<i>Carried forward,</i> .....		

Addresses of all Cases of Bubonic Fever, &c.,—Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
<b>1898.</b>			<b>1898.</b>		
<i>No. 4 Health District,—Contd.</i>			<i>No. 4 Health District,—Contd.</i>		
<i>Brought forward,</i> .....			<i>Brought forward,</i> .....		
Queen's Road Central, .....	...	63	Pottinger Lane, .....	3	57
Shelley Street, ...	1	2	" " Street, .....	11	1
* " " ...	4	1	* " " ...	13	1
" " ...	6	1	" " ...	35	1
" " ...	8	2	" " ...	43	3
Stanley Street, ...	11	1	" " ...	...	2
" " ...	16	2	Praya Central,...	21	1
" " ...	31	1	" " ...	39	2
" " ...	33	1	" " (Marine Club), .....	...	1
* " " ...	36	1	" " ...	...	2
" " ...	39	1	Queen's Road Central, ...	36	1
" " ...	47	1	" " ...	37	1
" " ...	62	1	" " ...	45	1
" " ...	84	1	" " ...	46	2
" " ...	86	1	" " ...	70	1
" " ...	...	4	" " ...	...	1
Staunton Street, .....	1	1	*Shelley Street, .....	4	1
" " ...	...	4	" " ...	10	1
*Tit Hong Lane, .....	9	1	Stanley Street,...	5	2
Tung Tak Lane, .....	8	1	" " ...	7	1
*Victoria Gaol, .....	...	1	" " ...	14	1
Wellington Street, .....	1	1	" " ...	21	1
" " ...	5	1	" " ...	24	1
* " " ...	70	1	* " " ...	36	1
* " " ...	103	1	" " ...	50	1
" " ...	15	1	" " ...	54	1
" " ...	38	1	" " ...	...	1
" " ...	44	4	Staunton Street, .....	...	1
" " ...	46	1	*Tit Hong Lane, .....	9	4
" " ...	62	2	Tung Tak Lane, .....	6	1
" " ...	64	2	*Victoria Gaol, .....	...	3
" " ...	67	2	Wai San Lane, .....	2	1
" " ...	68	1	" " ...	5	1
" " ...	74	1	" Tak Lane, .....	1	1
" " ...	76	1	" " ...	2	1
" " ...	80	1	" " ...	3	1
" " ...	91	1	Wellington Street, .....	14	1
" " ...	94	1	" " ...	41	2
" " ...	...	3	" " ...	58 <sup>a</sup>	1
Wai Tak Lane, ...	2	1	" " ...	58 <sup>b</sup>	1
" " ...	7	1	* " " ...	70	1
Wai San Lane, ...	5	1	* " " ...	103	1
Wo On Lane,.....	4	2	" " ...	105	1
* " " ...	8	1	" " ...	...	2
" " ...	9	1	Wing Wah Lane, .....	9	1
" " ...	12	1	*Wo On Lane,...	8	1
Wyndham Street, .....	31	1	Wyndham Street, .....	18	1
*Yan Shau Lane, .....	65	1	" " ...	59	1
" " ...	1	1	" " ...	73	1
			" " ...	...	1
			*Yan Shau Lane, .....	1	1
			" " ...	3	1
			" " ...	5	1
		130			124
<i>No. 5 Health District.</i>			<i>No. 5 Health District.</i>		
Alice Memorial Hospital,...	...	2	Aberdeen Street, .....	5	2
Alveston Terrace, .....	1	1	" " ...	16	1
Aberdeen Street, .....	12	1	" " ...	30	1
* " " ...	36	1	* " " ...	36	4
" " ...	17	2	" " ...	37	1
" " ...	26	1	" " ...	39	1
" " ...	38	1	" " ...	51	1
" " ...	44	1	" " ...	55	1
* " " ...	57	2	* " " ...	57	4
" " ...	45	1	" " ...	59	1
" " ...	47	1	" " ...	...	4
" " ...	...	2	Chun Hing Lane, .....	...	3
		16			24
<i>Carried forward,</i> .....			<i>Carried forward,</i> .....		

Addresses of all Cases of Bubonic Fever, &c.,—Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
<b>1896.</b>			<b>1898.</b>		
<i>No. 5 Health District,—Contd.</i>			<i>No. 5 Health District,—Contd.</i>		
<i>Brought forward,.....</i>			<i>Brought forward,.....</i>		
		16			24
Caine Road, .....	...	1	Chung Wo Lane, .....	6	1
Gage Street, .....	15	1	" " .....	10	1
" " .....	17	1	" " .....	13	2
" " .....	21	1	" " .....	19	1
" " .....	30	1	Elgin Street, ...	6	1
George's Lane, ...	6	1	" " .....	17	1
Gilman Street, ...	1	1	Gage Street, ...	32	1
" " .....	5	1	George's Lane,...	2	1
" " .....	44	1	" " .....	7	1
Gilman's Bazaar, .....	3	1	Gilman's Bazaar, .....	10	1
" " .....	31	1	" " .....	15	1
Gough Steeet, ...	20	1	" " .....	35	1
* " " .....	32	1	" " .....	36	1
" " .....	...	1	" " .....	24	1
Graham Street, ...	9	1	Gilman Street,...	30	1
" " .....	17	1	Gough Street, ...	32	1
" " .....	33	1	* " " .....	33	1
" " .....	39	1	" " .....	36	1
Hollywood Road (Totsai Chapel), ...	57	1	" " .....	67	1
" " .....	77	1	Hollywood Road, .....	72	1
			" " .....	5	1
I On Lane, .....	4	1	Hong Ning Lane, .....	48	1
*Kau U Fong, ...	8	1	" " .....	1	2
" " .....	15	1	I On Lane, .....	3	2
" " .....	...	2	" " .....	6	1
*Mee Lun Lane,...	6	1	" " .....	8	1
* " " .....	8	1	" " .....	...	1
" " .....	7	1	" " .....	4	1
" " .....	11	1	Kau U Fong, ...	5	2
Man Hing Lane, .....	1	1	" " .....	8	1
" " .....	2	1	* " " .....	10	1
" " .....	3	1	*Mee Lun Lane, .....	6	1
On Wo Lane,.....	3	1	" " .....	8	1
Praya Central, ...	52	1	On Wo Lane, ...	4	1
" " .....	...	3	Peel Street, ...	1	1
Pak Tsz Lane, ...	4	1	" " .....	3	1
" " .....	...	1	* " " .....	9	3
*Peel Street, ...	3	1	" " .....	14	1
" " .....	11	1	" " .....	21	1
" " .....	23	1	" " .....	25	2
" " .....	...	1	" " .....	51	1
Queen's Road Central, .....	159	1	" " .....	...	5
Sam Ka Lane, ...	3	1	Praya Central,...	...	3
*Shiu Hing Lane, .....	4	2	Queen's Road Central, ...	...	1
" " .....	8	1	*Shin Hing Lane, .....	4	1
" " .....	...	2	" " .....	9	1
Shing Wong Street, .....	...	1	Stauton Street, .....	39	1
Staunton Street,...	22	1	" " .....	41	1
" " Synagogue	23	1	" " .....	45	1
" " .....	35	1	" " .....	48	1
" " .....	43	1	" " .....	...	1
" " .....	...	1	Tung Man Lane, .....	13	1
Tung Man Lane, .....	5	1	" " .....	39	1
" " .....	17	1	Tung Shing Lane, .....	1	1
" " .....	18	1	" " .....	4	2
" " .....	22	1	" " .....	8	1
" " .....	23	1	Tung Wa Lane, .....	1	1
" " .....	24	1	Wa On Lane, ...	2	1
" " .....	9	1	" " .....	5	1
Tung Shing Lane, .....	...	1	" " .....	...	1
Tung Wah Lane, .....	2	1	Wellington Street, .....	113	1
Un Woo Lane, ...	117	1	" " .....	123	1
Wellington Street, .....	186	1	" " .....	124	1
" " .....	9	1	" " .....	128	1
Wing Kat Lane, .....	5	1	" " .....	180	1
Wing On Lane, ...	6	1	" " .....	192	1
" " .....	38	1	Wing On Lane, .....	4	1
" " .....	43	1	" " .....	24	1
" " .....	44	2	Yan Wo Lane,...	1	1
" " .....	45	1			
		90			106

Addresses of all Cases of Bubonic Fever, &c.,--Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
<b>1896.</b> <i>No. 6 Health District.</i>			<b>1898.</b> <i>No. 6 Health District.</i>		
Bonham Strand, .....	147	1	Bridges Street, ... ..	4	1
Bridges Street, ... ..	28	1	" " ... ..	13	1
" " ... ..	...	2	" " ... ..	22	1
* " " ... ..	66	1	" " ... ..	24	2
			" " ... ..	26	1
			" " ... ..	54	1
			" " ... ..	62	1
			* " " ... ..	66	1
			" " ... ..	...	7
Circular Pathway, .....	10	1	Circular Pathway, .....	7	1
" " ... ..	18	1	" " ... ..	15	3
" " ... ..	23	1	" " ... ..	30	1
" " ... ..	25	1	" " ... ..	...	1
" " ... ..	27	1	Hillier Street, ... ..	41	1
" " ... ..	...	3	Hollywood Road, .....	88	1
Hollywood Road, .....	110	1	" " ... ..	91	1
* " " ... ..	117	2	" " ... ..	111	1
* " " ... ..	121	1	" " ... ..	114	1
" " ... ..	131	1	" " ... ..	115	2
" " ... ..	147	1	* " " ... ..	117	1
" " ... ..	157	1	* " " ... ..	121	1
			" " ... ..	124	1
			" " ... ..	137	1
			" " ... ..	152	1
			" " ... ..	201	1
			" " ... ..	...	1
Jervois Street, ... ..	...	1	Jervois Street, ... ..	11	1
Kwai Wa Lane, ... ..	2	1	Kwai Wa Lane, ... ..	...	1
Kwong Yuen Street, East, .....	5	1	Kwong Yuen Street, East, .....	4	1
Lower Lascar Row, .....	7	1	" " West, .....	6	1
" " ... ..	11	1	" " " .....	7	1
" " ... ..	17	1	" " " .....	10	1
Man Wa Lane, ... ..	...	1	Ladder Street, ... ..	10	1
Mercer Street, ... ..	15	1	" " ... ..	...	4
Praya Central, ... ..	114	1	Lower Lascar Row, .....	10	1
			Ping On Lane, ... ..	3	1
			" " ... ..	5	1
			Praya Central, ... ..	90	1
			" " ... ..	...	7
Queen's Road Central, .....	294	1	Queen's Road Central, .....	197	1
			Shing Wong Street, .....	4	1
			" " ... ..	...	4
Square Street, ... ..	5	1	Square Street, ... ..	13	1
			" " ... ..	...	1
			Tsui On Lane, ... ..	6	1
Upper Lascar Row, .....	13	1	U Hing Lane, ... ..	1	1
Wai Yau Lane, ... ..	3	1	Un On Lane, ... ..	1	1
Wing Lok Street, ... ..	...	1	Upper Ladder Street, .....	7	1
Wing Wo Street, ... ..	10	1	Upper Lascar Row, .....	5	1
" " ... ..	...	1	Wah Hing Lane, ... ..	2	1
			Wing Lok Street, .....	...	1
		36			73
<i>No. 7 Health District.</i>			<i>No. 7 Health District.</i>		
*Cleverly Street, .....	1a	1	Cheung Hing Street, .....	1	1
East Street, .....	3	1	" " ... ..	2	1
" " ... ..	4	1	" " ... ..	3	1
" " ... ..	6	1	*Cleverly Street, .....	1a	1
" " ... ..	16	1	" " ... ..	7	1
" " ... ..	35	1	East Street, .....	8a	1
* " " ... ..	39	1	" " ... ..	14	1
" " ... ..	45	1	* " " ... ..	45	1
* " " ... ..	48	1	" " ... ..	...	1
Hollywood Road, .....	186	1	Hollywood Road, .....	186	1
			" " ... ..	190	1
			" " ... ..	192	1
			" " ... ..	201	1
<i>Carried forward,</i> .....		10	<i>Carried forward,</i> .....		13



Addresses of all Cases of Bubonic Fever, &c.,—Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
<b>1896.</b>			<b>1893.</b>		
<i>No. 8 Health District,—Contd.</i>			<i>No. 8 Health District,—Contd.</i>		
<i>Brought forward,</i> .....			<i>Brought forward,</i> .....		
Tsung Sau Lane, East,.....	9	1	Queen's Road West, .....	137	1
" " " .....	...	1	" " .....	138	1
" " West,.....	15	2	" " .....	170	1
" " " .....	19	1	" " .....	171	1
* " " " .....	2	1	" " .....	173	1
			" " .....	177	1
			" " .....	194	1
			" " .....	198	2
			" " .....	208	1
			" " .....	...	5
			Sai Woo Lane,...	2	1
			" " .....	23	1
			" " .....	...	1
			Shiu Cheung Lane,	...	1
			Sutherland Street,	8	1
			" " .....	...	1
			Tsung Sau Lane, East, ...	13	1
			* " " West,...	2	1
			Tsz Mi Alley ...	2	1
			" " .....	8	1
			" " .....	16	1
			" " .....	18	1
			Tung Wah Hospital,	...	2
			Wilmer Street,...	...	1
			Wing Lok Street,	127	1
Wo Fung Street, .....	...	1	Wo Fung Street, .....	...	1
		51			92
<i>No. 9 Health District.</i>			<i>No. 9 Health District.</i>		
Centre Street, ...	2	1	Algar Court, ...	...	2
* " " ...	22	2	Centre Street, ...	12	2
" " ...	...	2	" " ...	14	1
Eastern Street, ...	...	3	* " " ...	22	1
First Street, ...	5	1	" " ...	36	1
" " ...	24	1	" " ...	...	3
" " ...	40	2	Des Vceux Road,	...	2
" " ...	54	1	First Street,.....	7	1
" " ...	75	1	" " .....	10	2
" " ...	88	1	" " .....	11	1
" " ...	92	1	" " .....	15	1
" " ...	99	1	" " .....	25	1
" " ...	104	1	" " .....	39	1
" " ...	107	1	" " .....	46	2
" " ...	112	1	" " .....	48	1
" " ...	117	1	" " .....	55	1
" " ...	121	2	" " .....	69	1
* " " ...	115	1	" " .....	76	2
" " ...	127	1	" " .....	83	1
" " ...	4	1	" " .....	86	1
Fuk Sau Lane, ...	6	1	" " .....	95	1
* " " ...	7	1	" " .....	97	1
" " ...	7	1	" " .....	98	1
High Street, .....	17	1	" " .....	103	1
" " .....	22	1	" " .....	110	1
" " .....	26	1	* " " .....	115	1
" " .....	37	1	" " .....	116	2
" " .....	49	1	" " .....	119	2
" " .....	53	1	" " .....	125	1
" " .....	55	1	" " .....	...	3
" " .....	87	1	Fuk Luk Lane,	2	1
" " .....	...	1	" " .....	9	1
Ki Ling Lane, ...	...	1	" " .....	10	1
Leung I Fong, ...	10	1	Fuk Sau Lane,	3	1
Lunatic Asylum,	...	1	* " " .....	6	1
On Wai Lane, ...	1	2	Fuk Shing Lane,	...	1
Praya West, .....	176	1	High Street,.....	12	1
" " .....	184	1	" " .....	59	1
Pokfulam Road, .....	14	1	" " .....	...	4
		46			54
<i>Carried forward,</i> .....			<i>Carried forward,</i> .....		

Addresses of all Cases of Bubonic Fever, &c.,—Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
<b>1896.</b>			<b>1898.</b>		
<i>No. 9 Health District,—Contd.</i>			<i>No. 9 Health District,—Contd.</i>		
<i>Brought forward,</i> .....			<i>Brought forward,</i> .....		
Pokfulam Road,...	16	1	Ki Ling Lane,...	...	1
			Kung Shun Lane,	7	1
			On Wai Lane,...	4	1
			Pokfulam Road,	2	1
			" "	6	1
			" "	24	1
			" "	...	2
Queen's Road West, .....	227	1	Praya West, ...	...	1
" " .....	250	1	Queen's Road West, .....	208	1
" " .....	266	1	" " .....	246	1
" " .....	302	1	" " .....	258	1
" " .....	305	1	" " .....	278	1
" " .....	317	1	" " .....	298	1
" " .....	328	1	" " .....	301	1
" " .....	330	1	" " .....	322	2
" " .....	...	1	" " .....	342	2
* " " No. 7 Police			" " .....	345	1
" Station,.....	358	1	* " " No. 7 Police		
Sai Yuen Lane,...	1	1	" Station,.....	358	1
" " ...	7	1	Queen's Road West, .....	363	1
" " ...	14	1	" " "	...	2
" " ...	15	1	Sai Yuen Lane,	13	2
" " ...	26	1	* " "	14	2
Second Street, ...	6	1	" " "	...	1
" " ...	7	1	Second Street,...	18	1
" " ...	9	1	" " ...	53	1
" " ...	52	1	* " " ...	55	2
" " ...	55	2	* " " ...	61	1
* " " ...	61	2	" " ...	63	1
" " ...	62	1	" " ...	69	1
" " ...	68	1	" " ...	71	1
" " ...	76	1	" " ...	72	1
" " ...	78	1	" " ...	73	2
" " ...	96	1	" " ...	80	1
" " ...	117	1	" " ...	91	1
" " ...	121	1	" " ...	93	2
			" " ...	101	2
			" " ...	103	1
			" " ...	105	1
			" " ...	111	1
			" " ...	112	1
			" " ...	115	2
			" " ...	116	1
Sheung Fung Lane, .....	2	3	*Sheung Fung Lane, .....	6	1
* " " .....	6	1	" " .....	10	1
" " .....	17	1	" " .....	16	1
" " .....	20	1	" " "	...	3
Shing Hing Lane .....	3	1	" " "	12	1
" " .....	16	1	Sheung Hing Lane,	...	2
Third Street,.....	8	1	Shing Hing Alley,	9	1
" " .....	11	2	Third Street, ...	17	3
* " " .....	17	2	* " " ...	21	1
" " .....	32	1	" " ...	45	1
" " .....	36	1	" " ...	67	2
" " .....	44	1	" " ...	68	1
" " .....	51	1	" " ...	94	1
" " .....	65	1	" " ...	100	1
" " .....	71	1	" " ...	102	1
" " .....	79	1	" " ...	104	1
" " .....	87	1	" " ...	106	1
" " .....	92	1	" " ...	112	2
" " .....	93	1	" " ...	114	1
" " .....	96	1	" " ...	126	1
" " .....	103	1	" " ...	...	5
" " .....	105	1	Torsien Street,...	10	1
" " .....	121	1	U Lok Lane, ...	16	1
" " .....	124	1	Ui On Lane, ...	1	1
" " .....	128	1	Uun Fuk Lane,	6	2
" " .....	...	1	Un Shing Lane,	4	1
U Lok Lane, .....	4	1	" "	16	1
<i>Carried forward,</i> .....		108	<i>Carried forward,</i> .....		146

Addresses of all Cases of Bubonic Fever, &c.,—Continued.

Street.	House No.	No. of Cases.	Street.	House No.	No. of Cases.
<b>1896.</b>			<b>1898.</b>		
<i>No. 9 Health District,—Contd.</i>			<i>No. 9 Health District,—Contd.</i>		
<i>Brought forward,</i> .....			<i>Brought forward,</i> .....		
U Lok Lane, .....	7	1	Un Shing Lane, .....	17	1
" " .....	8	1	Western Street, .....	9	1
Üi On Lane, .....	3	1	" " .....	21	1
" " .....	4	1	" " .....	22	2
" " .....	5	1	" " .....	...	2
" " .....	8	1			
Western Street, ...	19	1			
		115			153
<i>No. 10 Health District,</i>			<i>No. 10 Health District.</i>		
*Bonham Road, "Fairlea," .....	9	2	Belcher's Path, .....	...	2
" " " .....	...	1	*Bonham Road, "Fairlea," .....	9	1
Basil Mission, ... ..	...	3	" " "Westward Ho," ..	...	1
Hill Road, .....	...	1	" " .....	...	1
F Yik Laue, .....	7	1	Connaught Road, .....	...	1
" " .....	9	1	Hill Road, .....	...	7
" " .....	17	1	Holland Street, .....	19	1
Kennedy Town Hospital, ...	...	2	" " " .....	...	1
Kennedy Town Matshed, ...	...	1	F Yik Lane, ... ..	10	1
*Praya West, .....	188	1	" " " .....	14	1
" " .....	198	1	" " " .....	19	1
" " .....	...	1	Isolation Matshed, .....	...	2
Pokfulam Road, ... ..	13	1	Kennedy Town, Feather Factory, ...	...	1
*Queen's Road West, .....	337	1	Pokfulam Road, .....	3	1
" " .....	365	1	* " " .....	13	1
" " .....	366	1	" " .....	19	1
" " .....	387	1	Praya West, .....	...	6
" " .....	394	1	Praya Kennedy Town, ...	19	1
" " .....	498	1	" " " .....	...	3
" " .....	508	1	Queen's Road West, .....	256	1
" " .....	574	1	" " .....	297	1
" " .....	...	1	" " .....	364	1
Sai Wo Lane, ... ..	7	1	* " " .....	366	2
Sam To Lane, ... ..	...	1	" " .....	368	1
Sheep and Swine Depôts, ...	...	1	" " .....	370	1
Second Street, ... ..	129	2	" " .....	374	2
" " " .....	...	1	" " .....	376	1
Tung Wo Lane West, .....	1	1	" " .....	393	1
" " " .....	2	1	" " .....	406	1
" " " .....	7	1	" " .....	408	1
" " " .....	9	1	" " .....	410	1
" " " .....	...	1	" " .....	471	1
Third Street, .....	132	1	" " .....	473	1
" " .....	138	1	" " .....	594	1
" " .....	169	1	Sam To Lane, ... ..	9	1
Third Laue, .....	3	1	" " " .....	17	1
		42	Second Street, ... ..	163	1
			Sixth Lane, .....	6	1
			Third Street, ... ..	150	1
			" " " .....	184	1
			Tung Wo Lane, West, .....	13	1
			Whitty Street, ... ..	...	3
			Wo On Hong, ... ..	7	1
					62

Appendix B.

*Report on House to House Search during epidemic of Plague by Honourable F. H. May, C.M.G.*

No. 75.  
M

POLICE OFFICE,  
HONGKONG, 14th July, 1898.

SIR,—I have the honour to forward, for the information of the Board, the following report on the work carried out during the recent epidemic of Plague in connection with the house to house search for plague patients.

The work, which began on the 19th April and ceased on the 11th June, was organised in the following manner:—

No. 2 Health District was divided into 2 sections and a search party consisting of 2 European Police Sergeants, 3 Soldiers and 3 Chinese Constables visited each section on alternate days.

No. 4 Health District was divided into 3 sections and a search party consisting of 1 European Police Constable, 2 Soldiers and 3 Chinese Constables visited one section a day.

No. 5 Health District was divided into 4 sections and a search party consisting of 1 European Police Sergeant, 1 European Police Constable, 4 Soldiers and 3 Chinese Constables visited one and a half sections a day.

No. 6 Health District was divided into 3 sections and a search party consisting of 1 European Police Constable, 2 Soldiers and 3 Chinese Constables visited two sections a day.

Nos. 7 and 8 Health Districts were divided into 3 sections and a search party consisting of 1 European Police Constable, 2 Soldiers and 3 Chinese Constables visited two of the sections each on alternate days.

No. 9 Health District was divided into 3 sections and a search party consisting of 1 European Police Constable, 1 Soldier and 2 Chinese Constables visited two of the sections each on alternate days.

The remaining section in No. 8 Health District and the remaining section in No. 9 Health District were visited by a search party consisting of 1 European Police Constable, 2 Soldiers and 3 Chinese Constables each on alternate days.

The total number of searchers employed was 45.

There were 62 cases of plague discovered by the search parties; of these 52 were alive and 10 dead. There were also 8 cases of suspected plague removed to Hospital which were pronounced not to be plague. All cases of plague or suspected plague, with the exception of those found in No. 9 Health District up to the 14th of May, were removed, in the first instance, to the Tung Wa Hospital where they were diagnosed by Dr. CHUNG and forwarded, if pronounced plague, to the Plague Hospital. After the 14th May the cases in No. 9 Health District were also forwarded, in the first instance, to the Tung Wa Hospital.

There was only one complaint made by the public against the Police engaged on house to house visitation. On investigation it was found to be without foundation. There were two complaints against the soldiers which were apparently well founded, and the men were removed from this duty, otherwise the soldiers did their work in a very orderly manner.

The search parties worked from 9 a.m. to noon and from 2 to 5 p.m. Each party was allowed half a day off duty once a week, and 24 hours' leave once a month.

The sections into which the Health Districts were divided, with a memo. of the number of houses in each, are filed at the Police Office for reference in the future if desired.

I have the honour to be,

Sir,

Your most obedient Servant,

F. H. MAY,  
*Captain Superintendent of Police.*

The Acting Secretary,

SANITARY BOARD.

## Appendix C.

*Report on Plague work at Kowloon by Mr. Frank Browne, (Acting Government Analyst).*

GOVERNMENT CIVIL HOSPITAL,  
HONGKONG, 22nd June, 1898.

SIR,—I have the honour to report for the information of the Board that the cleansing work in British Kowloon, for which I was appointed in April last by His Excellency the Acting Governor on the recommendation of the Board, is now concluded.

2. A great deal of cleansing was done particularly in Yaumati. The following table shows the extent of the cleansing carried out at the expense of the Government :—

<i>No. 11 District (Hunghom and Villages:)</i>	<i>No. 12 District (Yaumati, &amp;c.):)</i>
Floors washed only, ..... 29	36
Cleansed and lime-washed (floors),...202	528
Obstructions removed, ..... 88	68
* Coolies employed—one day each, .496	875

Where washing only was required in houses, the inmates usually carried out the work of their own accord, which fact will explain the small amount of washing only, that was done by the Government. Although an opportunity was afforded to the tenants to do the lime-washing required, very few availed themselves of it on account of the expense.

3. The obstructions removed consisted of bunks, cocklofts, cubicles, doors, josses, and latrines, which had been erected in such a way as to deprive the rooms of light and air. A great improvement has been effected in most houses by these removals as the removal of a single obstruction has in many cases converted a dark ill-ventilated room into a healthy and cheerful habitation. However, experience has shown that these obstructions are put up again as soon as vigilance is relaxed, so it is earnestly hoped that special attention will be directed so that such structures may be at once demolished if re-erected.

*No. 11 District—(Hunghom and Villages).*

4. Cleansing in this district was commenced on April 20th, and completed on May 23rd. The houses here are for the most part very good and substantial, but in the event of another epidemic attention should be particularly directed to Shung On Lane and Dock Lane, in which the houses are inferior. Several cases of plague having been traced from Shung On Lane, on May 7th the whole of Hunghom was disinfected with a mixture of salt, manganese di-oxide, and sulphuric acid. It was considered advisable to disinfect the whole of the place as a number of dead bodies had been found on the hill-side, and it was impossible to find out which houses were infected and which were not, so the safest plan was adopted of disinfecting them all.

No case of plague could be found to have occurred in the houses of Hunghom after the disinfection although several bodies (see table of cases of plague attached) were afterwards found on the hill-side, but the number of these bodies being only 11 from May 7th to June 13th, a further disinfection on a wholesale scale was not considered necessary.

*No. 12 District—(Yaumati, Tai Kok Tsui, Mong Kok Tsui, &c.)*

5. Cleansing operations were commenced on April 20th, and the work was completed on June 2nd. A number of cases of plague having occurred at Tai Kok Tsui a visit was paid to this village on April 24th, when it was seen that a large proportion of the inhabitants were living in insanitary dwelling-huts, boats, and hovels. On April 26th the whole of the district was disinfected with salt, manganese di-oxide, and sulphuric acid. The people in the huts, boats, and hovels were for the most part trespassers on Crown land; they were not agriculturists but apparently merely loafers of no use to the Colony. In an industrial centre like Tai Kok Tsui, such dirty and insanitary hovels are particularly objectionable; fortunately, now, many of them have been destroyed. Since the disinfection on April 26th no further cases of plague have occurred in the houses at Tai Kok Tsui, but several cases have been found in the hovels and on the foreshore. The majority of the houses in Tai Kok Tsui are well constructed and with the hovels removed there should be little fear of plague another year.

6. It was early seen in Yaumati from the number of deserted floors that a number of bodies had been carried out from the houses and placed in the street or in other open places. The whole place was therefore disinfected as in Tai Kok Tsui, on May 7th, and the number of dead bodies found in the street, subsequent to this disinfection, being considerable, chloride of lime was placed on every floor at Yaumati on May 17th.

\* Exclusive of lime-washers who were paid by piece-work.

7. It was not at all surprising to find so many dirty houses in Yaumati, considering that with the present arrangement of the kitchen it is absolutely impossible to prevent smoke from penetrating the living rooms. There are but few houses in Yaumati that have proper arrangements for carrying away smoke. In many houses the smoke is continually present in such quantities as to be extremely irritating to the eyes and nostrils of an European. - Can people living in such houses be expected to keep either their houses or themselves clean? But, worst of all, in order to keep the smoke out of the living rooms, the inmates block up the window between the kitchen and the living room so that a through current of air is shut off from that direction. This smoke nuisance can easily be abated as suitable clay fire-places can be easily and cheaply put in.

8. Many dark houses would be greatly improved by letting a small square of glass into the roof. Dark houses were nearly always dirty.

9. Houses 1, 2, 3, 4, 5 Fourth Lane are in a dirty and insanitary condition; they are little better than hovels. They have been disinfected three times; some boats on the foreshore above high water mark at Yaumati should be removed.

10. The houses in Fuk Sing Lane will require a lot of attention as a number of cases of plague have occurred there. The drains in several of these houses have had to be unblocked several times; probably they need repair.

11. On May 31st all the sampans in the district were examined. The boats were very clean for Chinese sampans. No sick people were found except two children just recovering from small-pox.

#### *Disinfection and Disinfectants.*

12. A large number of houses have been disinfected with chlorine. The process employed for disinfecting simultaneously a large number of houses without removal of the inmates was to place in each room on each floor two ounces of a mixture of one part of salt, and one part of manganese di-oxide. On this mixture was poured six ounces of dilute sulphuric acid (1 in 4). This gave off slowly but continuously for about 12 hours a stream of chlorine, which did not greatly interfere with the inmates, who were told to open all their doors and windows if the action of the chlorine became too suffocating. Throughout Kowloon the Chinese gladly receive this disinfectant, and, speaking generally, we found that they were ready to obey any directions in order to be protected from plague, provided that such directions did not mean that they were put to any expense.

13. For disinfection of closed houses in which plague had occurred the following process was employed:—

Close the doors, windows, and all apertures as completely as possible; [a carpenter is required for this]. Then place half a pound of chlorinated lime in a pot and well mix with a quart of water, place in the centre of the floor and pour on a quart of diluted sulphuric acid (1 in 5). Where the floors are large two pots to each should be used. Commence to disinfect on the top floor.

The following quantities of substances for disinfection have been used:—

- 3 cwt. manganese di-oxide.
- 3 cwt. salt.
- 800 pounds of sulphuric acid.
- 3,000 pounds of chlorinated acid.

#### *House to house Visitation.*

14. This was carried out by Sergeant CAMERON and P. C. CORMACK after the cleansing of the whole district of Kowloon was completed on June 2nd. All the Chinese houses in British Kowloon were visited. The visitation was considered by me to be unnecessary after June 18th.

#### *Conclusion.*

15. C. P. O. LOVELL was in charge of a cleansing party from April 20th to May 13th when his place was taken by P. C. CORMACK who returned to his ordinary duties on June 19th. Sergeant CAMERON was in charge of a cleansing party from April 20th to June 18th, after which he returned to his ordinary duties.

C. P. O. LOVELL, P. C. CORMACK and Sergeant CAMERON carried out extremely satisfactorily the work entrusted to them.

16. Herewith is attached a return showing that in No. 11 district 26 cases of plague were removed from March 16th to June 13th, and that in No. 12 district during the same period 149 cases of plague were removed.

I have the honour to be,

Sir,

Your obedient Servant,

FRANK BROWNE,  
*Acting Government Analyst.*

The Secretary,  
THE SANITARY BOARD.

*Return showing Number of Cases of Plague sent from Kowloon between 16th March and 13th June, 1898, in No. 11, Health District, (Hungom).*

Date.	Where from	Males.	Females.	Remarks.
March 16th	Matsheds, Hungom, .....	1	...	Dead.
" 17th	Foreshore " .....	...	1	"
" 20th	" " .....	1	...	"
" 26th	" " .....	...	1	"
" 30th	Hungom, West, .....	1	...	"
" 31st	8, Market Street, Ground Floor, .....	1	...	"
April 9th	Foreshore, Hungom, .....	1	...	Sick.
" 21st	" " .....	1	...	Dead.
" 23rd	No. 102, Market Street, .....	1	...	"
" 23rd	" 13, Hungom, West, .....	1	...	"
" 23rd	Foreshore, Tokwawan, .....	...	1	"
" 25th	Hok Ūn, Village, .....	1	...	"
May 1st	No. 6, Shung On Lane, .....	1	...	"
" 5th	" 68, Market Street, .....	...	1	"
" 6th	" 68, " .....	1	...	Sick.
" 12th	Hok Ūn, .....	1	...	Dead.
" 15th	Foreshore, Hungom, .....	...	1	"
" 16th	Hill-side, Tai Wan, .....	1	...	"
" 16th	Foreshore, Hungom, .....	...	1	"
" 16th	Hok Ūn, .....	1	...	"
" 18th	Foreshore, Hungom, .....	...	1	"
" 24th	" " .....	...	1	"
" 27th	Hungom, West, .....	1	...	"
" 29th	Hill-side, Hungom, .....	...	1	"
June 1st	Foreshore, Hungom, .....	1	...	"
" 3rd	" " .....	1	...	"
Totals,.....		17	9	

*Return showing Number of Cases of Plague sent from Kowloon between 30th March and 3rd June, 1898, in No. 12, Health District.*

Date.	Where from	Males.	Females.	Remarks.
March 30th	Hongkong Regiment, Kowloon, .....	1	...	Sick.
" 31st	Rifle Range, .....	...	1	Dead.
" 31st	No. 48, Battery Street, .....	...	1	Sick.
April 7th	No. 46, Temple Street, .....	1	...	Dead.
" 8th	Yaumati, .....	1	...	"
" 9th	" .....	1	...	Sick.
" 9th	Taikoktsui, .....	...	1	Dead.
" 9th	" .....	1	...	"
" 9th	" .....	1	...	"
" 10th	Foreshore, Yaumati, .....	1	...	"
" 16th	" " .....	...	1	"
" 19th	Fuk Tsun Heung, .....	1	...	"
" 20th	Foreshore, Yaumati, .....	1	...	"
" 23rd	" Taikoktsui, .....	1	...	"
" 23rd	No. C. M. Dock Launch, .....	1	...	"
" 24th	Hill-side, Hung Chung, .....	...	1	"
" 24th	No. 16, Fuk Sing Lane, .....	1	...	"
" 26th	Station Street, .....	1	...	"
" 29th	Taikoktsui, .....	...	1	"
May 1st	No. 158, Station Street, .....	...	1	Sick.
" 2nd	Indian Barracks, Kowloon, .....	1	...	"
" 2nd	Taikoktsui, .....	1	...	Dead.
" 3rd	Foreshore, Yaumati, .....	...	1	"
" 4th	Hung Chung, .....	...	1	"
" 4th	Foreshore, Taikoktsui, .....	...	1	"
" 5th	No. 68, Reclamation Street, .....	...	1	Sick.
" 5th	No. 15, Station Street, .....	...	1	"
" 5th	No. 15, " .....	...	1	Dead.
" 5th	Mati, .....	1	...	"
" 7th	Station Hospital Kowloon, .....	1	...	Sick.
" 7th	Yaumati, .....	1	...	Dead.
" 8th	" .....	1	...	"
" 8th	Taikoktsui beach, .....	...	1	"
<i>Carried forward,.....</i>		19	14	

Return showing Number of Cases of Plague sent from Kowloon, etc.,—Continued.

Date.	Where from	Males.	Females.	Remarks.
	<i>Brought forward,</i> .....	19	14	
May 8th	Foreshore, Yaumati, .....	1	...	Dead.
" 8th	Kowloon City, .....	...	1	Sick.
" 9th	No. 17, Battery Street, .....	1	...	Dead.
" 9th	" " .....	...	1	"
" 9th	Taikoktsui, .....	1	...	"
" 10th	Foreshore, Stonecutters' Island, .....	...	1	"
" 10th	No. 94, Taikoktsui, .....	1	...	"
" 10th	On a boat at Yaumati, .....	...	1	"
" 11th	No. 17, Fuk Shing Lane, .....	1	...	Sick.
" 11th	" " .....	1	...	Dead.
" 11th	" " .....	1	...	"
" 11th	No. 27, Station Street, .....	...	1	Sick.
" 11th	On a boat at Yaumati, .....	1	...	Dead.
" 11th	No. 36, Taikoktsui, .....	1	...	"
" 11th	Foreshore " .....	...	1	"
" 12th	On a boat at Yaumati, .....	...	1	"
" 12th	" " .....	...	1	"
" 12th	No. 6, McDonnell Road, .....	...	1	"
" 12th	No. 1, Reclamation Street, .....	...	1	Sick.
" 13th	Yaumati, .....	1	...	Dead.
" 14th	No. 8, McDonnell Road, .....	...	1	Sick.
" 14th	" " .....	...	1	"
" 14th	" 26, Elgin Road, .....	1	...	"
" 14th	On a boat at Yaumati, .....	...	1	Dead.
" 14th	Foreshore, Stonecutters' Island, .....	1	...	"
" 14th	" " .....	...	1	"
" 14th	No. 52, Battery Street, .....	1	...	"
" 15th	No. 23, " .....	...	1	"
" 15th	On a boat at Taikoktsui, .....	1	...	"
" 15th	Hill-side, .....	1	...	"
" 16th	No. 54, Station Street, .....	...	1	Sick.
" 16th	No. 54, " .....	...	1	Dead.
" 16th	No. 70, Reclamation Street, .....	...	1	"
" 16th	No. 54, Station Street, .....	1	...	"
" 16th	No. 91, " .....	...	1	"
" 16th	No. 27, Mati, .....	...	1	"
" 16th	Matsheds at Kuug Chung, .....	1	...	"
" 17th	Reclamation Street, .....	...	1	"
" 17th	No. 52, Reclamation Street, .....	...	1	"
" 17th	On a boat at Yaumati, .....	...	1	"
" 17th	Praya, Fuk Tsun Heung, .....	1	...	"
" 17th	Matshed at Taikoktsui, .....	...	1	"
" 18th	No. 33, Battery Street, .....	1	...	"
" 18th	No. 81, Taikoktsui, .....	...	1	"
" 19th	No. 56, Reclamation Street, .....	1	...	"
" 19th	Hill-side, Mongkoktsui, .....	...	1	"
" 19th	No. 56, Station Street, .....	1	...	"
" 19th	Foreshore, Taikoktsui, .....	1	...	"
" 19th	No. 56, Station Street, .....	1	...	"
" 19th	Fuk Tsun Heung, .....	1	...	Sick.
" 20th	No. 25, Battery Street, .....	...	1	"
" 21st	On a boat at Taikoktsui, .....	1	...	"
" 21st	Foreshore, Mongkoktsui, .....	...	1	"
" 22nd	" Yaumati, .....	...	1	"
" 22nd	Rifle Range, .....	...	1	"
" 23rd	Yaumati, .....	1	...	"
" 23rd	Yaumati, .....	1	...	"
" 23rd	No. 44, Station Street, .....	...	1	"
" 23rd	No. 11, Elgin Street, .....	1	...	"
" 24th	Reclamation Street, .....	1	...	Dead.
" 24th	Foreshore, Mongkoktsui, .....	...	1	"
" 24th	No. 155, Station Street, .....	1	...	"
" 24th	Station Street, .....	1	...	"
" 25th	Yaumati, .....	...	1	Sick.
" 25th	No. 24, Fuk Sing Lane, .....	1	...	"
" 25th	Foreshore, Stonecutters' Island, .....	1	...	Dead.
" 25th	Sixth Lane, Yaumati, .....	...	1	"
" 26th	No. 9, Elgin Road, .....	1	...	Sick.
" 26th	" 10, Temple Street, .....	...	1	Dead.
" 26th	Foreshore, Stonecutters' Island, .....	1	...	"
" 27th	Yaumati, .....	1	...	Sick.
" 27th	No. 2, Canton Villas, .....	1	...	"
	<i>Carried forward,</i> .....	56	49	

*Return Showing Number of Cases of Plague sent from Kowloon, etc.,—Continued.*

Date.	Where from	Males.	Females.	Remarks.
	<i>Brought forward, .....</i>	56	49	
May	27th No. 4, Fuk Tsun Hung, .....	1	...	Sick.
"	27th " 78, Taikoktsui, .....	1	...	"
"	27th Foreshore, .....	1	...	Dead.
"	27th Hillside, Mongkoktsui, .....	1	...	"
"	27th On a boat at Yaumati, .....	1	...	"
"	27th Foreshore, Cosmopolitan Dock, .....	1	...	"
"	28th No. 13, Reclamation Street, .....	...	1	Sick.
"	28th " 51, Mongkoktsui, .....	...	1	Dead.
"	28th Foreshore, Yaumati, .....	1	...	"
"	28th On a boat at Yaumati, .....	...	1	"
"	29th No. 6, Kennedy Street, .....	...	1	"
"	29th Yaumati, .....	1	...	"
"	29th No. 46, Mongkoktsui, .....	1	...	"
"	29th " " .....	...	1	"
"	29th No. 13, Kennedy Street, .....	1	...	"
"	29th No. 64, Station Street, .....	1	...	"
"	29th No. 60, " .....	1	...	"
"	30th Hill-side, Yaumati, .....	1	...	"
"	30th Rifle Range, .....	1	...	"
"	30th On a boat at Yaumati, .....	...	1	"
"	30th " " .....	1	...	"
"	31st No. 129, Station Street, .....	1	...	"
"	31st On a boat at Yaumati, .....	...	1	"
"	31st Foreshore, Mongkoktsui, .....	1	...	"
"	31st Reclamation, .....	1	...	"
"	31st Yaumati, .....	1	...	Sick.
June	1st Matshed at Kung Chung, .....	1	...	"
"	1st No. 22, Mongkoktsui, .....	...	1	"
"	2nd Foreshore, Yaumati, .....	1	...	"
"	3rd Hill-side, Fuk Tsun Heung, .....	1	...	"
"	3rd No. 4, Ship Lane, Taikoktsui, .....	...	1	"
"	4th No. 31, Temple Street, .....	1	...	"
"	4th On a boat at Taikoktsui, .....	1	...	"
"	4th " " .....	...	1	"
"	4th McDonnell Road, .....	...	1	"
"	5th No. 12, Station Street, .....	1	...	"
"	7th No. " , Market Lane, Yaumati, .....	...	1	Sick.
"	7th No. 33, Mongkoktsui, .....	1	...	Dead.
"	7th Kowloon Road, .....	...	1	"
"	8th Hill-side, Yaumati, .....	...	1	"
"	10th Mongkoktsui, .....	1	...	Sick.
"	10th Taikoktsui, .....	...	1	"
"	11th No. 48, Temple Street, .....	1	...	Dead.
"	12th On a boat at Yaumati, .....	...	...	"
"	12th Foreshore, Yaumati, .....	1	...	"
	Totals, .....	85	64	

## GOVERNMENT NOTIFICATION.—No. 592.

Tenders will be received at this Office until Noon of Monday, the 30th January, 1899, for the general scavenging of the following villages, namely:—

1. Hunghom, Kowloon Point, Yaumati and Taikoktsui, etc.
2. Shaukiwan and Quarry Bay.
3. Aberdeen and Aplichau.
4. Stanley and Taitam.

For specifications, period of contracts and full particulars, apply at the Office of the Secretary to the Sanitary Board.

For form of tender apply at this Office.

The Government does not bind itself to accept the lowest or any tender.

By Command,

T. SERCOMBE SMITH,  
Acting Colonial Secretary.

Colonial Secretary's Office, Hongkong, 24th December, 1898.