

The Management of Malaria and Leprosy in Hong Kong
and the International Settlement of Shanghai,
1880s – 1940s

Daniel Ham
Corpus Christi College

This dissertation is submitted for the degree of Doctor of Philosophy
September 2012

This dissertation is the result of original work and includes nothing which is the outcome of work done in collaboration or work submitted for the MPhil in Historical Studies degree except where indicated in the text.

It does not exceed 80,000 words excluding the bibliography and footnotes.

Daniel Ham

Abstract

This dissertation contrasts Hong Kong's and the International Settlement's management of malaria and of leprosy from the 1880s through the 1940s. This dissertation has two main objectives. Firstly it examines the historical management of malaria and leprosy within specific geo-political contexts. By focusing on British possessions in coastal China, this project explores the production of colonial medical knowledge within a transnational context, presents new and original analyses of the local history of the disease, and bridges the historiography of the British Empire and that of modern China. Secondly this dissertation contrasts Hong Kong's and the International Settlement's management of each of these two diseases. By focusing specifically on these two British possessions in coastal China, this project provides insights into the Imperial conceptualisation and management of Chinese bodies and Chinese environments, sheds light on broader historiographical debates regarding the role of colonial medicine, and complicates modern debates about the nature of colonialism in China.

Acknowledgements

This dissertation is the realisation of a childhood ambition, and I am indebted to everyone who helped me along the way.

First and foremost I would like to thank my supervisor Chris Bayly for his tireless support, encouragement and advice through two degrees and four years' worth of postgraduate research.

I would like to thank Paul Aston for inspiring me to read history in the first place, albeit at 'the other place'. If truth be told, I chose Cambridge purely on the advice of Mr. E. Blackadder & Co.

I am especially grateful to all of my professors at Cambridge, in particular Larry Klein, Rosamond McKitterick, William O'Reilly, Megan Vaughan, and Hans van de Ven. I would also like to extend my thanks to Mark Harrison and Jo Robertson at Oxford. I am very grateful for the assistance I received from John Moffet of the Needham Research Institute and from all of the Seeley Library staff.

Before embarking on my postgraduate research on Imperial history, I was advised to take particular care in selecting the region I wished to study. Although an unnamed source was shocked to hear that I could have selected Tahiti, or any other island in the South Pacific for that matter, Hong Kong and Shanghai proved fortuitous choices. I would like to acknowledge Maria Sin, Angela Leung, Robert Peckham, and Robert Carroll of Hong Kong University and Helen Swinnerton of HSBC's Asia-Pacific archives for assisting me with my research. Special thanks also to Jenny McClain and Bill Whitaker for taking me under their wing. As for Shanghai, I cannot thank Meiling Cheng enough for her extraordinary hospitality.

Neither my studies in Cambridge nor my research trip to China would have been possible without the generous support of the Arts and Humanities Research Council, the Smuts Memorial Fund and the Corpus Christi College Small Research Fund.

I would like to thank all of my friends for making my time at Cambridge such a wonderful and memorable experience. In particular I would like to thank Theodore Bell, Emma & Will Calvert, Fan Chen, Elisabeth Leake, Peter Matthews, Liza Mirelman, Ulf Narloch, Rob Payne, Charlie Pearson & Breeshey Harkin, Amy Renton, Emma Rhule & Lorry Carr, Laldinkima Sailo, Claire Simmonds, Alice Turnbull and Faridah Zaman.

Finally I would like to thank Bonnie & Brian for supporting this childhood ambition from inception to fruition, Jonathan for inspiring, and Sophie & Louis for making September 28th a doubly auspicious occasion. And last but by no means least I would like to thank Trisha from the bottom of my heart.

Contents

Abstract	i
Acknowledgements	iii
Illustrations	vii
List of Abbreviations	ix
Maps	xi
Introduction	1
2 Leprosy in Hong Kong	29
3 Leprosy in the International Settlement of Shanghai	83
4 Malaria in Hong Kong	135
5 Malaria in the International Settlement of Shanghai	187
Conclusion	233
Appendix A: 'Hearty Gun's Warning'	249
Appendix B: Additional Statistics	253
Bibliography	261

Illustrations

Maps

1	Hong Kong	xi
2	The Expansion of the International Settlement of Shanghai, 1894-1943	xiii
3	Shanghai	xv
4	The Islands of Dom João and Cheung Chau	42
5	Mainland Leprosaria	48
6	The National Leprosarium and the Sino-Japanese War, 1937-38	115
7	The Brennan Road Emergency Leprosarium	117
8	The Cattle Depôts and Slaughter Houses at Kennedy Town	143
9	Experimental Malarial Prophylaxis at the Police Stations in the New Territories	152
10	The Kowloon Reservation	165
11	The Site of the Queen Mary Hospital at Pokfulam, ca. 1935	181
12	The Malaria Bureau's Operations during the Construction of the Shing Mun Reservoir, ca. 1933	183
13	A Trans-Municipal Approach to Malaria Prevention, 1936-42	222

Figures

1	<i>Leprosy</i> by W. Howard, Canton, ca. 1861	33
2	<i>A Kiu – Case VI. One of Cantlie's Leprosy Patients in Hong Kong</i> , ca. 1890	40
3	<i>A Typical Leper</i>	55
4	<i>Board of Directors, Hongkong Auxiliary</i> , ca. 1927	57
5	<i>The Hongkong Sunday Herald's</i> Sensational Article about the Kennedy Town Leprosarium	67
6	The Kennedy Town Leprosarium, 1935-39	70
7	Prisoners discharged from the colony's prisons with leprosy, 1931-39	71
8	<i>A Modern Nightingale. Miss Ethel R. Groce ministering to a female leper in Hong Kong</i>	72
9	<i>The Swatow Municipal Leprosarium after air-raid on May 5, 1939</i>	74
10	<i>Some Victims among the patients of the ill-fate Leprosarium</i>	74
11	Lt. Gen. Norton's visit to the Kennedy Town Leprosarium	75
12	E. S. Tyau and the Leper Clinic at the Hongkew General Dispensary, ca. 1929	90
13	Staff and Patients at the C.M.L.'s Hongkew Clinic for Skin Diseases, ca. 1933	90
14	<i>Dedication of the National Leprosarium of Shanghai</i> , Dec. 12, 1935	103
15	<i>The remaining lepers in crowded quarters with shells flying over their heads in morning worship. Thirty-three lepers are now crowded in the small court seen in the picture. Chungshan Hospital, Shanghai, ca. Oct.-Dec. 1937</i>	111
16	The Brennan Road Emergency Leprosarium, ca. 1938-42	122

17	<i>A Bread-eating Contest at the Shanghai Emergency Leprosarium, ca. 1941</i>	122
18	<i>Ong Ih-dao, a leper artist in the National Leprosarium of Shanghai</i>	123
19	<i>Ong Ih-dao Caught on camera while at work in his open air studio on enlarging a photo of the Rev. T. C. W.</i>	123
20	'An Occupational Hazard': Malaria and the Police Force, 1897-1920	149
21	An Untrained Nullah	160
22	A Trained Nullah	160
23	Chinese Deaths from Malaria Registered at Kowloon and on Hong Kong Island, 1910-25	172
24	Military and Civilian Cases of Malaria, 1927-32	201
25	Notified Cases of Malaria Amongst the Foreign and Chinese Communities, 1927-36	204
26	The Public Inauguration of the Flying Column, ca. Aug. 1936	207
27	<i>A corner of the M.P.U. experimental laboratory, ca. 1939</i>	212
28	The distinctive Public Health uniforms, ca. 1936-39	219
29	The distinctive Public Health uniforms, ca. 1936-39	219
30	The Flying Column	223
31	Resident and Refugee Admissions to the National Leprosarium, 1938-45	258
 Tables		
2.1	Leprosy Deportations and Admissions, 1899-1912	46
2.2	Returns at the Government Infectious Diseases Hospital at Kennedy Town, 1898-1914	50
2.3	Return of Leprosy Admissions and deaths, 1928-35	61
2.4	The Kennedy Town Leprosarium, 1935-39	70
3.1	<i>Distribution in Shanghai: Out-patients at the Hongkew Clinic for Skin Diseases, 1934-35</i>	102
3.2	Maintenance of Foreign and Chinese Leprosy Sufferers	126
4.1	Experiments with Prophylactic Regimes at the Police Stations in the New Territories	151
4.2	Principal Causes of Sickness on the Kowloon-Canton Railway, 1907-10	170
5.1	<i>Mosquito Extermination Work, 1909-11</i>	196
5.2	Proposed changes to the anti-malarial staff in the Eastern and Western Districts	205
A2.1	Leprosy Cases in Hong Kong	255
A2.2	Leprosy Cases in the International Settlement's Isolation Hospitals, 1903-31	256
A2.3	The International Settlement's Maintenance of Resident and Refugee Leprosy Sufferers, 1938-40	257
A2.4	Malarial Admissions amongst Hong Kong's Police Force, 1897-1920	259
A2.5	Annual Malaria Returns for the European Troops in Hong Kong, 1898-1914	260
A2.6	Notified Civilian and Military Cases of Malaria in the International Settlement of Shanghai, 1927-32	260

Abbreviations

Actg.	Acting
B.E.L.R.A.	British Empire Leprosy Relief Association
C.M.L.	Chinese Mission to Lepers
C.M.M.A.	China Medical Missionary Association
D.P.W.	Director of Public Works
Gen. Mgr.	General Manager
I.M.S.	Indian Medical Service
Mgr.	Manager
<i>N.C.D.N.</i>	<i>The North-China Daily News</i>
<i>N.C.H.</i>	<i>The North-China Herald</i>
P.W.D.	Public Works Department
R.A.M.C.	Royal Army Medical Corps
Sec.	Secretary
Supt.	Superintendent

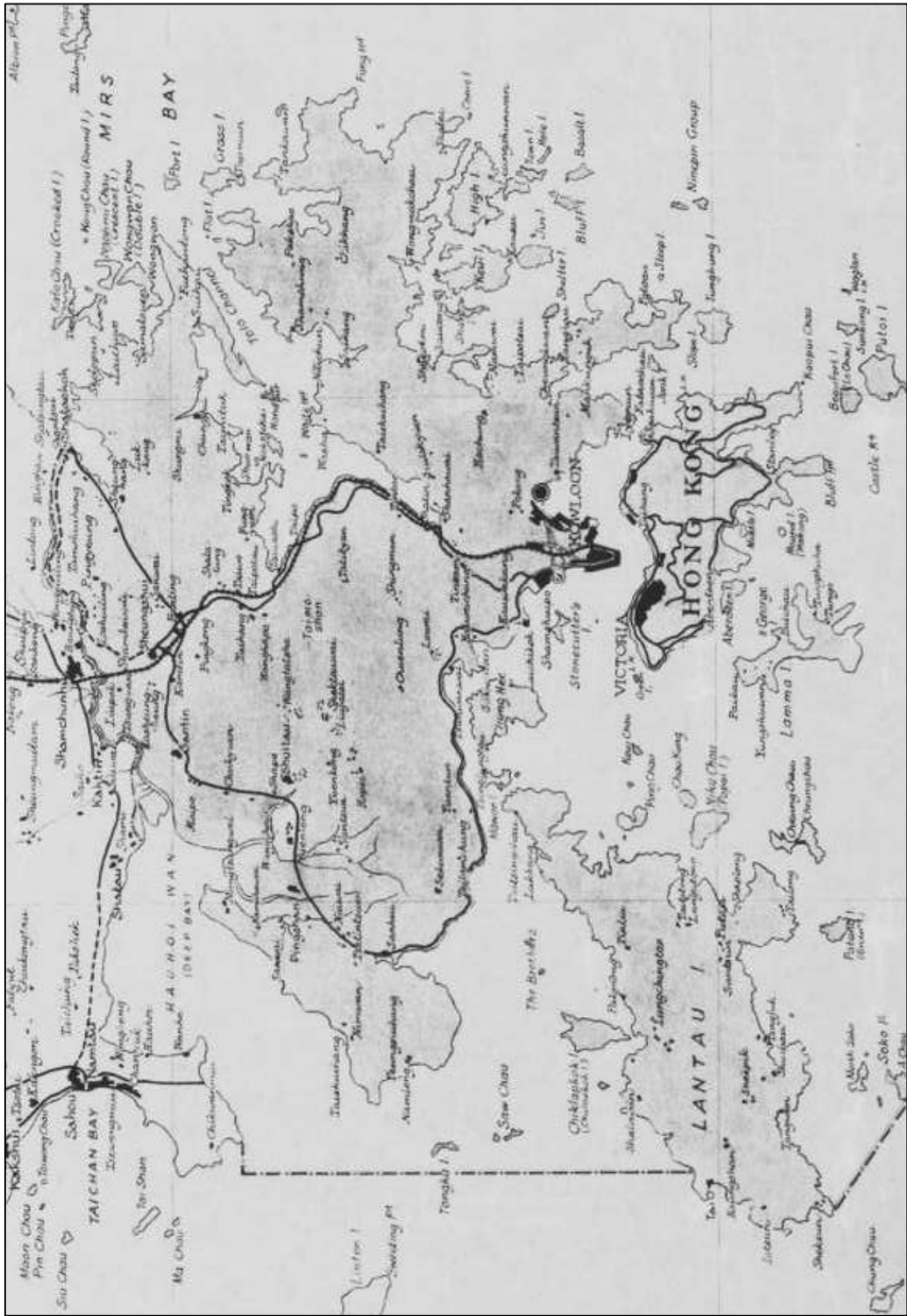
Terms specific to Hong Kong

Actg. Col. Sec.	Acting Colonial Secretary
Assist. Govt. Malariologist	Assistant Government Malariologist
Capt. Supt. Police	Captain Superintendent of Police
Col. Sec.	Colonial Secretary
D.M.S.S.	Director of the Medical & Sanitary Services
Govt. Malariologist	Government Malariologist
K.R.A.	Kowloon Residents' Association
M.O.H.	Medical Officer of Health
P.C.M.O	Principal Civil Medical Officer

Terms specific to the International Settlement of Shanghai

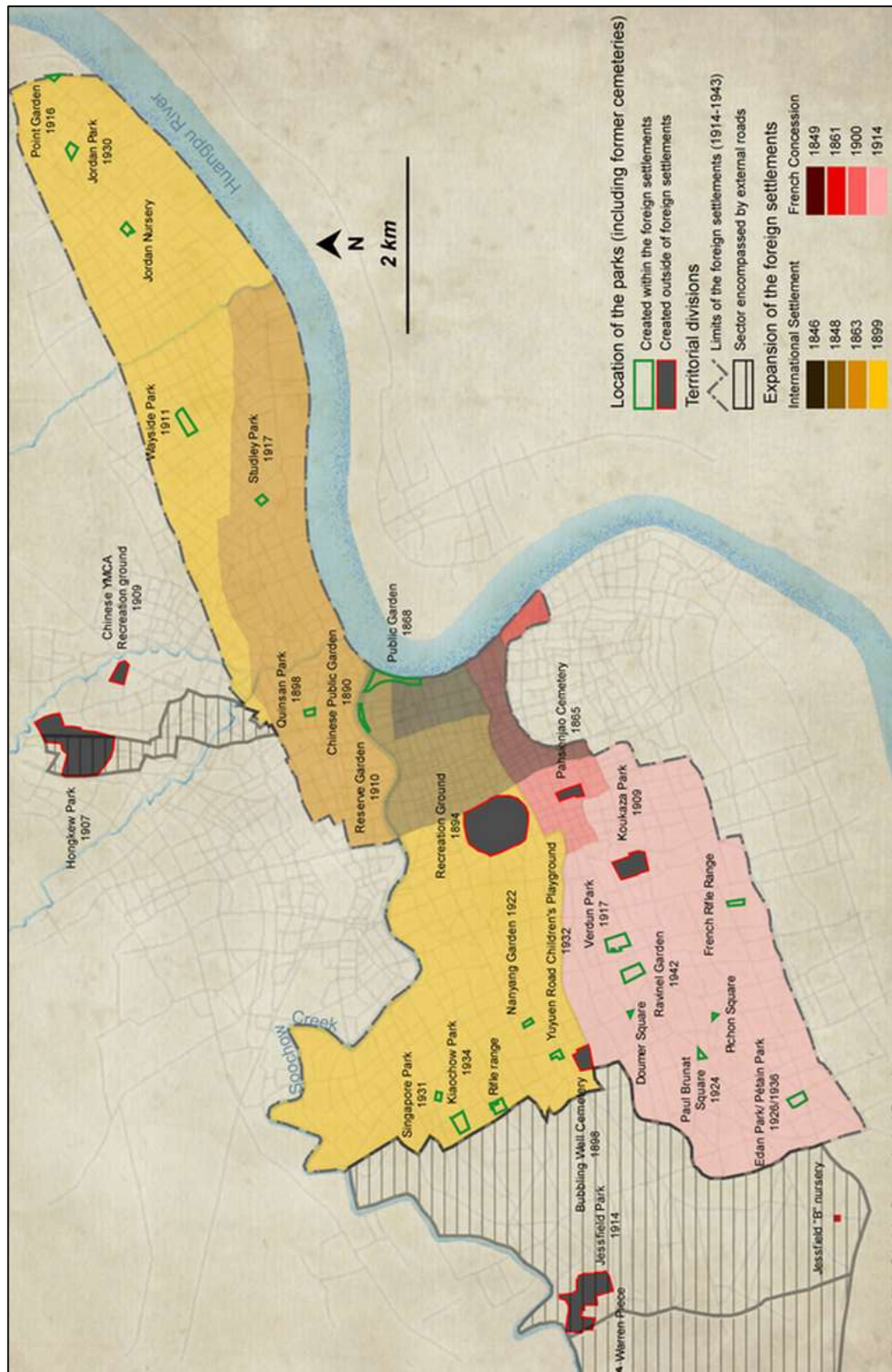
C.H.I.	Chief Health Inspector
C.P.W.	Commissioner of Public Works
C.P.W.	Commissioner of Public Works
Com. Police	Commissioner of Police
Com.	Commissioner
D.C.P.W.	Deputy Commissioner of Public Works
P.H.D.	Public Health Department
S.M.C.	Shanghai Municipal Council
S.P.B.C.O	Shanghai Public Benevolent Cemetery Organisation
Sec. & Com. Gen.	Secretary & Commissioner General
W.A.S.P.	Western Area Special Police Force

Maps



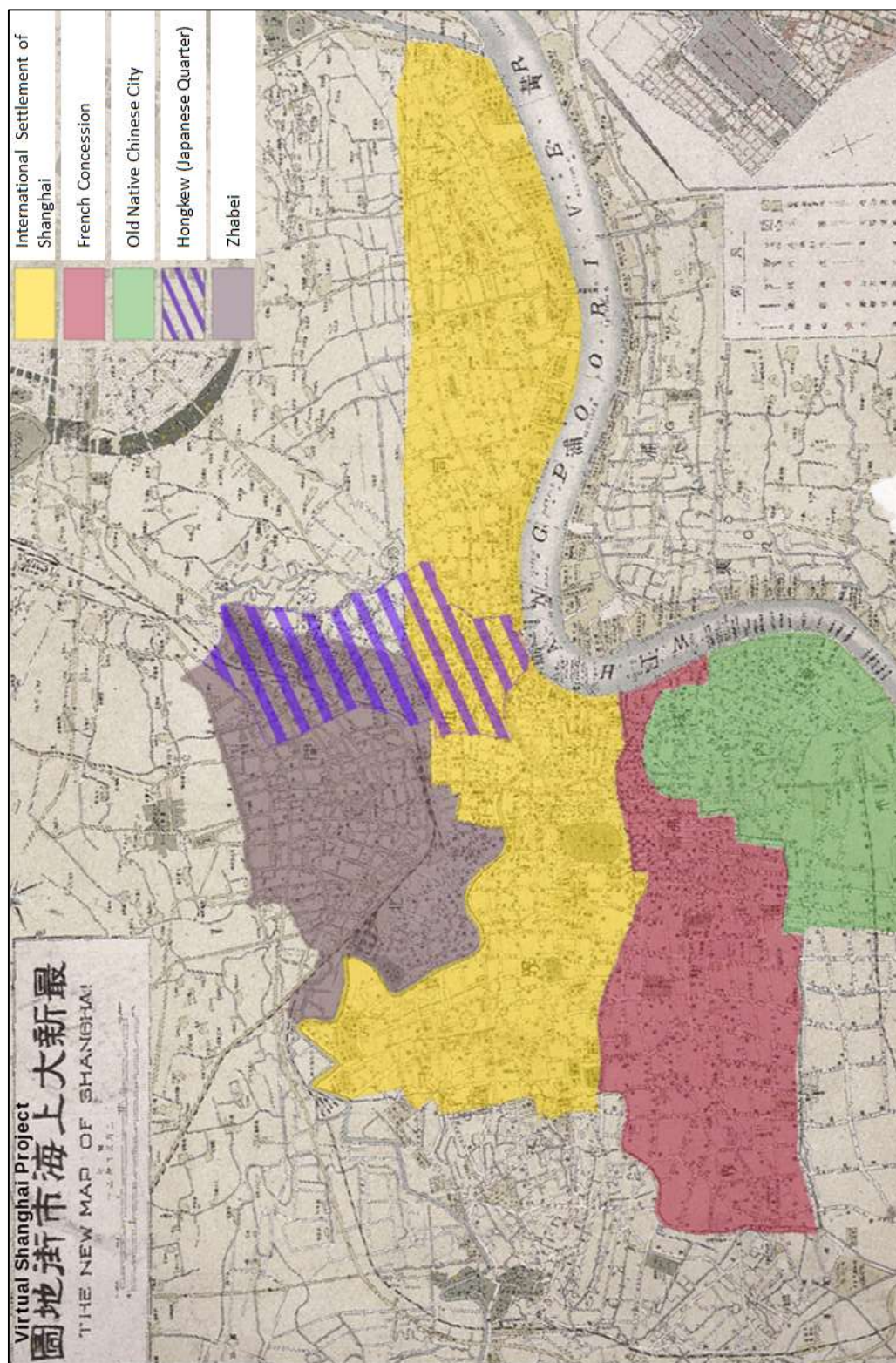
Map 1. Hong Kong.

Source: <http://nla.gov.au/nla.map-brsc31>



Map 2. The Expansion of the International Settlement of Shanghai, 1849, 1943.

Source: *Virtual Cities Project* (Institut d'Asie Orientale)
http://www.virtualshanghai.net/Asset/Preview/vcMap_ID-558_No-1.jpeg



Map 3. Shanghai.

Source: Virtual Cities Project (Institut d'Asie Orientale)
http://www.virtualshanghai.net/Asset/Preview/vcMap_ID-710_No-1.jpeg

Introduction

In 1894 Dr. James Cantlie, a Scottish physician in Hong Kong, circulated a questionnaire on the prevalence, transmission and treatment of leprosy to almost 400 doctors, medical missionaries, and colonial officials in China, southeast Asia and the Pacific. Cantlie hoped to establish, among other things, the relationship between leprosy and other diseases including malaria:

The relation of malaria to leprosy has been a burning question, nor is the belief quite dead. The provinces of Kwang-tung [Guangdong], Fokien [Fujian], and Shan-tung [Shandong] are the most malarial, at the same time the most leprous... On the other hand, we find leprosy in many cases without malaria, and malaria without leprosy.¹

This dissertation does not propose to revolutionise what has long been accepted – what Cantlie concluded on the basis of the 75 responses that he received – namely that there was, and is, no pathological connection between the two diseases. Leprosy is a chronic infectious disease caused by *Mycobacterium leprae*, whereas malaria is a life-threatening disease caused by the mosquito-borne transmission of one of four parasite species.² Instead this dissertation explores the production, evolution and role of colonial medicine in East Asia through the prisms of these two diseases. During the colonial period these two diseases were conceptualised and managed in very different ways: leprosy was inherently associated with colonial bodies, malaria with inhabited environments. In a sense, these two diseases represented opposite ends of a conceptual spectrum along which other diseases may be situated.

The dissertation has two main objectives. Firstly it examines the historical management of each of these two diseases within specific geo-political contexts. By focusing on British possessions in coastal China, this project explores the production of colonial medical knowledge within a transnational context, presents new and original analyses of the local histories of these diseases, and bridges the historiography of the British Empire and that of modern China. Secondly the dissertation contrasts Hong Kong's and the International Settlement's management of malaria and of leprosy. By focusing specifically on *these* two British possessions in coastal China, the project provides insights into the Imperial conceptualisation and management of Chinese bodies and Chinese environments, sheds light on broader historiographical debates regarding the role of colonial medicine, and complicates modern debates about the nature of colonialism in China.

The colonial presence in modern China encompassed colonies, treaty-ports, coercively leased territories and spheres of influence. Whilst formations such as British Hong Kong, Portuguese Macao and Japanese Taiwan were indisputably 'colonial' territories, scholars continue to debate the notion of 'semi-colonial' possessions. This Leninist term

¹ James Cantlie, ed., *Report On The Conditions Under Which Leprosy Occurs in China, Indo-China, Malaya, The Archipelago, and Oceania. Compiled Chiefly During 1894* (London: MacMillan and Co., 1897), 21.

² The exact transmission of leprosy is still unknown, but the most-widely held belief, at least until recently, was that it was transmitted through prolonged physical contact. The four malaria parasites are *Plasmodium falciparum* (the most common and deadly form), *P. vivax*, *P. malariae*, *P. ovale*. These parasites are exclusively transmitted through the bites of *Anopheles* mosquitoes.

implied that treaty-ports such as the International Settlement of Shanghai were in a state of transition.³ But as historians Robert Bickers and Christian Henriot have argued “the treaty system effectively replaced the state as the defining organizational frame”.⁴ How then are we to understand the relationship between medicine and these diverse colonial forms? Historians have identified parallels between the medical discourses and practices in these ‘semi-colonial’ territories on the one hand, and the British, Japanese and French empires on the other.⁵ Given Rogasaki’s contention that “no one treaty-port history can stand in for all the others”, can we even coin new phrases such as ‘semi-colonial medicine’ or ‘treaty-port medicine’?⁶ Rather than providing a conclusive answer, this dissertation provides detailed evidence suggesting the validity of such terms. The dissertation explores how the geography of colonialism in East Asia impacted upon the geography of foreign medicine by contrasting Hong Kong’s and the International Settlement’s disease prevention strategies.

Exploring the evolution of medical discourses and practices from the perspective of British outposts on the coastal fringes of China sheds light on the locality of colonial medicine. Modern historians charting the development of disease discourses, notably leprosy and malaria, run the risk of falling afoul of teleological and diffusionist interpretations. Historian Michael Worboys for instance cautioned against viewing the identification of the *Plasmodium* parasite in 1880 by French physician Alphonse Laveran and Ronald Ross’s and Giovanni Battista Grassi’s research into the mosquito-borne transmission of the disease as inevitable discoveries.⁷ Nor should the diffusion of scientific discoveries, hypotheses and theories be understood in terms of the dissemination of a coherent corpus of indisputable knowledge from the metropole to a passive colonial audience.⁸ Scholars have repeatedly called for the abandonment of centre-periphery models in favour contact zones and networks.⁹ My work situates Hong Kong and the International Settlement’s management of both diseases within the broader context of major developments in aetiology and disease prevention, exploring

³ Bryna Goodman and David S. G. Goodman, eds., *Twentieth-Century Colonialism in China: Localities, the everyday, and the world* (Abingdon: Routledge, 2012), 1-5; Jürgen Osterhammel, “Semi-Colonialism and Informal Empire in Twentieth-Century China: Towards a Framework of Analysis,” in *Imperialism and After: Continuities and Discontinuities*, eds. Wolfgang J. Mommsen and Jürgen Osterhammel (London: Allen & Unwin, 1986), 296.

⁴ Robert Bickers and Christian Henriot, “Introduction,” in *New frontiers: Imperialism’s New Communities in East Asia, 1842-1953*, eds. Robert Bickers and Christian Henriot (Manchester: Manchester University Press, 2000), 5.

⁵ See for example the studies in Angela Ki Che Leung and Charlotte Furth, eds., *Health and Hygiene in Chinese East Asia: Policies and Publics in the Long Twentieth Century* (Duke: Duke University Press, 2010).

⁶ Ruth Rogasaki, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley: University of California, 2004), 13.

⁷ Michael Worboys, “From Miasmas to Germs: Malaria 1850-1879.” *Parassitologia* 36, nos. 1-2 (1994): 61.

⁸ Paolo Palladino and Michael Worboys, “Science and Imperialism,” *Isis* 84, no.1 (1993): 99-100.

⁹ Warwick Anderson, “Postcolonial Technoscience,” *Social Studies of Science* 32, nos. 5/6 (2002): 648-651. See also David Wade Chambers, and Richard Gillespie, “Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge,” *Osiris*, 2nd ser., 15 (2000): 221-240; J. A. Secord, “Knowledge in Transit,” *Isis* 95, no. 4 (2004): 654-672.

the local actors and linkages that underpinned the evolution of medical ideas and practices in both territories.

Britain in China

A brief introduction to the origins of Hong Kong and the International Settlement is perhaps pertinent at this stage. The Treaty of Nanjing (1842) formalised the British presence in China: Hong Kong Island was ceded “in perpetuity” and five trading ports were established, including a British concession of approximately one square mile in Shanghai. This concession fused with the American concession to the north to form the International Settlement in 1863; the neighbouring French Concession remained a separate entity (map 2).¹⁰ The colony of Hong Kong was expanded with the acquisition of the southern portion of Kowloon peninsula in 1860 and with the lease of the New Territories in 1898, the latter extending colonial rule over 365 square miles of densely-vegetated hinterland and approximately 230 outlying islands. The International Settlement was also formally extended, to 2.75 and 8.35 square miles in 1893 and 1899 respectively.¹¹ The construction of extra-Settlement roads and residences, principally to the west of the Settlement, during the second quarter of the 20th century unofficially extended the Shanghai Municipal Council’s jurisdiction even further, over a large swathe of Chinese territory.¹² Following the Japanese occupation of Chinese Shanghai in 1937 this western extra-Settlement area became known as the ‘Badlands’.¹³

Hong Kong and the International Settlement had slightly different medical and sanitary infrastructures. The colony’s Sanitary Board was responsible for sanitation during much of the 19th and early 20th centuries. Established in 1883, the board initially consisted of four members including the Colonial Surgeon, who headed the medical department, and a Sanitary Superintendent, who was responsible for overseeing the execution of the Board’s decisions.¹⁴ The Board gradually increased in size and by the early 20th century also included the Director of Public Works, the Captain Superintendent of Police, and at least two Chinese

¹⁰ The American concession was established in 1848, the French concession in 1849. Christian Henriot et Zheng Zu’an, “Les divisions de la ville à Shanghai (XIX^e – XX^e siècles),” in *Les divisions de la ville*, ed. Christian Topalov (UNESCO Editions MSH, 2002), 158-161.

¹¹ Albert Feuerwerker, *The Foreign Establishment in China in the Early Twentieth Century* (Ann Arbor: Center for Chinese Studies, University of Michigan, 1976), 3.

¹² According to Wakeman, the S.M.C. had constructed 45.5 miles of extra-settlement roads, encompassing an area of about 265,000 acres or 414 square miles, by the end of 1926. Frederic Wakeman Jr., *Policing Shanghai, 1927-1937* (Berkeley: University of California Press, 1996), 65-68. See also Paul French, *The Old Shanghai A-Z* (Hong Kong: Hong Kong University Press, 2010), 53-54.

¹³ See for example Frederic Wakeman Jr., *The Shanghai Badlands: Wartime terrorism and urban crime, 1937-1941* (Cambridge: Cambridge University Press, 1996).

¹⁴ The title Sanitary Superintendent replaced that of Sanitary Inspector in 1887. Y. W. A. Lau, *A History of the Municipal Councils of Hong Kong 1883-1999: From the Sanitary Board to the Urban Council and the Regional Council* (Hong Kong: Leisure and Cultural Services Department, 2002), 22-23. For further details on early decades of Settlement and the Board’s establishment see Lau, *A History of the Municipal Councils*, 7-20.

members; the post of Principal Civil Medical Officer replaced that of Colonial Surgeon.¹⁵ The colonial government overhauled this sanitary infrastructure in the 1930s: a senior medical officer was transferred from Malaya with the remit of overseeing the development of the colony's medical and sanitary services in the guise of its director; and the Urban Council replaced the Sanitary Board.¹⁶

The International Settlement's Health Officer, a post that the Shanghai Municipal Council inaugurated in 1871, was responsible for overseeing sanitation.¹⁷ Dr. Edward Henderson, an extremely well-respected Scottish physician, served as the Settlement's first health officer until the late 19th century.¹⁸ The Settlement's medical community comprised a variety of foreign private practitioners, missionaries as well as the medical officers assigned to the Imperial Maritime Customs Service.¹⁹ The public health infrastructure was reorganised in the early 1920s.²⁰ The position of Commissioner of Public Health replaced that of health officer, and the Settlement was partitioned into four districts – Central, Northern, Eastern and Western – each of which was divided into a different number of sub-districts.²¹ A Chief Health Inspector was placed in charge of the foreign and Chinese sanitary staff in each district. The fourth Western sub-district (4W) comprised the Western 'extra-Settlement' area, which was bounded by the Shanghai-Hangzhou railway to the west, Soochow creek to the north and Hungjao Road to the south.

Disease and Empire

Leprosy took on a new significance within the context of British Imperial expansion. Fears that the disease was spreading throughout Britain's tropical colonies heightened metropolitan concerns about a recrudescence of the disease in Britain.²² The Royal College of

¹⁵ Lau, *A History of the Municipal Councils*, 28-31. For detailed summaries of the colony's Western and foreign hospitals, see Arthur Starling et al., eds., *Plague, SARS and the Story of Medicine in Hong Kong* (Hong Kong: Hong Kong Museum of Medical Sciences Society, 2006), 75-143.

¹⁶ For more on the Urban Council's establishment and pre-war evolution see Lau, *A History of the Municipal Councils*, 71-84.

¹⁷ Alexander Jamieson, "Dr. Alexander Jamieson's Report on the Health of Shanghai for the half year ended 30th September, 1871," *Customs Gazette, Medical Reports* 11, no. 6 (Sept. 1871): 33-43, 35; Kerrie L. A. MacPherson, *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893* (Hong Kong: Oxford University Press, 1987), 132.

¹⁸ For a brief summary of the little that is known about Henderson's life, and the controversial appointment of his successor see MacPherson, *A Wilderness of Marshes*, 84-85, 132-142, 287n4.

¹⁹ Though the origin of this sanitary compartmentalisation of the Settlement is unclear, it was certainly in place by the early 20th century. See for instance Stanley, Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1901* (Shanghai: Kelly & Walsh, 1902), Shanghai Municipal Archives (hereafter SMA), U1/16/4650, 31-32, 32.

²⁰ Dr. Arthur Stanley, who served as health officer from 1898 to 1920, held the first commissionership for 1921. His deputy Dr. C. Noel Davis succeeded him the following year. The Health Department was renamed the Public Health Department.

²¹ Three Central sub-districts, three Northern, six Eastern and Four Western. Each sub-district was assigned a reference number, for instance 5E for the fifth Eastern sub-district.

²² Rod Edmond, *Leprosy and Empire: A Medical and Cultural History* (Cambridge: Cambridge University Press, 2006), chaps.2 and 3; Rod Edmond, "Returning Fears: Tropical Disease and the Metropolis," in

Physicians, for instance, conducted an empire-wide investigation into the disease in the 1860s at the government's request. Despite significant Western medical uncertainty about the disease's aetiology, many governments resorted to "systems of isolation" from the second half of the 19th century.²³ Rod Edmond's *Leprosy and Empire* (2006), for instance, contrasted the establishment of "island leper colonies" in Hawaii, the Cape Colony, Australia and New Zealand.²⁴ Numerous studies have explored the history of the disease as well as broader issues of colonialism through the prisms of specific institutions.²⁵ The confinement of leprosy sufferers in leprosaria echoed the Biblical 'casting out' of those suspected of suffering from the disease. According to Michel Foucault, leprosaria were the precursors of "more sophisticated internalised hygienic practices", exemplified in his eyes by the "plague town", because the early modern "leper was caught up in a practice of rejection, of exile-enclosure".²⁶ Many studies have challenged Foucault's contention that 'exile-enclosure' merely separated the 'unclean' leprosy sufferers from the 'clean' community by examining the extent to which the inmates of modern leprosaria were internally differentiated, and the resultant impact upon the production of "health subjectivities".²⁷ Historian Megan Vaughan for instance examined how African leprosaria, as colonies within the colonies, engineered new community and ethnic identities.²⁸ Hong Kong's and Shanghai's management of the disease complicates Vaughan's argument by demonstrating how the emergence of colonial Chinese identities impacted upon the colonial management of those within. The Chinese elite within both Hong Kong and Shanghai increasingly distinguished between mainland Chinese – i.e. alien – leprosy sufferers and local *colonial* Chinese sufferers. This distinction precipitated an important

Tropical Visions in an Age of Empire, eds. Felix Driver and Luciana Martins (Chicago: University of Chicago Press, 2005), 175-194.

²³ Alison Bashford, *Imperial Hygiene: A Critical History of Colonialism, Nationalism and Public Health* (Basingstoke: Palgrave Macmillan, 2004), 81.

²⁴ Edmond, *Leprosy and Empire*, 143-177.

²⁵ Warwick Anderson, "Leprosy and Citizenship," *positions: east asia cultures critique* 6, no. 3 (1998): 707-730; Josep Bernabeu-Mestre and Teresa Ballester-Artigues, "Disease as a Metaphorical Resource: The Fontilles Philanthropic Initiative in the Fight Against Leprosy, 1901-1932," *Social History of Medicine* 17, no. 3 (2004): 409-421; Harriet Deacon, "Leprosy and racism at Robben Island," in *Studies in the History of Cape Town*, vol. 7 ed. Elizabeth van Heyningen (Rondebosch: UCT Press, 1994), 45-83; Simone Horwitz, "Leprosy in South Africa: A Case Study of Westfort Leper Institution, 1898-1948," *African Studies* 65, no. 2 (2006): 271-295; Rita Smith Kipp, "The Evangelical Uses of Leprosy," *Social Science & Medicine* 39, no. 2 (1994): 165-178; John Maguire, "The Fantome Island Leprosarium," in *Health and Healing in Tropical Australia and Papua New Guinea*, eds. Roy MacLeod, and Donald Denoon (Townsville: James Cook University, 1991), 142-148; Renisa Mawani. " 'The Island of the Unclean': Race, Colonialism and 'Chinese Leprosy' in British Columbia, 1891-1924," *Law, Social Justice & Global Development (LGD)*, no. 1 (2003): 1-21.

²⁶ By contrast Foucault argued that plague victims were "caught up in a meticulous tactical partitioning in which individual differentiations were the constricting effect of a power that multiplied, articulated and subdivided itself". Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Allen Lane (Penguin Books: London, 1977), 198, 199.

²⁷ Bashford and Nugent, "Leprosy and the management of race," 107-108.

²⁸ Megan Vaughan, *Curing their Ills: Colonial Power and African Illness* (Cambridge: Polity, 1991), 79-84.

change, not so much in terms of 'how' leprosy sufferers were managed, but where this management took place.

As Vaughan demonstrated, the treatment of leprosy sufferers was intimately associated with the Biblical significance of the disease.²⁹ Historians have explored this association by interrogating Erving Goffman's contention that leprosaria, like prisons and other encompassing institutions, were "total institutions".³⁰ Rita Kipp, for instance, argued that evangelistic opportunities varied according to a leprosarium's status as a total institution: the greater the institutional regimentation, the greater the opportunities.³¹ The dissertation's analysis of leprosaria in East Asia makes explicit the necessity of taking into account differences in administrative structures when assessing evangelistic opportunities. More importantly my work broadens Goffman's focus on the internal attributes of 'total institutions' by demonstrating the impact of external geo-political factors: the engulfment of city beyond the walls of Shanghai's leprosarium during the Sino-Japanese War precipitated a drastic increase in the popularity of the superintendent's evangelical messages.

Malaria also assumed a particular importance within the context of British imperial expansion. As Mark Harrison argued within the context of British India, malaria came to symbolise "Oriental backwardness".³² Unlike leprosy, however, this fatal and prevalent disease posed a very real threat to Imperial military and socio-economic hegemony. Prevention focused principally on two different approaches: direct environmental interventions, such as drainage schemes, and quinine prophylaxis. The success of these schemes varied according to local priorities, budgetary constraints, and colonial agendas. Recent studies have broadened the traditional historiographical focus on Africa, South Asia and Southeast Asia by examining East Asian malaria prevention strategies.³³

Malaria, Empire and China

Much of the scholarship on malaria in East Asia has focused on Hong Kong. This reflects, at least in part, Hong Kong's association with the disease since the earliest decades of settlement. Following his return to Britain in the late 19th century, Cantlie delivered a lecture on Hong Kong which was later published in the first volume of *The British Empire*

²⁹ Vaughan, *Curing their Ills*, 79-84.

³⁰ Goffman argued that 'total institution's were places "of residence and work where a large number of like-situated individuals, cut off from the wider society for an appreciable period of time, together lead an enclosed, formally administered round of life". Erving Goffman, *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (Chicago: Aldine 1962), xiii.

³¹ Kipp, "The Evangelical Uses of Leprosy," 167, 171.

³² M. Harrison, "'Hot beds of disease': malaria and civilization in nineteenth-century British India," *Parassitologia* 40, nos.1-2 (1998): 11. See also K. T. Silva, "Malaria eradication as a legacy of colonial discourse: the case of Sri Lanka," *Parassitologia* 36, nos.1-2 (1994): 151.

³³ See for instance W. F. Bynum, "'Reasons for contentment': malaria in India, 1900-1920," *Parassitologia* 40, nos.1-2 (1998): 19-27; D. J. Bradley, "Watson, Swellengrebel and species sanitation: environmental and ecological aspects," *Parassitologia* 36, nos.1-2 (1994): 137-147; V. R. Muraleedharan and D. Veerarghavan, "Anti-Malaria Policy in the Madras Presidency: An Overview of the Early Decades of the Twentieth Century," *Medical History* 36, no.3 (1992): 290-305.

Series. He noted that the colony's insalubrious climate had been so notorious during the earliest decades of settlement that "Go to Hong-kong" became a byword.³⁴ All histories of the colony invariably refer to the prevalence of the disease, but several disease-specific studies have recently emerged, most notably Ka-che Yip's concise edited chapter on malaria and public health.³⁵ A number of recent studies have sought to dispel the notion of Hong Kong's intellectual subordination by highlighting the colony's unique contribution to the development of the dominant global discourse on malaria. These studies argued that Patrick Manson's seven-year stint in Hong Kong in the 1880s proved formative for the future 'father of tropical medicine' than his time in Amoy (Xiamen) during the previous decade. For instance Arthur Starling *et al.*'s *Plague, SARS and the Story of Medicine in Hong Kong* (2006), published by the Hong Kong Museum of Medical Sciences Society, claimed:

Whilst in Hong Kong, he [Patrick Manson] became interested in malaria and, unaware of Laveran's work, he tried to cultivate the organism by inoculating malaria-infected blood onto rotting vegetable matter from the marshes of Happy Valley, without success.³⁶

Yip's study similarly highlighted this "Hong Kong connection", claiming that the colony prompted Manson to expand upon his work on elephantiasis in Amoy by investigating the vectoral transmission of malaria.³⁷

In fact these studies overstate the extent to which Manson actually researched malaria during his time as a medical practitioner in Hong Kong. The colony has been undeniably proud of its association with Manson ever since the late 19th century, but even his contemporaries recognised that his experience in Amoy proved far more important, at least as far as his research into malaria was concerned. More importantly these modern studies perpetuated rather than dispelled the colony's intellectual passivity and reliance on the metropole by focusing *exclusively* on Manson. The dissertation challenges this approach by expanding upon my MPhil research into the colony's vibrant medical community.³⁸ A growing

³⁴ James Cantlie, "Hong-Kong," in *The British Empire Series*, ed. William Sheowring, vol. 1, *India, Ceylon, Straits Settlements, British North Borneo* (London: Kegan Paul, Trench, Trübner & Co., 1899), 521. An early draft of this lecture is preserved in the Wellcome Archives. James Cantlie, "Lecture on Hong Kong", ca. 1898, MS 1488, Wellcome Library, London (hereafter Wellcome).

³⁵ Ka-che Yip, "Colonialism, Disease and Public Health: Malaria in the History of Hong Kong," in *Disease, Colonialism, and the State, Malaria in Modern East Asian History*, ed. Ka-che Yip (Hong Kong: Hong Kong University Press, 2009).

³⁶ Starling *et al.*, eds., *The Story of Medicine in Hong Kong*, 21. Starling *et al.* cited Manson's grand-son and official biographer Sir Philip Manson-Bahr. Although the latter stated that "In Hong Kong Manson became interested in malaria", Manson-Bahr also pointed out that his grandfather's efforts to "cultivate the active principle of malaria-blood in infusions of rotting vegetable matter which he had obtained from Happy Valley in Hong Kong" marked a 'return' to similar experiments in Amoy. Patrick Manson-Bahr, *Patrick Manson, The Father of Tropical Medicine* (London: Thomas Nelson and Sons Ltd., 1962), 50-51.

³⁷ Ka-che Yip, "Colonialism, Disease and Public Health: Malaria in the History of Hong Kong," in *Disease, Colonialism, and the State, Malaria in Modern East Asian History*, ed. Ka-che Yip (Hong Kong: Hong Kong University Press, 2009), 18-19.

³⁸ D. Ham, "Malarial Hygiene and Colonial Society in Hong Kong, c.1880-c.1910," (MPhil thesis, University of Cambridge, 2009). Coincidentally 2009 also saw the production of another MPhil

desire to disseminate and debate local medical research, notably on malaria but also on leprosy, underpinned the very establishment of a network of local civilian, military and naval medical officers as well as foreign (i.e. non-Chinese) corresponding members from treaty-ports in China and Japan. These medical officers negotiated, debated and appropriated new ideas, tailoring discussions of their local research to suit the latest international trends. As historian Douglas Haynes argued, the creation of distinctive career opportunities was central to the development of tropical medicine during this period.³⁹ The dissertation highlights how local amateurs contributed to the development of local medical discourses, through their own independent investigations and through the local validation of 'foreign' theories. My work also expands significantly upon both Yip's and my MPhil's analysis of the colony's management of the disease during the late 19th and early 20th centuries.

The dissertation also provides the very first analysis of the International Settlement's management of malaria during the early 20th century. To date the only published study on the International Settlement's anti-malaria campaign was a descriptive summary by a local non-specialist in the late 1930s; Kerrie MacPherson's seminal study on the origins of public health in the Settlement ends just shy of the turn of the century.⁴⁰ Recent decades have witnessed the expansion of scholarly interest in the management of the disease in East Asia, but until now, the Settlement has been completely ignored. Yip for instance has focused principally on the Chinese Nationalists' efforts to build a modern healthcare system by controlling communicable diseases such as malaria.⁴¹ He also brought together specialists on Taiwan, Okinawa, and mainland China with the compilation of *Disease, Colonialism and the State: Malaria in Modern East Asian History*.⁴² This collection of studies explored the management of local environments within the context of changing ideas about the transmission and prevention of the disease, evolving concepts of health and disease, and local political and economic priorities. The dissertation broadens our understanding of the colonial

dissertation on the colony's early management of the disease. C. A. Cowlie, "Form follows fever malaria and the making of Hong Kong, 1841-1848," (MPhil thesis, University of Hong Kong, 2009).

³⁹ Douglas Melvin Haynes, "Social Status and Imperial Service: Tropical Medicine and the British Medical Profession in the Nineteenth Century," in *Warm Climates and Western Medicine: The Emergence of Tropical Medicine, 1500-1900*, ed. David Arnold (Amsterdam: Rodopi, 1996), 219.

⁴⁰ H. Crozier Faulder, "Malaria Prevention with Special Reference to Shanghai," *China Journal* 30, no. 5 (1939): 305-312; Kerrie L. A. MacPherson, *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893* (Hong Kong: Oxford University Press, 1987).

⁴¹ Ka-che Yip, "Antimalarial work in China: a historical perspective," *Parassitologia* 40, nos. 1-2 (1998): 29-38; Ka-che Yip, *Health and National Reconstruction in Nationalist China: The Development of Modern Health Services, 1928-1937* (Ann Arbor: Association for Asian Studies, 1995); Ka-che Yip, "Disease and the Fighting Men: Nationalist Anti-Epidemic Efforts in Wartime China, 1937-1945," in *China in the Anti-Japanese War, 1937-1945*, eds. David P. Barrett and Larry N. Shyu (New York: Peter Lang, 2001), 171-188.

⁴² Ka-che Yip, ed., *Disease, Colonialism, and the State: Malaria in Modern East Asian History* (Hong Kong: Hong Kong University Press, 2009). This edited volume contains chapters on Hong Kong, Taiwan, mainland China and Okinawa. For further discussions of Taiwan's anti-malaria campaigns, see Lin Yi-ping and Liu Shiyung, "A Forgotten War: Malaria Eradication in Taiwan," in *Health and Hygiene in Chinese East Asia*, eds. Angela Ki Che Leung and Charlotte Furth (Duke: Duke University Press, 2010), 183-203; Ka-che Yip, "Malaria eradication: the Taiwan experience," *Parassitologia* 42, nos. 1-2 (2000): 117-126.

management of Chinese environments by comparing the International Settlement's and Hong Kong's malaria prevention strategies.

Leprosy, Empire and China

Much of the historiography on China and leprosy has focused on the global rather than the local narrative. A number of studies have analysed how Chinese migrants captured the Imperial imagination in the 19th century, and were held responsible for introducing the disease throughout the Pacific. Indeed leprosy became known as "Chinese disease" in Australia and in Hawaii.⁴³ Imperial fears of a leprosy pandemic emanating from China simultaneously fed into the social tensions that accompanied the rapid growth of the Chinese diaspora and the Western interventions into China. As Alison Bashford has argued, the growth of anti-leprosy legislation around the Pacific at the end of the century was inextricably linked with the growth of anti-immigration legislation aimed specifically at Chinese immigrants.⁴⁴ Moreover this intimate association between the disease and the diaspora prompted a distinctive racialised response: exclusively-Chinese leprosy asylums were established at sites around the Pacific Rim, and many of the patients were deported to China, occasionally via Hong Kong.⁴⁵ Parry, for instance, stated that the inmates of the Mud Island asylum, in the Northern Territory, were occasionally "repatriated to Hong Kong" in the late 19th century whenever transport could be found.⁴⁶ British Columbia similarly relied on an "intermittent practice of deportation".⁴⁷ My own research has uncovered examples of repatriations via Hong Kong from Canada and from Singapore and via the Settlement from the United States.⁴⁸ As Bashford explained, the deportation of Chinese leprosy sufferers "beyond national and

⁴³ Edmond, *Leprosy and Empire*, 146-147, 163-165. On Australia see Bashford and Nugent, "Leprosy and the management of race," 107, 110-111; Suzanne Parry, "'Of Vital Importance to the Community': The Control of Leprosy in the Northern territory." *Health and History* 5, no. 1 (2003): 2,5. On Hawaii see R. D. K. Herman, "Out of sight, out of power: leprosy, race and colonization in Hawai'i," *Journal of Historical Geography* 27, no. 3 (2001): 325; Jaime L. Benchimol and Magali Romero, "Adolpho Lutz and controversies over the transmission of leprosy by mosquitoes," *História, Ciências, Saúde – Manguinhos* 10, no. S1 (2003): 60.

⁴⁴ Bashford, *Imperial Hygiene*, 88-89.

⁴⁵ For Australia see Parry, "'Of Vital Importance to the Community,'" 5; Edmond, *Leprosy and Empire*, 107, 166; Bashford, *Imperial Hygiene*, 89; "New South Wales," *Brisbane Courier*, Oct. 8, 1896, 5. From British Columbia see Bashford, *Imperial Hygiene*, 89; Mawani, "'The Island of the Unclean,'" 10-13; Janice Dickin McGinnis, "'Unclean, Unclean': Canadian Reactions to Lepers and Leprosy," in *Health, Disease and Medicine: Essays in Canadian History*, ed. Charles G. Roland (Hannah Institute for the History of Medicine, 1984), 259, 265-67. From San Francisco see Joan B. Trauner, "The Chinese as medical scapegoats in San Francisco, 1870-1905." *California History* 57, no. 1 (1978): 75.

⁴⁶ Parry noted that the indigent and the chronically ill were also repatriated. Parry, "'Of Vital Importance to the Community,'" 5.

⁴⁷ Bashford, *Imperial Hygiene*, 89.

⁴⁸ For Hong Kong see E. R. Hallifax, *Administrative Reports: Report of the Registrar General for the Year 1912*, 31 Mar. 1913, Hong Kong Government Records Online (hereafter HKGRO), 11; E. R. Hallifax, *Administrative Reports: Report of the Secretary for Chinese Affairs for the Year 1915*, 15 June 1917, 4. For Shanghai see J. H. Jordan (C.P.H.) to K. M. Bourne (Com. Police), 3 Jan. 1941, Shanghai Municipal Archives (hereafter SMA), U1/16/2618, 83-84.

Imperial lines” served to return those who “did not ‘belong’ within Imperial or Commonwealth territory or systems of obligation”.⁴⁹ The trans-national management of leprosy thus throws light on the nature of Empire. But the deportation of Chinese leprosy sufferers from sites across the Pacific was largely conducted on an ad hoc basis, not least because the practice was contingent on finding suitable forms of transportation.⁵⁰ Deportation was thus secondary to domestic segregation. Deportation severed Imperial governments’ responsibilities towards the confinement (and treatment) of these patients.

Several recent studies have finally re-oriented the scholarly focus onto China itself. By far the most significant contribution is Angela Leung’s seminal *Leprosy in China: A History* (2009) – a 373 page monograph covering the history of the disease in mainland China from the 4th century B.C. to the modern. As well as consciously paralleling the “better-known history of the disease in the Mediterranean and European worlds”, Leung situated her analysis of leprosy in modern China within the “global context of colonialism, racial politics, and ‘imperial danger’”.⁵¹ For instance she examined the incrimination of the Chinese diaspora, notably in Australia, and assessed the impact that this international discourse had upon the Republican regime’s attempts to remake the Chinese body politic through public health programs. Leung identified three models of segregation – two domestic and one foreign – that the Republicans looked to for inspiration at the turn of the century: the “traditional” Chinese model, the Western “missionary” model – of which there were many in China – and the “nationalist” model, exemplified by world-renowned institutions such as the Molokai colony in Hawaii and the Culion colony in the Philippines. Leung argued that the nationalisation of several missionary leprosaria in China resulted in the emergence of a conspicuous new form of segregation from the 1920s onwards, which she coined the “Nationalist Hybrid” model.⁵² These institutions emerged following the Nationalist Government’s realisation that it was unable to nationalise missionary leprosaria without the continued support of the missionary authorities who ran them.

Leung’s work represented a major break-through in the field and has rightly been praised as essential reading for both modern and pre-modern historians.⁵³ But in situating

⁴⁹ Bashford, *Imperial Hygiene*, 89.

⁵⁰ Parry, “‘Of Vital Importance to the Community,’ ” 5; Edmond, *Leprosy and Empire*, 107, 166; Bashford, *Imperial Hygiene*, 89, 93; Mawani, “‘The Island of the Unclean,’ ” 12-13; Trauner, “The Chinese as medical scapegoats,” 75.

⁵¹ Angela Ki Che Leung, *Leprosy in China: A History* (New York: Columbia University Press, 2009), 1. Li and Wang have also made significant contributions. Shang-Jen Li, “Shijiu shiji houqi Yingguo yixue jie dui Zhongguo mafeng bing qing di diaocha yanjiu,” [British Medical Research on Leprosy in Late Nineteenth-Century China], *Bulletin of the Institute of History and Philology, Academic Sinica* 74, no. 3 (2003): 445-506; Wen-Ji Wang, “‘Laying out a Model Village’: George Gushue-Taylor and Missionary Leprosy Work in Colonial Taiwan,” *East Asian Science, Technology and Society: an International Journal* 1, no. 1 (2007): 111-133.

⁵² Leung, *Leprosy in China*, 155-171.

⁵³ See for instance Howard H. Chiang, review of *Leprosy in China: a history*, by Angela Ki Che Leung, *Medical History* 54, no.2 (2010): 280-281; Benjamin A. Elman, review of *Leprosy in China: A History*, by Angela Ki Che Leung, *T’oung Pao: International Journal of Chinese Studies* 96, nos. 4-5 (2010): 550-553; Yi-Li Wu, review of *Leprosy in China: A History*, by Angela Ki Che Leung, *Harvard Journal of Asiatic Studies* 71, no. 1 (2011): 220-227.

China within the 'global context of colonialism', Leung (and her supporters) largely ignored the local context of colonialism in China. Although Leung explored the interaction between western medical experts and Chinese perceptions of the disease, she focused principally on those physicians working in mainland China.⁵⁴ Hong Kong, the International Settlement and indeed the broader context of colonialism in China were thus largely ignored. For instance she simply noted that the colonial authorities in Hong Kong "systematically" repatriated leprosy sufferers to Guangdong Province during the pre-war period, specifically to the Sheklung Asylum from the 1930s onwards. Neither Leung, nor indeed any other scholar, has examined the origins, evolution or significance of this policy.⁵⁵ A handful of other scholars have cursorily referred to the establishment of a domestic leprosy asylum at Kennedy Town on Hong Kong Island during the late 1930s, but none have examined why, let alone explored the significance of this institution within the context of the colony's policy of 'systematically repatriating' leprosy sufferers to the mainland.⁵⁶ The dearth of scholarly analysis on the colony's pre-war management of the disease is striking for two reasons. Firstly, one of the most influential articulators of the China-fuelled leprosy pandemic was Cantlie, the Scottish physician based in Hong Kong in the late 1880s and early 1890s. Scholars have focused on Cantlie's contributions to the global discourse at the exclusion of localising the production and significance of his work.⁵⁷ Secondly, the dearth of scholarly analysis on the pre-war period stands in stark contrast to the wealth of studies on the colony's post-war eradication of the disease. Significantly these studies marginalised the disease's pre-war significance by reinforcing the notion that the domestic segregation of leprosy sufferers in Hong Kong was purely a post-war phenomenon.⁵⁸ Chapter 2 fundamentally revises the existing scholarship by examining the origins of Hong Kong's practice of deporting leprosy sufferers to the mainland,

⁵⁴ Leung, *Leprosy in China*, 6-7, 132-176.

⁵⁵ She noted that the asylum received philanthropic donations and official support from Hong Kong. Leung, *Leprosy in China*, 143, 168-169, 220, 290n157, 310n20.

⁵⁶ Leung makes no reference to this institution. See for instance Starling et al., eds., *The Story of Medicine in Hong Kong*, 25; Kerrie L. MacPherson, "Invisible borders: Hong Kong, China and the imperatives of public health," in *Public Health in Asia and the Pacific: Historical and comparative perspectives*, eds. Milton J. Lewis and Kerrie L. MacPherson (Abingdon: Routledge, 2008), 20; Yip, "Segregation, Isolation, and Quarantine: Protecting Hong Kong from Diseases in the Pre-war Period." *Journal of Comparative Asian Development* 11, no. 1 (2012): 16. Starling and MacPherson took the statements in the colony's annual medical reports for the latter half of the 1930s largely at face value. Yip cited Starling.

⁵⁷ Scholars invariably cite Cantlie's prize-winning *Report On The Conditions Under Which Leprosy Occurs* (1897). More recently scholars such as Edmond and Leung have begun to cite similar comments in Cantlie's earlier pamphlet *Leprosy in Hongkong* (1890). Leung uniquely noted that Cantlie visited a leprosy asylum in Canton shortly after producing this pamphlet, though she was principally interested in the impact that the visit had upon Cantlie's companion Sun Yat-sen. See Zachary Gussow and George S. Tracy, "The Use of Archival Materials in the Analysis and Interpretation of Field Data: A Case Study in the Institutionalization of the Myth of Leprosy as 'Leper'," *American Anthropologist* 73, no. 3 (1971): 701, 706n14; Mawani, "'The Island of the Unclean,'" 8, 17n62; Edmond, *Leprosy and Empire*, 126; Leung, *Leprosy in China*, 103, 138, 142-143, 145, 150, 155, 217, 283n85, 284n99.

⁵⁸ See for example N. R. Honey, "Leprosy in Hong Kong, Past, Present and Future," *"The Bulletin" Journal of Society of Community Medicine Hong Kong* 9, no. 1 (1978): 22-28, 22; Lily Chan Lai Lee, "A Regional Study of Hay Ling Chau," (BA. thesis, University of Hong Kong, 1963), ix

by analysing the emergence of domestic leprosaria *prior* to the outbreak of Second World War, and by assessing the *re-emergence* of the deportation policy in the immediate post-war period.

The International Settlement's management of Chinese leprosy sufferers has received even less scholarly attention. A single sentence in Leung's study noted that the Shanghai Municipal Council supported the National Leprosarium of Shanghai, a mainland leprosarium, in the 1930s.⁵⁹ The absence of any scholarly research the International Settlement's management of the disease during the course of the Settlement's 100-year existence is all the more striking given that that the Oxford Wellcome Unit's Global Project on the History of Leprosy identified and summarised some of the relevant files in the Shanghai Municipal Archives almost a decade ago.⁶⁰ Situated on the geographical border between the British Empire and China, Hong Kong and the International Settlement have fallen between a historiographical fissure without leaving so much as a mark on either Leung's *Leprosy in China* or Edmond's *Leprosy and Empire*.

Racial Ideas and Their Spread

As Chapter 4 shows, Hong Kong's experiences shed new light on older debates about the interplay between race, space, malaria and colonial governance. Prominent scholars of Africa have examined how racialised preventive theories contributed to the residential segregation of European populations in some tropical African cities.⁶¹ The malaria committee of Britain's Royal Society tasked two doctors, S. R. Christophers and J. W. W. Stephens of the Liverpool School of Tropical Medicine, to investigate the mosquito-borne transmission of the disease in West Africa at the turn of the 20th century. They identified native children as the principal source of infection and advocated racial segregation over mosquito control. The

⁵⁹ She noted that the National Leprosarium of Shanghai received financial support from the Chinese municipality and the International Settlement. Leung, *Leprosy in China*, 171.

⁶⁰ The Global Project was an early 21st century initiative of the International Leprosy Association in conjunction with WHO and the Nippon Foundation. The project developed a textual and visual database of leprosy archives, research institutes, individuals, treatments and leprosaria. See <http://www.leprosyhistory.org>. For instance the project summarised the contents of some of the relevant files in the Shanghai Municipal Archives (U1/16/753(1) to U1/16/755; U1/16/758; U1/16/759(2) to U1/16/762; U1/16/2618 to U1/16/2622), though the project's list is incomplete, and in some instances inaccurate (specifically U1/16/766 and U1/16/767). For a brief summary of the project see Jo Robertson and A. Colin McDougall, "Leprosy work and research in Oxford, UK: four decades in the pursuit of new knowledge about an arcane disease," *International Journal of Dermatology* 44, no. 8 (2005): 695-698.

⁶¹ Philip D Curtin, "Medical Knowledge and Urban Planning in Tropical Africa," *American Historical Review* 90, no. 3 (1985): 594-613; John W. Cell, "Anglo-Indian Medical Theory and the Origins of Segregation in West Africa," *American Historical Review* 91, no. 2 (1986): 307-335; Stephen Frenkel and John Western, "Pretext or Prophylaxis? Racial Segregation and Malarial Mosquitos in a British Tropical Colony: Sierra Leone," *Annals of the Association of American Geographers* 78, no. 2 (1988): 211-228; W. U. Eckart, "Malaria and colonialism in the German colonies New Guinea and the Cameroons. Research, control, thoughts of eradication," *Parassitologia* 40, nos. 1-2 (1998): 83-90. Cell challenged Curtin's claim that the conjunction between town-planning and the emergence of tropical medicine originated in British-Indian sources in the late 19th century.

popularity and implementation of this theory varied according to local colonial motives, urban contexts and indigenous resistance. For instance the establishment of an exclusively-European 'Hill Station' at Freetown, Sierra Leone, owed as much to contemporary European economic rationales and prejudices about indigenous sanitary habits as it did to the prevention of malaria.⁶² A number of historians have alluded to, but failed to explain, the relationship between malaria control and the establishment of an exclusively European reservation in northern Kowloon in Hong Kong during this period. Welsh for instance simply stated that this exclusively European reservation was justified on economic grounds and "on specious grounds of health (the Chinese could not be trusted to keep down mosquitoes)".⁶³ Others, including the most recent studies, have uncritically accepted the contemporary insinuation that the living conditions of lower class Chinese promoted mosquito breeding.⁶⁴ These studies have crucially failed to contextualise the anti-malarial justifications for this reservation within the broader evolution of Hong Kong's malarial discourse *and* the origins of the proposal itself.

The racialised conceptualisation of leprosy in East Asia also complicates modern historiographical debates about the leprosy stigma. Broadly speaking three schools of thought emerged in the twentieth century, the latter two as polar opposite reactions to the first. The earliest school argued that erroneous associations between the disease and Biblical passages, most notably the Book of Leviticus, were responsible for perpetuating contemporary prejudices towards leprosy sufferers. Many, however, rejected this inherently Western-centric approach. On the one hand figures such as Dr. Olaf K. Skinsnes argued instead that the stigma was an intrinsic reaction to the disease unique combination of pathological factors, including the progressive crippling of the body.⁶⁵ Skinsnes's recognition of major historical and contemporary parallels between 'Oriental' and 'Occidental' social reactions to the disease was not a coincidence. Born in China to medical missionary parents in 1917, he spent a formative decade of his career as an eminent leprologist in Hong Kong in the 1950s.⁶⁶ Zachary Gussow, George Tracy and the third school of thought countered by arguing that 'leprosy phenomena'

⁶² Frenkel, "Pretext or Prophylaxis," 211-227.

⁶³ Frank Welsh, *History of Hong Kong* (London: Harper Collins Publishers, 1997), 378. See also Roger Bristow, *Land-use Planning in Hong Kong: History, Policies and Procedures* (Hong Kong: Oxford University Press, 1984), 39; G. B. Endacott, *History of Hong Kong* (Hong Kong: Oxford University Press, 1973), 284; Henry Lethbridge, *Hong Kong: Stability and Change* (Hong Kong: Oxford University Press, 1978), 173-174.

⁶⁴ See for example Yip, "Colonialism, Disease and Public Health," 20; John M. Carroll, "The Peak: residential segregation in colonial Hong Kong," in *Twentieth-century Colonialism in China: Localities, the everyday, and the world*, eds. Bryna Goodman and David S. Goodman (Abingdon: Routledge, 2012), 85.

⁶⁵ Olaf K. Skinsnes, *Leprosy Rationale*, 2nd ed., 3rd reprint (New York: American Leprosy Missions, 1971), 12-15.

⁶⁶ Robert C. Hastings, "Olaf K. Skinsnes, M.D., Ph.D. – An Appreciation," *International Journal of Leprosy* 47, no. 1 (1979): 59-60. Skinsnes joined the first General Executive Committee of the Mission to Lepers Hong Kong Auxiliary as well as the Board of Managers of the Hay Ling Chay Leprosarium. He also attended to the leprosarium's patients as a pathologist.

were specific to particular socio-historical contexts.⁶⁷ Leprosy was thus “retainted” in the late 19th century.⁶⁸ This dissertation complicates modern debates about the interplay between all three factors by exploring the emergence of leprosy as a major social and public health issue in Hong Kong and the International Settlement.⁶⁹

Dissertation Outline

The structure of the dissertation is tailored to fulfil its two primary objectives. Each chapter explores the management of a specific disease within a specific geo-political context. The chapters are paired by disease to facilitate comparisons between the two territories. The dissertation focuses principally on the period from the 1880s until the 1940s, from the decade inaugurated by the discoveries of the causative agents of both diseases to the surrender of British colonial rule.⁷⁰ All four chapters extend beyond December 1941 in order to explore the extent of wartime disruptions and continuities. Chapter 2 uniquely extends as far as the early 1950s because my analysis of Hong Kong’s pre-war management of leprosy radically revises the modern historiography’s interpretation of post-war developments.

Chapter 2 examines the origins of Hong Kong’s dual policy of deporting leprosy sufferers to the Chinese mainland *and* staunchly opposing domestic segregation. Cantlie influentially articulated the assumptions that underpinned this colonial management of the disease. Conceptually these strategies were two sides of the same coin. On the one hand leprosy was inextricably associated with destitute Chinese migrants. Deportation was therefore considered both morally justifiable and essential for the preservation of the colony’s health. On the other the colony’s prosperity allegedly served as a beacon to destitute and diseased mainlanders, as a veritable “El Dorado to the leprous Chinaman from the mainland”.⁷¹ The inherent superiority of Western medical practices heightened colonial anxieties about the colony’s appeal. This chapter complements Cantlie’s well-established contribution to the global discourse on the Chinese-fuelled leprosy pandemic by localising his research, exploring the interaction between the colony’s management of the disease, his experiences of Western- and Chinese-style leprosaria, and his own preventive recommendations. This chapter also provides the very first analysis of the evolution of Hong Kong’s deportation policy, exploring the official and popular ties that linked the colony to Chinese, missionary and Nationalist leprosaria in Guangdong Province.

⁶⁷ Zachary Gussow and George S. Tracy, “Stigma and the Leprosy Phenomenon: The Social History of a Disease in the Nineteenth and Twentieth Centuries,” *Bulletin of the History of Medicine* 44, no. 5 (1970): 432-444.

⁶⁸ Edmond, *Leprosy and Empire*, 6.

⁶⁹ See for example Edmond, *Leprosy and Empire*, 5-9.

⁷⁰ Gerhard Armauer Hansen announced the discovery of the *M. leprae* in 1873. Laveran described a malaria parasite in 1880. Japanese troops occupied the International Settlement on 8th December 1941, the day after Pear Harbour. Hong Kong surrendered just over a fortnight later on 25th December 1941.

⁷¹ James Cantlie, *Leprosy in Hongkong* (Hongkong: Kelly & Walsh, 1890), 1.

This chapter fundamentally revises the prevailing presumption that the establishment of domestic leprosaria in Hong Kong was a purely post-war phenomenon. All modern studies, ranging from scientific papers by respected local dermatologists through Leung's seminal study, attribute the colony's abandonment of the deportation policy after the Second World War to the establishment of the People's Republic of China and the resultant closure of the Sino-British border. These studies have marginalised the colony's pre-war management of the disease by relying on the records of the Mission to Lepers Hong Kong Auxiliary, a post-war organisation that played a pivotal role in establishing a temporary leprosarium at Sandy Bay and a permanent leprosarium on Hay Ling Chau ('The Isle of Happy Healing') in the early 1950s. By reinstating Hong Kong's four pre-war leprosaria into this narrative, the dissertation examines the external and internal factors that challenged the colony's management of the disease and ultimately overturned its reliance on deportation *before* the outbreak of the Second World War. During the early 20th century, for instance, the colony's geo-political expansion and the emergence of international and metropolitan calls for domestic segregation *appeared* to prompt a shift in the colony's management of the disease. Not only did the government support a small leprosy village in the newly-acquired New Territories, but it appointed a hospital on Hong Kong Island as a leprosy asylum. These initiatives, however, were merely a façade. The government's actions in the early 1910s actually entrenched rather than replaced its reliance on deportation. The growth of humanitarian concern and Chinese agency during the interwar period increasingly challenged the colony's reliance on mainland institutions and the government's contention that all Chinese leprosy sufferers were mainlanders. The government finally acknowledged its liability towards the maintenance of British Chinese sufferers, but resisted the increasingly persistent internal calls for reform by formalising its reliance on a specific mainland leprosarium: the Sheklung Asylum. Popular concern about the unregulated movements of domestic communities of leprosy sufferers, both real and imagined, and the outbreak of the Sino-Japanese War in the late 1930s ultimately forced the government to establish a government-run isolation facility, the Kennedy Town Leprosarium on Hong Kong Island, and an isolation cell commonly known as a 'leprosarium' within the Stanley Bay Prison,. This chapter concludes with a discussion of the brief *re-emergence* of the deportation policy in the immediate post-war period, and the implications for modern interpretations of the post-war establishment of domestic leprosaria at Sandy Bay and Hay Ling Chau.

Whereas Hong Kong's reliance on deportation emerged in the mid-1870s in response to police fears about contagion, the International Settlement's medical community considered the disease a rarity well into the early twentieth century. Chapter 3 examines how leprosy emerged as a trans-municipal public health issue in the late 1920s. The alarming reports of a local foreign-run dispensary inadvertently precipitated the International Settlement's reliance on a mainland leprosarium – a reliance that paralleled Hong Kong's management of diseased Chinese bodies. But the Settlement's practice of transferring Chinese leprosy sufferers to a Church Missionary Society hospital in Hangzhou was far more limited than Hong Kong's deportation policy. Chinese agency nevertheless challenged the

Settlement's opposition to domestic segregation. In particular the Chinese Mission to Lepers (C.M.L.), a Shanghai-based Christian Chinese philanthropic organisation with Auxiliaries in Hong Kong and major Chinese coastal cities, profoundly impacted on the International Settlement's management of the disease. Whilst the Settlement successfully resisted the establishment of isolation facilities within its borders, it was forced to come to terms with the establishment of the C.M.L.'s National Leprosarium of Shanghai, a model institution just a few miles to the north of the Settlement. The Settlement's maintenance of 'bona-fide resident' patients during the second half of the 1930s complicated its conceptualisation of leprosy as an alien disease. The remarkable but hitherto largely-forgotten working relationship between the Settlement and the C.M.L.'s National Leprosarium was one of intense negotiation: the early case-by-case evolution of the admissions, maintenance and discharges procedures provides rare insights into the trans-municipal contestations of power.

The impact of the Sino-Japanese War upon the Settlement's management of leprosy paralleled that of Hong Kong, though the consequences of the Japanese invasion were both more immediate and direct in Shanghai. Chapter 3 examines how the military encirclement of the city precipitated the evacuation of the National Leprosarium of Shanghai to three consecutive temporary premises within the space of a single year. These experiences presented the Chinese Mission to Lepers with unprecedented evangelistic opportunities and contributed to the greater degree of patient agency displayed in the National Leprosarium than in Hong Kong's Kennedy Town Leprosarium during the same period. Eventually the evacuees found shelter at the Brenan Road 'Emergency' Leprosarium, which lay within the Western extra-Settlement area and was therefore nominally under the S.M.C.'s jurisdiction. The leprosarium's location simultaneously heightened the Settlement's fears of contagion and restricted its ability to confine a growing number of patients within this C.M.L.-run institution. The overwhelming refugee crisis exacerbated popular fears of contagion further, prompting the Settlement to assume the maintenance of 'emergency resident' patients as well as an increasing number 'bona-fide' resident patients. The Settlement's management of the disease remained intensely racialised, as demonstrated by the exceptionally rare and detailed records of the confinement of a Russian leprosy sufferer. Whereas the cessation of colonial rule completely interrupted Hong Kong's management of the disease, successive war-time governments *preserved* the Settlement's practice of maintaining only those Chinese leprosy sufferers classed as 'bona-fide residents'.

The focus of the second pair of core chapters shifts from exploring the management of colonial bodies to the management of colonial environments through the prism of malaria prevention. Chapter 4 begins by exploring the evolution of malarial aetiology in Hong Kong, examining the ways in which the nascent conceptualisation of 'malarial fevers' was understood in relation to the colony's insalubrious environment *and* the insanitary habits of its Chinese inhabitants. The colony's vibrant community contested new ideas regarding the disease's transmission through local research and debate. This chapter significantly expands upon the limited historiography by analysing the reception of new ideas regarding the mosquito-borne transmission of the disease. The colonial authorities as well as the general

public vigorously debated different facets of these theories according to local concerns and received experiences. Local amateur entomological research underpinned the process of locally (in)validating these new ideas, dictating the evolution of Hong Kong's localised management of malaria.

This chapter also explores the origins and evolution of the colony's vectoral management of the disease during the first half of the 20th century. My work revises Yip's assessment that a "broad anti-malaria program" was introduced in 1899 by analysing the range of experimental measures that were implemented between 1899 and 1901.⁷² Moreover rather than implementing a 'broad' program, the colonial administration tailored its geographical management of the disease in order to prioritise the colonial state. On the one hand, the government restricted its management of malaria on Hong Kong Island to direct environmental interventions in the city of Victoria. On the other, the authorities opposed managing the malarious environment in the New Territories in favour of the prophylactic protection of the colonial police force. The colony vigorously resisted internal calls for its dual approach to be extended; only malaria epidemics that threatened the colonial state prompted temporary geographical extensions of the colony's management of the disease. The government finally relented in the late 1920s, establishing a dedicated anti-malaria unit, the Malaria Bureau. My work revises the traditional historiography's analysis of this institution by situating its establishment within the context of almost a decade's-worth of internal calls for reform. Moreover my research presents an original analysis of the evolution of the Bureau's work during the 1930s and early 1940s, including the impact of its Malayan heritage upon its integration of environmental and social indices. The chapter also explores the interplay between race, space and colonial governance by presenting a fresh comprehensive analysis of the malarial justifications for a European reservation in northern Kowloon. The chapter concludes by exploring the impact of the Japanese occupation of Hong Kong upon its management of the local environment.

Chapter 5 presents the very first modern analysis of the Settlement's management of the disease. The comparative rarity of malarial fevers in Shanghai during the 19th century impacted upon the extent of local research, the diffusion of new ideas regarding the transmission of the disease and the nature of the International Settlement's early anti-mosquito campaigns. Indeed only a desire not to be outdone by the French Concession prompted the Settlement to implement an extensive anti-mosquito campaign in 1909. This trial laid the foundations for the Settlement's far more systematic and geographically-comprehensive approach to malaria prevention compared to Hong Kong. Whereas a reluctance to tackle all of the territory under its jurisdiction defined Hong Kong's management of the disease during the early 20th century, the Settlement increasingly turned its attention to the territory *beyond* its immediate control. The Settlement's attempts to manage the malarious environment beyond its borders provides insights into the trans-municipal contestations of power, the impact these negotiations had upon the Settlement's perceptions

⁷² Yip, "Colonialism, Disease and Public Health," 19.

of Chinese (medical) modernity at a crucial stage in the emergence of the Nationalist Government, and the extent to which the Settlement transgressed Chinese sovereignty.

The outbreak of the Sino-Japanese war impacted to a much greater extent on the Settlement's management of malaria compared to Hong Kong's precisely because of the Settlement's trans-municipal approach. The encirclement of Shanghai and the capitulation of the Chinese forces amplified anti-British sentiment, particular in the Western extra-Settlement area – an area that was identified as integral to the Settlement's malaria prevention program. This volatile environment intensified the negotiations for the deployment of the Settlement's Malaria Prevention Unit – a product of local innovation rather than foreign expertise – beyond the Settlement's borders. Ironically the war repaired some of the damage done to the Public Health Department's relationship with the Henry Lester Institute, a local medical research institute, as a result of the Chinese municipality's refusal to support a joint anti-malaria campaign before the war. By contrast the war strained the department's anti-malarial relationship with other Settlement departments, principally the Public Works Department, to such an extent that the Malaria Prevention Unit was forced to justify its very existence. Ultimately the interment of the M.P.U.'s and indeed the Settlement's Allied personnel paralleled the fate of many of Hong Kong's personnel. The M.P.U.'s activities continued nonetheless, albeit on a small scale, for several years under Japanese occupation.

Sources

The dissertation draws on a wealth of sources including government correspondence, departmental records, newspapers, journals and conference proceedings, printed works, and the unpublished records of different medical bodies and individuals. The majority of this material is in English, though I have also drawn on French- and German-language sources where possible. A reliance on sources produced in the languages of the colonial state as opposed to Chinese-language records poses interpretational limitations, particularly with regard to assessing indigenous agency and patients' experiences. Both the project's scope and my methodology take these linguistic limitations into consideration. Firstly my work focuses primarily on presenting an original analysis of the 'official' management of leprosy and malaria in Hong Kong and Shanghai. Chinese (and non-Chinese) agency is therefore explored in terms of its interaction with and impact upon the state's prevention strategies. In doing so, this project lays the foundations for further research into Chinese medical agency. Secondly an assiduous analysis of the extant secondary sources, particularly works by Chinese-speaking scholars, guided both my primary and secondary research, enabling me to identify the relevant Chinese-language materials that I needed to have translated. In many cases though even Chinese-speaking experts such as Leung and Yip relied extensively on contemporary English-language sources. I greatly expanded upon this preliminary bibliography by drawing on: the wider historiography on disease prevention and colonialism in China; the online database of the Global Project on the History of Leprosy; as well as my own knowledge of British and Chinese archival records.

The government records from Hong Kong include the annual medical reports compiled by the head of the medical department, namely the Colonial Surgeon for 1880 through 1896 and the Principal Civil Medical Officer for 1897 through 1927. These reports were subsequently compiled by the newly-inaugurated Director of Medical and Sanitary Services. The annual sanitary reports, compiled by the colony's Sanitary Board, complimented these reports.⁷³ These reports contain morbidity and mortality statistics – for the colony's Western and Chinese hospitals and for different sections of the foreign and Chinese communities – as well as qualitative discussions about the prevalence and prevention of different diseases. The dissertation also draws on a variety of other annual reports, including those of the colony's police force, the veterinary surgeon and the superintendent of the botanical and afforestation department. The government records also include the minutes of the Legislative Council (the *Hong Kong Hansard*), and *The Hongkong Government Gazette*. All of these records are available through an online searchable database hosted by the Hong Kong University Library's Digital Initiative, referred throughout this dissertation as the Hong Kong Government Records Online.⁷⁴ Additionally, I assiduously researched the National Archives in London for the colony's, and indeed the Settlement's, correspondence with the Colonial Office. Furthermore I drew on the often-neglected inter- and intra-departmental records preserved in the Hong Kong Public Records Office. The Sanitary Board's minutes and its correspondence with the colonial government, for instance, provide insights into the Board members' opinions and actions which are unavailable through other sources. Unfortunately only a fraction of the original material is still extant.⁷⁵ Finally the departmental records also include the Sanitary Board's publications, including illustrated pamphlets on the prevention of specific diseases.

The International Settlement's annual medical reports broadly paralleled those of Hong Kong. The fact that only five individuals were responsible for producing Shanghai's extant reports – Dr. E. Henderson (1870-1890), Dr. A. Stanley (1898-1921), Dr. C. Noel Davis (1922-1929), Dr. J. H. Jordan (1930-1941) and Dr. Y. Tashiro (1942) – poses both advantages and disadvantages. On the one hand the greater degree of continuity provides insights into the ways in which each of these men interrogated leprosy and malaria. Yet this continuity also promoted formulaic report entries that glossed over the finer details of change. Imbalances in the extant inter- and intra-departmental source material also pose a number of problems. Whilst the Hong Kong Public Records Office contains a limited volume of colonial material primarily from the first half of the twentieth century, the Shanghai Municipal Archives preserve an extraordinary wealth of material from the 1920s through to the early 1940s, including the records of the Shanghai Municipal Council, the Public Health Department, the

⁷³ The annual reports of the Medical Officer of Health were initially included in the sanitary reports (for the years 1897 through 1904) but were subsequently fused with the Principal Civil Medical Officer's reports. The annual medical reports and the annual sanitary reports were published separately except for the years 1908 through 1920.

⁷⁴ The portal is available through <http://www.lib.hku.hk/database/>.

⁷⁵ For instance only the Board's letters to and from the government for the period 1900 to 1907 have survived.

Public Works Department, the Malaria Prevention Unit as well as the minutes of the Health Committee.

As a complement to these 'official records', the dissertation draws on an extensive corpus of local English-language newspaper materials. In some instances these newspapers provide the only reliable alternative to the 'official' records. Hong Kong's newspapers, for instance, provide a more comprehensive record of the Sanitary Board's meetings than the limited volume of original minutes preserved by the Hong Kong Public Records Office. Secondly the editorials provide commentaries on the official management of both leprosy and malaria, albeit coloured by each paper's political bias and political inclinations. But even the most pro-government papers occasionally criticised the government's handling of public health. Contributions in the form of letters to the editor provide further insights into popular attitudes. Chapter 4 for instance examines the controversial reception of new ideas regarding the mosquito-borne transmission of malaria by drawing on a flurry of heated personal exchanges that appeared in Hong Kong's press in the early 20th century. The varied modern availability of these newspapers, however, has resulted in an imbalance against Shanghai. The Hong Kong Central Library's Multimedia Information System provides an online searchable portal of digitised editions of contemporary newspapers.⁷⁶ I have drawn on three daily newspapers and two weekly newspapers: *The China Mail* (1869-1941), *The Hongkong Daily Press* (1875-1941), *The Hongkong Telegraph* (1882-1941), *The Hongkong Weekly Press* (1895-1909) and *The Hongkong Sunday Herald* (1929-1941).⁷⁷ By contrast Shanghai's Bibliotheca Zi-Ka-Wei was only just considering putting its impressive collection of English-, French-, German-, Russian- and Chinese-language newspapers on microfilm at the time of my visit in 2011. Moreover this library only made duplicates publicly available.⁷⁸ Working under visa-imposed time constraints I nevertheless manually consulted every available fin de siècle edition of *The North-China Daily Press*, a local English-language daily newspaper, as well as every edition of *The North-China Herald and Supreme Court & Consular Gazette*, a local weekly newspaper, from the late 19th century through June 1941. Additionally the Public Health Department's files in the Shanghai Municipal Archives preserved articles from a variety of Shanghai's English-, Chinese-, Russian- and German-language newspapers. These not only help rectify the imbalance of material compared to Hong Kong, but their selection and the Department's annotations provide insights into the medical authorities' reactions to popular developments and public criticisms.

Materials from a variety of medical networks, organisations and figures complement these official and popular sources. For instance the original replies to the Royal College of Physicians' Leprosy Committee, which are held in the College's archives, as well as the

⁷⁶ Available through <http://hkclweb.hkpl.gov.hk/hkclr2/internet/eng/html/welcome.html>.

⁷⁷ The dates represent the periods for which I found relevant articles and not do not necessarily represent the full extent covered by the Multimedia Information System. The portal is available through:

http://www.hkpl.gov.hk/english/collections/services_er/services_er_mmis/services_er_mmis.html

⁷⁸ For instance, the *The North-China Herald and Supreme Court & Consular Gazette* for January 1911 was not publicly available as the library only had one copy.

Committee's official report, provide some of the earliest insights into the prevalence of leprosy in both Hong Kong or Shanghai and raise doubts about the statements made in later published reports such as Cantlie's *Leprosy in Hongkong* (1890) regarding the disease's early local 'history'. More importantly these replies contextualise the emergence of the colony's reliance on deportation. Both the original medical reports of the Imperial Maritime Customs Service and Gordon's *Epitome* similarly provide some of the earliest insights into the management of both leprosy and malaria in Shanghai. The dissertation draws on a variety of sources by physicians working in Hong Kong and Shanghai, and throughout China more generally, including scholarly contributions to international medical journals – such as *The Lancet*, *The British Medical Journal* and *The Journal of Tropical Medicine and Hygiene* – and conference proceedings. For instance my work provides an original analysis of Cantlie's research on leprosy in Hong Kong, Macao and Canton by drawing on the Wellcome Library's collection of his unpublished papers and case notes. The largely-ignored unpublished minutes of the Hong Kong Medical Society serve to localise the research of colonial officers such as Cantlie and Manson. The dissertation also examines the missionary context that was so central to both Hong Kong's and Shanghai's management of leprosy by drawing on the records of foreign missionaries. *The China Medical Missionary Journal*, for instance, served as the principal forum for the foreign medical community in China from 1886 until 1949.⁷⁹ These missionaries also elicited support through Hong Kong's and Shanghai's newspapers. Foreign physicians in China also submitted research and reports to the *Leprosy Review* and the *International Journal of Leprosy* during the 1930s.⁸⁰

My analysis of the importance of Chinese agency, particularly the work of the Chinese Mission to Lepers and its Hongkong Auxiliary, draws on all of the above sources as well the Mission's own bilingual mouthpiece, *The Leper Quarterly*. Produced from 1927 through the early 1940s, this journal published the latest research by international specialists, reports from foreign and Chinese physicians, the Mission's conference proceedings, editorials, details of public subscriptions, a remarkable selection of photographs of different Chinese leprosaria and occasionally articles by cured leprosy sufferers.⁸¹ Unsurprisingly the journal's content was tailored to suit a specific objective: eliciting regional support for the Mission's activities and the Chinese leprosaria that it supported. The C.M.L.'s Protestant association impacted upon the level of attention accorded to different mainland leprosaria.⁸² *The Leper Quarterly*, for instance, devoted far less attention to the Catholic asylum at Sheklung than to Protestant

⁷⁹ The journal was renamed *The China Medical Journal* in 1907 and *The Chinese Medical Journal* in 1932.

⁸⁰ First published in 1930 and 1931 respectively, the first paper on China appeared in the former in 1931 and in 1934 in the latter. James L. Maxwell, "The Menace of Leprosy in Manchuria," *Leprosy Review* 2, no. 1 (1931): 5-7; Curtis M. Galt and Elder Noi Yawt, "Kiulungkiang Married Lepers' Settlement," *International Journal of Leprosy* 2, no. 3 (1934): 315-317.

⁸¹ The journal was first published in 1927. The last English-language articles were published in the March 1942 edition, though subsequent editions continued to include a table of contents in English until as late as December 1943. I am especially grateful to Angela Leung for directing me Shanghai Public Library's collection.

⁸² Leung, *Leprosy in China*, 161.

leprosaria in the region such as Tungkung, Pakhoi and Tai-Kam. Consequently I have also drawn on the illustrated pamphlets produced by the missionary superintendents of various leprosaria, including Father G. Deswazières's *With the Chinese Lepers at Shek-lung* (1925).⁸³ The C.M.L.'s increasing reliance on the International Settlement for financial support restricted the possibilities of publishing critical accounts of the Settlement's management of the disease. The journal's pieces on the inmates of various mainland leprosaria, particularly C.M.L.-run institutions such as the National Leprosarium, tended to downplay instances of poor management or patient dissatisfaction. The contestations of power, the extent of institutional unrest and the nature of patients' escapes are revealed by examining this journal in conjunction with the Mission's records, preserved in the International Settlement's Public Health Department files. These include the Mission's correspondence to and from the Public Health Department, regular maintenance statements, the minutes of the Mission's Executive Committee and the department's own internal correspondence regarding the Mission's activities – all of which was conducted in English until the mid-1940s. Although *The Leper Quarterly* also reported on the Hongkong Auxiliary, the whereabouts of this auxiliary's records are unknown.⁸⁴

Disease as Text and Image

The contrast between the modern scholarly management of malaria and leprosy is striking. For instance there has never been a malarial equivalent for "leper" in the English language: the disease has never subsumed the identity of the sufferer. And yet indigenous populations were pathologised as malarial hosts for much of the early 20th century. Moreover social factors remain at the heart of modern malarial aetiology. The transmission of the disease relies upon the co-existence of human populations, malaria-carrying mosquitoes and malaria parasites. The fundamental differences between the ways these two diseases were understood during the colonial period thus contextualise the way they were managed. The unique stigma attached to leprosy qualifies our understanding of the malarial pathologisation of indigenous populations and vice versa. Thus in throwing light the history of colonial medicine from different angles, the prisms of malaria and leprosy shed light on one another. Viewed together, this prisms provide a more nuanced understanding of the management of Chinese bodies and Chinese environments in Hong Kong and the International Settlement of Shanghai.

⁸³ Time constraints precluded a visit to the Missions Étrangères de Paris. I nevertheless consulted the archives online portal (<http://archives.mepasie.org/recherche>), which provides access to numerous records relating to the Sheklung asylum, including the *Bulletins des missions étrangères*, the *Annales des missions étrangères*, the *Rapports des évêques*, and the *Rapports des établissements*. See for instance G. Deswazières, "Kouang Tong: La léproserie de Sheklung," *Annales des missions étrangères*, 1926, 7-10, <http://archives.mepasie.org/Annales-des-missions-etrangees/kouang-tong-la-la-c-proserie-de-sheklung>.

⁸⁴ This pre-war Chinese Mission to Lepers Hongkong Auxiliary should not be confused with the post-war and unrelated Mission to Lepers Hong Kong Auxiliary.

Throughout the dissertation I refrain from using the derogatory term ‘leper’, except when quoting directly from the primary source material or when referring to specific institutions. This decision reflects the recommendations made by the “Committee on the Change of the Words ‘Leper’ and ‘Leprosy’ ” at the Fifth International Congress of Leprosy (Havana, 1948).⁸⁵ Instead I rely on the term ‘leprosy sufferer’ to designate anyone suffering from or suspected of suffering from the disease. I restrict my use of ‘leprosy patient’ – the committee’s recommended alternative – to denote an individual’s association with a particular leprosarium. As Edmond pointed out, access to medical facilities was especially limited during the period.⁸⁶ I use ‘leprosaria’ as a non-specific collective term for all in-patient facilities dedicated exclusively to leprosy sufferers, including clinics, asylums and settlements. I do so for the sake of clarity without necessarily implying common institutional structures.

In recommending the retention of the term ‘leprosy’, the committee also acknowledged the use of appropriate popular alternatives. During the 1960s the patients and staff at the National Leprosarium in Carville, Louisiana, took up the chorus for the term to be abandoned altogether in favour of “Hansen’s Disease” or “so-called leprosy” – terms which they considered destigmatising.⁸⁷ The institution was even renamed the National Hansen’s Disease Center.⁸⁸ Some modern historians continue to adhere to this practice.⁸⁹ However as Skinsnes explained shortly after his formative decade in Hong Kong, pursuing this name change to its logical conclusion results in anomalous terms such as “Hansenology”, “Hansenophobia” and “Hansenarium – an institution for the care of Hansen (long since departed this world) or peopled with Hansens – hardly practical or significant in China, India, Japan, etc.”.⁹⁰ I would add “Hansen’s diseased” (in place of ‘leper’), “Hansen’s disease sufferer/patient” and “*Mycobacterium hansenae*” to Skinsnes’s list. These terms are extremely cumbersome, particularly if pluralised and/or preceded by adjectives: consider for instance “British Chinese Hansen’s disease sufferers”. More importantly these terms fall short

⁸⁵ Dr. N.D. Fraser, who worked at the Swatow Mission Hospital in the late 1920s and 1930s and later played a pivotal role in establishing and superintending the Hay Ling Chau Leprosarium in Hong Kong, was a member of this committee. Olaf K. Skinsnes, “Notes from the History of Leprosy,” *International Journal of Leprosy* 41, no. 2 (1973): 245. For more on Fraser’s work see his articles in the bibliography and Daniel G. Lai and Suchen Wang Lai, “The Kahn Reaction in Leprosy: A Study of 167 Lepers in Swatow District,” *China Medical Journal* 42, no.12 (1928): 880-883, 883.

⁸⁶ Edmond, *Leprosy and Empire*, 17. My use of the term ‘leprosy patient’ does not necessarily imply that the individual’s association with a particular leprosarium entailed medical treatment *per se*.

⁸⁷ Zachary Gussow and George S. Tracy, “Status, Ideology, and Adaptation to Stigmatized Illness: A Study of Leprosy,” *Human Organization* 27, no. 4 (1968): 320. For earlier advocates see Howard N. Morse “The Changed Attitude Toward Hansen’s Disease,” *Journal of the American Medical Association* 199, no. 2 (1967): 253-254.

⁸⁸ John Parascandola, “The Gillis W. Long Hansen’s Disease Center at Carville,” *Public Health Reports* 109, no. 6 (1994): 728-730.

⁸⁹ See for example Yara Nogueira Monteiro, “Prophylaxis and exclusion: compulsory isolation of Hansen’s disease patients in São Paulo,” *História, Ciências, Saúde –Manguinhos* 10, no. S1 (2003): 95-121.

⁹⁰ Olaf K. Skinsnes, “Leprosy in Society III. The Relationship of the Social to the Medical Pathology of Leprosy,” *Leprosy Review* 35, no. 4 (1964): 175-181, 177. Reprinted in Skinsnes, *Leprosy Rationale*, 15-17.

of achieving their destigmatising objective by complicating matters further, as Skinsnes explained:

Unfortunately, society will want to know what 'Hansen's disease' is. Recognizing it as leprosy, society will then need the same rational explanation for its misconceptions that it should be challenged immediately with the same energetic efforts that are applied to promoting the attempted name change.⁹¹

Multilateral bodies such as the World Health Organisation and philanthropic bodies dedicated to raising support for and awareness of leprosy sufferers around the world, such as The Leprosy Mission (UK), the Leprosy Mission International and the International Leprosy Association, continue to refer to the disease as leprosy.⁹² There is no denying that the process of destigmatisation is a necessary and on-going battle, but a sensitive and informative handling of the subject matter is arguably more effective than rebranding the disease.

Compared to the extensive debates about textual references to leprosy sufferers, the ethical implications of reproducing visual representations of leprosy have largely been ignored. This is especially surprising given the extent to which images can fuel popular stigma, particularly those images that emphasise the disfiguring nature of the disease. Well-established and widely-distributed modern journals dedicated to the study of the disease continue to publish images of leprosy sufferers. The final 21st century editions of the *International Journal of Leprosy and other Mycobacterial Diseases*, for instance, opened with a section dedicated to 'Images from the History of Leprosy'.⁹³ Yet even images with an explicitly educational and destigmatising purpose can inadvertently support stigma and discrimination.⁹⁴ Some of my history postgraduate colleagues therefore abstain from reproducing images of leprosy sufferers without the subjects' explicit permissions. Other scholars only reproduce images that do not reveal the sufferers' identities. For instance in her undergraduate dissertation on the Hay Ling Chau Leprosarium in Hong Kong, Lily Chan Lai Lee only included photographs of leprosy sufferers that concealed their faces.⁹⁵

During the course of my research I uncovered a variety of visual depictions of leprosy sufferers in contemporary publications, journals, pamphlets, and, to a lesser extent newspapers, as well as a limited number of unpublished images. These images consisted mostly of photographs – of individuals and communities, of homes and institutions, of doctors and patients – but also illustrations and diagnostic schematics. Tracing the identities of those depicted in these images in order to secure their consent is beyond the scope of this project and in many cases impossible given the period under study. But these images are too valuable and under-appreciated not to be reproduced. They provide fascinating, new, personal and

⁹¹ Skinsnes, "Leprosy in Society III," 177.

⁹² The Association is currently organising the 18th International Leprosy Conference (Brussels, 2013).

⁹³ See for example "Images from the History of Leprosy," *International Journal of Leprosy and other Mycobacterial Diseases* 73, no. 4 (2005): 239.

⁹⁴ See for instance Leanne Johnny and Claudia Mitchell, "'Live and Let Live': An Analysis of HIV/AIDS-Related Stigma and Discrimination in International Campaign Posters," *Journal of Health Communication*, no. 11 (2006), 755-767.

⁹⁵ Lily Chan Lai Lee, "A Regional Study of Hay Ling Chau," (BA. thesis, University of Hong Kong, 1963).

often unparalleled insights into the lives of Chinese leprosy sufferers during this period – insights that neither words (nor maps) can capture. I reproduce them in this dissertation in order to strengthen our understanding of the colonial stigma.

Chapter 2: Leprosy in Hong Kong

Hong Kong's pre-war management of leprosy has all but been forgotten. In an article entitled "Leprosy in Hong Kong, Past, Present and Future", published in one of the colony's respectable medical journals in 1978, Dr. Honey of the Social Hygiene Service stated simply, "Prior to World War II, leprosy was not regarded as a problem in Hong Kong and treatment was arranged in Leprosaria near Canton".¹ This narrative has underpinned modern interpretations of the colony's pre-war management of the disease, including Leung's, for the last 60 years.² Yet the disease's association with the island dates to the very earliest period of settlement. R. Montgomery Martin, the colony's first treasurer, opened his highly critical 'Report on the Island of Hong Kong' (1844) with a description of the colony's terrain. After comparing the post-monsoon "greenish-hue" of the island's "hogsback" hills to a "decayed Stilton cheese", he cast his gaze over the Chinese peninsula that lay to the island's north:

The desolate aspect to the island ... is unrelieved by the adjacent main land, whose physical features are precisely similar to those of Hong Kong, its mountain tops and sides presenting the appearance of a negro streaked with leprosy.³

Leprosy swiftly shed its purely metaphorical association with the colony, emerging as an alarming social and policing issue in the 1870s. The colonial authorities responded to this apparent threat not by casting Chinese leprosy sufferers without the camp but without the colony altogether. This chapter traces the evolution of the colony's management of the disease, charting the challenges to its reliance on deportation and its staunch opposition to domestic segregation. In doing so this chapter highlights the role of local physicians such as Cantlie in the production of local and global colonial medical discourses and the impact of colonial Chinese agency

The Emergence of the Deportation Policy

Leprosy was initially considered a rarity in Hong Kong. The Royal College of Physicians in London appointed a Leprosy Committee in 1862 in response to concerns about the prevalence of the disease in the British West Indies. The Committee drafted a questionnaire that was circulated via the Colonial Office throughout the British Empire, including Hong Kong

¹ N. R. Honey, "Leprosy in Hong Kong, Past, Present and Future," *The Bulletin Journal of Society of Community Medicine Hong Kong* 9, no. 1 (1978): 22-28, 22.

² See for instance Lily Chan Lai Lee, "A Regional Study of Hay Ling Chau," (BA. thesis, University of Hong Kong, 1963), ix; L. Y. Chong and N. R. Honey, "Leprosy control programme in Hong Kong," *Journal of The Hong Kong Medical Association* 45, no. 1 (1993): 70-73; K. H. Lau, "Leprosy in Hong Kong: From Hay Ling Chau to Cheun Sha Wan," *Hong Kong Journal of Dermatology and Venereology* 10, no. 3 (2002): 107; Angela Ki Che Leung, *Leprosy in China: A History* (New York: Columbia University Press, 2009), 220, 310n20. The Mission to Lepers Hong Kong Auxiliary, a post-war organisation which was jointly responsible with the government for opening a leprosarium on Hay Ling Chau in 1952, was responsible for propagating this narrative. The Mission to Lepers Hong Kong Auxiliary, *First Annual Report, 1951*, (Hong Kong, 1952), 3.

³ *Hong Kong. Copies of 'Report on Hong Kong,' 'Report on Chusan,' and Minute on the British Position and Prospects in China,' by Mr. R. Montgomery Martin, when Treasurer to The Queen at Hong Kong, and a Member of Her Majesty's Legislative Council in China* (Parl. Papers, Session 1 (148), 1857), 3-4. Frank Welsh used Martin's phrase 'A negro streaked with leprosy' as a chapter sub-heading. Frank Welsh, *A History of Hong Kong* (London: Harper Collins, 1997), 155, 158.

and Shanghai.⁴ The Acting Governor of Hong Kong forwarded the questionnaire to almost a dozen government, military and civilian medical officers.⁵ The three respondents all asserted that the disease was either non-existent or else exceptionally rare in Hong Kong. Instead they emphasised the prevalence of Chinese leprosy sufferers in neighbouring Macao and Canton (Guangzhou).⁶ One of the respondents, a German physician named Dr. Schetelig, submitted a photograph of a leprosy patient from Canton (fig. 1) and actually travelled to Macao on Christmas day in order to report on the dilapidated Hospital de São Lázaro, run by the Santa Casa da Misericórdia.⁷ In contrast to these contemporary assertions, Dr. James Cantlie alleged in 1887 – only a year after his arrival in the colony – that a small group of “leper families and communities” had in fact resided “on the hill-sides above the town of Victoria” on Hong Kong Island from the early 1840s until the 1870s.⁸ Cantlie’s comments came three decades after the College’s report at a time, as we shall see, when the reported prevalence of the disease was far more acute. As such his statements may have reflected late 19th century popular beliefs. Alternatively awareness of the existence of this hill-side community of leprosy sufferers may only have surfaced sometime after Schetelig and his colleagues submitted their replies.

⁴ The Committee’s final report summarised these responses. George Edward Eyre, and William Spottiswoode eds., *Report on Leprosy by the Royal College of Physicians prepared for, and published by her Majesty’s Secertary of State for the Colonies, with an appendix* (London: 1867), xiv, 72-78, 221-23. For more on the Leprosy Committee’s investigation see Rod Edmond, *Leprosy and Empire: A Medical and Cultural History* (Cambridge: Cambridge University Press, 2006), 51-67.

⁵ W. T. Mercer (Actg. Governor) to the Duke of Newcastle, 7 Mar. 1863, Royal College of Physicians (RCP), OFFIP/4119/116-116a. Mercer also contacted the authorities in Macao on the Committee’s behalf, and also drew its attention to an article in *The Chinese Repository* by Benjamin Hobson, a foreign medical missionary in Canton. João Ferreira Pinto (President, Macao) to Mercer, 12 Dec. 1863, RCP, OFFIP/4119/91; “Remarks by Dr. Hobson on the subject of leprosy”, ca. 1851, RCP, OFFIP/4119/90. Hobson delivered a similar paper to the colony’s China Branch of the Royal Asiatic Society, which provided an early non-specialist forum for discussion (1847-1859). Benjamin Hobson, “Leprosy in China and the East. A Brief Account of the Leprosy of China and the East,” *Transactions of the China Branch of the Royal Asiatic Society*, no.3 (1851-52): 17-27.

⁶ The hospital was also known as a hospice. Dickson stated that he “had some years ago opportunity of seeing Leprosy” in Canton while working as a private practitioner. “Dr. Dickson’s Answers to Queries on Leprosy”, ca. 1863, RCP, OFFIP/4119/117-117a, 1, 7, 15; “Dr. Enscoe’s Answers to Queries on Leprosy”, 13 Dec. 1862, RCP, OFFIP/4119/118, 1; “Dr. Schetelig’s Answers to Queries on Leprosy”, 5 Mar. 1863, RCP, OFFIP/4119/119, 1-5, 17-24. See A. Damas Mora and J. C. Soares, “Leprosy in Macao: Some Comments by the Portuguese Doctors in Macao,” *Chinese Medical Journal* 50 (1936): 721-725, 722.

⁷ “Dr. Schetelig’s Answers to Queries on Leprosy”, 5 Mar. 1863, RCP, OFFIP/4119/119, 6-7, 17-24. W. Howard of Canton, the author of the original photograph, sent a mounted copy of it along with a mounted photograph of a patient with elephantiasis to the College. W. Howard, “Elephantiasis”, ca. 1861, RCP, OFFIP/4119/101-102; W. Howard, “Leprosy”, ca. 1861, RCP, OFFIP/4119/103

⁸ James Cantlie, *Leprosy in Hongkong* (Hong Kong: Kelly & Walsh, 1890), 3. Thin’s treatise on leprosy reprinted Cantlie’s comments. George Thin, *Leprosy* (London: Percival and Co., 1891), 54-55.



Figure 1. *Leprosy* by W. Howard, Canton, *ca.* 1861.
Sent by Dr. Schetelig of Hong Kong to the Royal College of Physicians.⁹

This discrepancy notwithstanding, both Cantlie and the early respondents concurred on the racial distribution of the disease. Leprosy was reportedly widespread amongst the Chinese populations of southern China and Macao, but European cases of the disease were exceptionally rare. Schetelig, for example, reported that only two of the 31 patients in the Hospital de São Lázaro in Macao were not Chinese: Jacintha, the matron, and “a Goa man of Mozambique extraction”.¹⁰ Only one European leprosy sufferer from Hong Kong was reported

⁹ “Photograph of a case accompanying Dr. Schetelig’s replies to interrogatories re leprosy”, *ca.* 1861, RCP, OFFIP/4119/120.

¹⁰ “Dr. Schetelig’s Answers to Queries on Leprosy”, 5 Mar. 1863, RCP, OFFIP/4119/119, 23-34.

during this period. The noted British dermatologist Erasmus Wilson examined a fifty year old resident who had contracted “Elephantiasis anaesthetica” – which Wilson identified as a form of “leprous affections” – in 1858, shortly after the patient’s departure from the year that he left Hong Kong after several years’ of residence.¹¹ This unique case attracted the attention of at least some European and Chinese physicians in southern China, though Cantlie seems to have been unaware of the case.¹²

Leprosy emerged as an acute social and policy issue within the colony in the decade after the College’s report. The police were increasingly alarmed by the number of detained suspects who appeared to be suffering from the disease.¹³ Captain Superintendent of Police W. M. Deane reported that “the number of Mendicants arrested (558), mostly Lepers, is a matter of worthy consideration”.¹⁴ The absence of any isolation facilities within the Victoria Gaol compounded the police’s fears of contagion – fears based on ignorance, suspicion and stigma.¹⁵ Deane briefly considered converting Round Island, a small uninhabited island off the south coast of Hong Kong Island, into a “Lazarette”, but he dismissed the idea because he feared the scheme would burden the colonial authorities with an influx of leprosy sufferers from the neighbouring mainland.¹⁶ Even in this moment of crisis, the authorities opposed the idea of domestic segregation on the basis that the colony’s isolation facilities would serve as a beacon to sufferers on the mainland.

Instead this crisis prompted the establishment of a practice that would define the colony’s management of the disease through much of the early 20th century. Sir Daniel Brooke Robertson, H.M. Consul in Canton, successfully negotiated “the speedy transmission of lepers to Canton” with the permission of Governor General of Guangdong Province.¹⁷ ‘The Deportation and Conditional Pardons Consolidation Ordinance’ (1876) officially sanctioned this arrangement:

¹¹ Erasmus Wilson, *On Diseases of the Skin. A System of Cutaneous Medicine*, 6th ed. (London: John Churchill & Sons, 1867), 633-34. The Committee’s report included Wilson’s ‘Observations on the true leprosy or elephantiasis, with cases’. Eyre and Spottiswoode, *Report on Leprosy*, 231-44.

¹² For instance a Chinese physician with the Chinese Maritime Customs Service in Canton cited this case several years later. F. Wong, “Memorandum on Leprosy,” *Customs Gazette, Medical Reports*, no. 6 (Sept. 1873): 41-47, 44. Cantlie, however, claimed that he had never “heard of any European being *attacked* in China, nor have I yet seen a case amongst the Portuguese”, though he knew of a young English girl suffering from the disease who passed through the colony en route from Singapore (*italics added*). Cantlie, *Leprosy in Hongkong*, 28.

¹³ “The Leper Nuisance,” Police Intelligence, *China Mail*, Sept. 7, 1877, 2; “A Leper,” Police Intelligence, *China Mail*, Oct. 15, 1880, 3; “Lepers,” Police Intelligence, *China Mail*, July 10, 1882, 3.

¹⁴ *Hong Kong Government Gazette*, Feb. 8, 1873, HKGRO, 39-44, 40.

¹⁵ The Gaol was not equipped with a ‘Leper Cell’ and an ‘Itch Cell’ until the 1880s. E. J. Ackroyd, *Sessional Papers: Report of the Commission Appointed to Consider the Question of Insufficient Accommodation in Victoria Gaol*, June 1, 1886, HKGRO, 150.

¹⁶ *Hong Kong Government Gazette*, Feb. 8, 1873, HKGRO, 39-44, 40.

¹⁷ *Hong Kong Government Gazette*, Nov. 18, 1876, HKGRO, 496; Minute by P. J. Hennessy (Governor), 11 July 1881, Hong Kong Public Records Office (hereafter HKPRO), HKRS101/1/4/5. Robertson’s reply to the Royal College of Physicians’ indicated his awareness of Canton’s leprosaria and the reported regional prevalence of leprosy since the 1860s. Eyre and Spottiswoode, *Report on Leprosy*, xiv, 76-77.

XVI. All persons affected with leprosy are hereby prohibited from residing or being within the jurisdiction of this Colony, and all lepers natives of China found in the jurisdiction shall be apprehended, and, subject to the order of the officer for the time being in command of the Police, be liable to be forthwith sent to Canton, and there handed over to the Chinese authorities, and on being found within this Colony a second time, shall be liable to deportation by order of the Governor.¹⁸

Whereas clause XV imposed a range of punishments for mendicancy, ranging from a fine through hard labour to deportation, clause XVI sanctioned the *immediate deportation* of all Chinese leprosy sufferers; the prospect of non-Chinese leprosy sufferers was not envisioned. Within months Deane reported a “marked decrease in the number of Mendicants of this class”.¹⁹ Cantlie reported that the small community of leprosy sufferers that had established itself on the hillsides above Victoria “were disturbed in their retreats, and were expelled to the mainland” as a result of this legislation.²⁰ The authorities also penalised those caught bringing leprosy sufferers into the colony by boat.²¹ The ordinance uniquely criminalised those who were guilty of nothing more than succumbing to an incurable disease. Once apprehended, the fate of these individuals rested in the hands of the police rather than those of the medical authorities.

The ordinance may have dictated an extreme coercive response, but the colony’s management of leprosy was haphazard at best. Firstly senior members of the colonial administration initially appeared wholly ignorant of the ordinance’s existence. The incarceration of Hong A Kat, a convicted larcener who was suspected of suffering from the disease, in the early 1880s prompted the Colonial Secretary to suggest that “it would be well to have a definite line of action laid down as regards Lepers”.²² Even the Superintendent of the Victoria Gaol was under the impression that the deportation of leprosy sufferers to Canton – an arrangement which he himself had helped implement – had lapsed.²³ Secondly the authorities lacked the resources necessary to enforce the ordinance’s extreme measures. Indeed they readily acknowledged the impossibility of preventing deported leprosy sufferers from returning to the colony.²⁴ A newspaper report on a case in court in 1876 complained:

¹⁸ *Hong Kong Government Gazette*, Dec. 16, 1876, HKGRO, 552. The ‘Amended Ordinance for better Securing the Peace of the Colony (1857)’ did not specifically prohibit leprosy sufferers from residing in the colony. *Hong Kong Government Gazette*, July 18, 1857, HKGRO, 2.

¹⁹ *Hong Kong Government Gazette*, Feb. 10, 1877, HKGRO, 58.

²⁰ Cantlie, *Leprosy in Hongkong*, 3.

²¹ The Merchant Shipping Consolidation Ordinance was first read in 1874 but wasn’t promulgated until 1879. *Hong Kong Government Gazette*, Jul 18, 1874, HKGRO, 297-325, 319; *Hong Kong Government Gazette*, Dec. 3, 1879, HKGRO, 774-809, 801.

²² Minute by F. Stewart (Actg. Col. Sec.), 9 July 1881, HKPRO, HKRS101/1/4/5. The Governor had to reassure him that the “question of sending Lepers to Canton has been long since settled”. Minute by Hennessy, 11 July 1881, HKPRO, HKRS101/1/4/5.

²³ He informed the Governor, “I am glad to find it in life”. Minute by M. S. (Supt., Victoria Gaol), 12 July 1881, HKPRO, HKRS101/1/4/5.

²⁴ “The Leper Nuisance,” Sept. 7, 1877, 2; “A Leper Driven to Steal,” Supreme Court, *China Mail*, Jan. 21, 1885, 3; P. B. C. Ayres, *Sessional Papers: The Colonial Surgeon’s Report for 1889*, June 27, 1890, HKGRO, 346.

It appears the Government are continually deporting lepers from the colony to their native places in passage boats... These lepers had been up to their native place at the expense of the Government, and the passenger junks have driven a flourishing trade in bringing them back to the colony.²⁵

This “joke” was still current more than half a century later.²⁶ Junk-masters either flouted the prohibition on transporting leprosy sufferers to the colony or else feigned ignorance about the penalties for doing so.²⁷ Others were simply unaware that their passengers were suffering from the disease. The colony’s porous border heightened local fears about the dangers of an unregulated influx of Chinese leprosy sufferers from the mainland.

The delay in establishing a “Leper Cell” in the Victoria Gaol, as promised by the Attorney General, renewed the police’s fears about the threat of contagion.²⁸ Deane complained that Hong A Kat had been returned to the police cells because of his condition:

I desire respectfully, but most strongly to point out that the Police Cells are not proper places in which to detain Lepers or mendicants for more than the necessary time to send them before a Magistrate.²⁹

This anxiety was so acute that the Acting Police Magistrate exceeded his powers by personally ordering the deportation of a leprosy sufferer who had already been deported once before because he considered “a prompt dealing with the case desirable”.³⁰ The Attorney General and the Acting Colonial Secretary were forced to remind him that the power to order the banishment of a returned ‘deportee’ rested solely with the Governor in Council.³¹ The establishment of a “Leper Cell” within the city’s Gaol may have assuaged some of Deane’s concerns, but the necessity of isolating leprosy prisoners in this manner contributed to overcrowding within the Gaol’s other cells, much to the annoyance of the Superintendent.³² The disease thus went from a rarity to a significant social and policing problem within the space of a decade.

Dr. Cantlie and the trope of the “El Dorado of the leprous Chinaman from the mainland”

Cantlie was responsible for influentially articulating local and Imperial fears about Chinese migrants. His dire warnings about the overwhelming threat of diseased Chinese migrants and the dangers of inter-racial intercourse stoked Imperial fears of degeneration and

²⁵ “Leper Nuisance,” *Hongkong Daily Press*, June 16, 1876, 2.

²⁶ “The Leper World: Leprosy in Hongkong,” *Leper Quarterly* 13, no. 3 (1939): 125-126, 125.

²⁷ “Bringing Lepers into the Colony,” Police Intelligence, *China Mail*, June 15, 1876, 2; “Leper Nuisance,” June 16, 1876, 2.

²⁸ *Hong Kong Government Gazette*, Nov. 18, 1876, HKGRO, 496.

²⁹ H. M. Deane (Capt. Supt. Police) to F. Stewart (Actg. Col. Sec.), 9 July 1881, HKPRO, HKRS101/1/4/5.

³⁰ J. Francis (Actg. Police Magistrate) to Stewart, 13 Aug. 1880, HKRPO, HKRS101/1/4/4, 72-73.

³¹ Stewart to J. Francis (Judge), Ng. Choy and (Actg. Police Magistrates), 25 Aug. 1880, HKPRO, HKRS101/1/4/5. Lum A Ming was allegedly willing to depart the colony, having merely returned to collect “some small sum of money and other property taken from him in the Gaol which had been detained when he was discharged”. Francis to Stewart, 31 Aug. 1880, HKPRO, HKRS101/1/4/4, 71.

³² Ackroyd, *Sessional Papers: Report of the Commission*, June 1, 1886, HKGRO, 150.

struck at the heat of Hong Kong's fears of internal and external corruption.³³ Until now, however, the scholarly emphasis on his two major publications on the subject – his pamphlet *Leprosy in Hongkong* (1890) and his prize-winning *Report On The Conditions Under Which Leprosy Occurs in China, Indo-China, Malaya, The Archipelago, and Oceania* (1897) – has ignored how his formative experiences in Hong Kong impacted upon his conceptualisation of the disease. Leung for instance argued that Cantlie's earlier pamphlet reflected contemporary Chinese rumours that leprosy was spread in Hong Kong through "lascivious" sexual relations between white men and Chinese women.³⁴ In fact he initially expressed serious doubts about sexual transmission of the disease.³⁵ Yet his position on the matter underwent a complete volte-face within the space of just five years. In his later work he not only concluded that leprosy was a sexually-transmitted disease, he also overturned his previous opinion regarding the threat from "single coitus".³⁶ Cantlie's first-hand observations in a Cantonese and a Macanese leprosaria had a profound impact upon his beliefs about the transmission of the disease and, more importantly, upon his recommendations for the colony's management of leprosy.³⁷

By his own admission, Cantlie had little prior experience of the disease, save for a few cases he had witnessed in Egypt in 1883.³⁸ Stationed in Hong Kong from 1887 to 1896, his work exposed him to several Chinese cases of the disease, some of whom he kept under observation for several years, and details of which he shared on numerous occasions with the newly-formed Hong Kong Medical Society (see fig. 2).³⁹ As we shall with regard to malaria, this society served as a vibrant forum for the dissemination of local research and scientific debate.

³³ Edmond, *Leprosy and Empire*, 106-107, 124-126; Rod Edmond, "Returning Fears: Tropical Disease and the Metropolis," in *Tropical Visions in an Age of Empire*, eds. Felix Driver and Luciana Martins, (Chicago: University of Chicago Press, 2005), 189; See Leung, *Leprosy in China*, 138, 143, 150, 283n85.

³⁴ Leung attributed these comments to Cantlie's earlier pamphlet on Hong Kong but actually cited his later report. Leung, *Leprosy in China*, 150, 283fn85.

³⁵ Cantlie declared that there was no evidence to indicate that the disease could be "carried by a single coitus". Moreover he raised doubts about the "actual sexual connection" in reported cases of European women contracting the disease from their Chinese husbands, primarily in Australia. Cantlie, *Leprosy in Hongkong*, 28, 43-44.

³⁶ James Cantlie, ed., *Report On The Conditions Under Which Leprosy Occurs in China, Indo-China, Malaya, The Archipelago, and Oceania. Compiled Chiefly During 1894* (London: MacMillan and Co., 1897), 16-17.

³⁷ I dispute Leung's contention that Wong Foon, the Western-educated Cantonese medical officer of the Imperial Maritime Customs whose 'Memorandum on Leprosy' (1873) cited the case of a European leprosy sufferer from Hong Kong, convinced Cantlie of the sexual transmission of the disease. Leung, *Leprosy in China*, 150.

³⁸ Cantlie, *Leprosy in Hongkong*, 7.

³⁹ Ibid., 7; Hong Kong Medical Society, *Minutes of Meetings, 1886-1912, ca. summer/autumn 1887*; Ibid., ca. autumn/winter 1888; Ibid., 9 Feb. 1888; James Cantlie, "Six cases of leprosy treated with Koch's tuberculin. 1899-94", MS 1468, Wellcome Library, London (hereafter Wellcome). The society was later renamed the Hong Kong and China Branch of the British Medical Association. The original bound volume of the Society's minutes is in poor condition, but a photocopied volume is available at the Main Library of the University of Hong Kong. This dissertation refers to the meetings by date, as neither the original nor the photocopied volumes contained page numbers. Due to the condition of the original volume, some dates are approximate.

Many of Cantlie's colleagues had first-hand experience of treating the disease.⁴⁰ Indeed Patrick Manson claimed to have "obtained in great profusion a bacterium" similar to that described by Hansen "by cultivating the juice expressed from leper tubercles" whilst serving as an Imperial Maritime Customs Officer in Amoy (Xiamen) in the late 1870s.⁴¹ But in 1889, prompted in part by growing Imperial concerns about leprosy in India, Cantlie embarked on a new project analysing the records of 125 leprosy sufferers from the recently-opened Alice Memorial Hospital.⁴² His investigation revealed only two cases that had originated in colony – one from Hong Kong and one from British Kowloon – whilst a third came from the Chinese city of Kowloon. The remaining cases were drawn from all over south-eastern China.⁴³ Consequently Cantlie opened his *Leprosy in Hongkong* with a dire warning:

At a time when all the world is bestirring itself in regard to the disease "Leprosy", and more especially as the English Government is about to deal with leprosy in India, it behoves us here in China to claim the ear of the Home Government, to protect us against the dangers we run.

The free port of Hongkong offers hospitality to the Chinese of all classes; but by no class is the opportunity more likely to be embraced than by lepers, who, driven from their relations and friends by virtue of their having the disease, are reduced to a state of destitution, and seek refuge in Hongkong in preference to entering one of the wretched leper villages of China. Hither lepers come, in the hope of obtaining employment, in the hope of getting cured by some of the European doctors, or of at least obtaining food by begging in the streets. There is no law against begging in Hongkong, therefore the streets of the City with its rich inhabitants are as an El Dorado to the leprous Chinaman from the mainland.⁴⁴

Leprosy was conceived as an imported social problem within the British colony. Cantlie's warning fuelled contemporary Imperial fears about the threat of infection. The year 1889 was marked by the death of Father Damien, the Belgian missionary who contracted leprosy whilst treating the sufferers in the Hawaiian asylum of Molokai; the publication of Wright's *Leprosy an Imperial Danger*; the establishment of the National Leprosy Fund; and the formation of the Leprosy Investigation Commission.⁴⁵

⁴⁰ Hong Kong Medical Society, *Minutes of Meetings*, spring/summer 1887. See also *Ibid.*, 10 June 1892; *Ibid.*, 16 Dec. 1893.

⁴¹ Patrick Manson, "Notes on Some Skin Diseases," *Imperial Maritime Customs, Medical Reports* 2, no. 21 (Mar. 1881): 27-36, 27n1. See also Max Durand-Fardel, *La Chine et les Conditions Sanitaires des Ports ouvert au commerce étranger* (Paris: Librairie J.B. Baillière & Fils, 1877), 173-177.

⁴² Cantlie, *Leprosy in Hongkong*, 1-2. He claimed that no records were available from the Tung Wah Hospital because this Chinese hospital did not regularly keep such information, and because "it may be considered important to conceal the prevalence of a disease introduced by the Chinese amongst the English community in Hongkong". The Alice Memorial Hospital, named in memory of Dr. Kai Ho Kai, one of the colony's most prominent Chinese members, was opened in the same year as Cantlie's arrival in Hong Kong.

⁴³ *Ibid.*, 24.

⁴⁴ *Ibid.*, 1. He shared his pamphlet with his colleagues prior to publication. His paper was well received in Britain. Hong Kong Medical Society, *Minutes of Meetings*, 5 Oct. 1889; *Ibid.*, 9 Nov. 1889; "Reviews and Notices," *British Medical Journal*, Oct. 11, 1890, 849.

⁴⁵ Jane Buckingham, *Leprosy in Colonial South India: Medicine and Confinement* (Chippenham: Palgrave, 2002), 152-153; Jo Robertson, "In Search of *M. leprae*: Medicine, Public Debate, Politics and

In spite of his dire introductory warnings, Cantlie rejected a sweeping policy of immediate deportation. For a start his analysis of twenty of the most recent cases revealed that only a quarter of them had definitely developed the disease *before* their arrival in the colony. International uncertainty regarding the incubation of the disease meant that further analysis was pure speculation. On the basis of this sample group Cantlie suggested that the proportion of locally-contracted cases ranged anywhere between one in eight and two in three. Nevertheless even the most conservative estimate demonstrated that leprosy “can be, and is, ‘caught’ in Hongkong” – a fact which had “a most important bearing as to the right we have to send our lepers back to the mainland”.⁴⁶ Cantlie concluded that the government therefore had a duty to provide for all its British subjects, irrespective of their nationality:

If the Government are to act energetically by deportation of all Chinese lepers, be they British subjects or not, it would be acting ruthlessly, and to my mind, dishonestly.⁴⁷

Cantlie recognised that the disease could be contracted locally, and he presaged an increasing number of Chinese cases who would be able to claim British citizenship, either by dint of their birth or their prolonged residence within the colony.⁴⁸ Citizenship rather than race thus dictated the government’s duty of care. He suggested that the Government could secure permission from the Chinese authorities to establish a “leper retreat...for British subjects, be they Chinese or Foreigners” on a small neighbouring island – a suggestion that echoed Captain Deane’s tentative proposal for Round Island.⁴⁹ Alternatively he advised the government to continue deporting Chinese leprosy sufferers to the mainland on condition that the government supported the maintenance of British subjects for a “definite period”.⁵⁰ Either way he acknowledged that the government had a duty of care towards all of the colony’s British subjects.

the Leprosy Commission to India,” in *Economies of Representation, 1790-2000: Colonialism and Commerce*, ed. Leigh Dale, and Helen Gilbert (Aldershot: Ashgate, 2007), 41, 47-48; Jo Robertson, “Leprosy and the elusive *M. leprae*: colonial and Imperial medical exchanges in the nineteenth century,” *História, Ciências, Saúde –Manguinhos* 10, no. S1 (2003): 27-30.

⁴⁶ Cantlie, *Leprosy in Hongkong*, 29-32, 32.

⁴⁷ *Ibid.*, 57-58, 58.

⁴⁸ *Ibid.*, 59.

⁴⁹ *Ibid.*, 59.

⁵⁰ *Ibid.*, 59. He stressed the need to limit the duration of the maintenance “as relatives had a knack of taking annuities long after the legal recipients have passed away.”

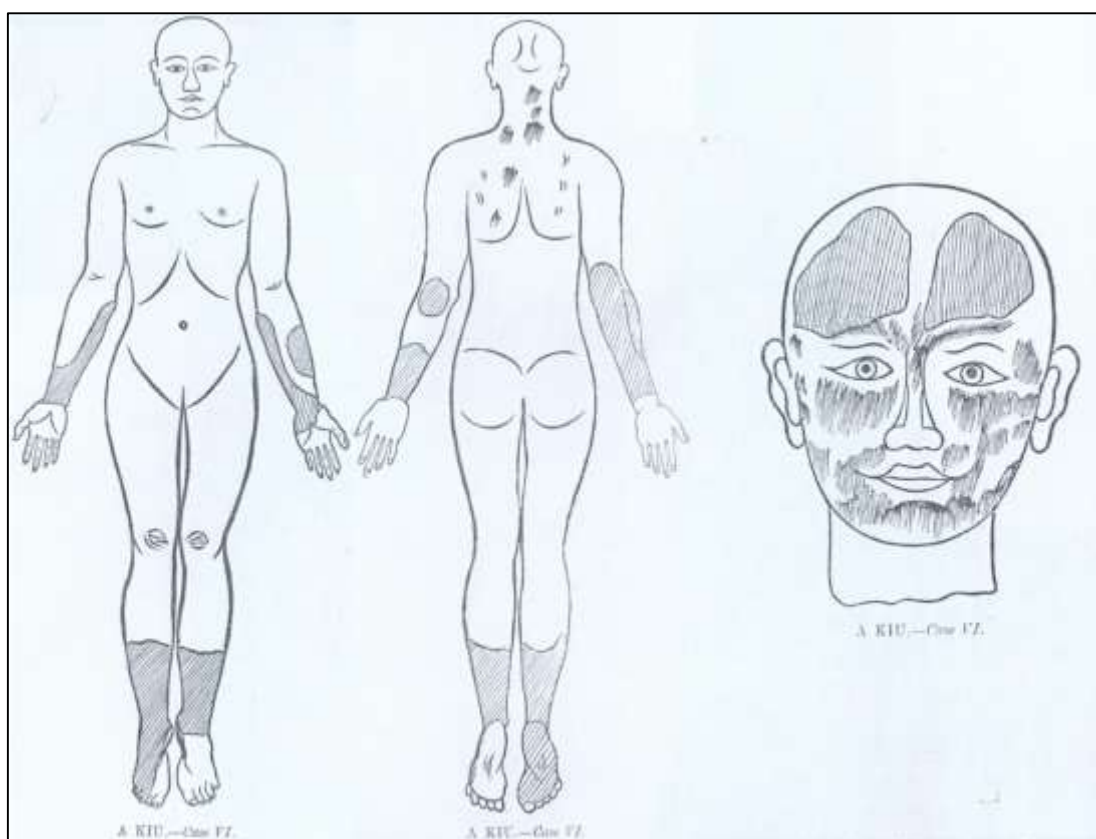


Figure 2. *A Kiu – Case VI.* One of Cantlie’s Leprosy Patients in Hong Kong, ca. 1890.⁵¹

Cantlie’s ideas about prevention underwent a profound change as a result of his increasingly-ambitious research in the region. According to his biographers, he allegedly contacted Sir Joseph Fayrer, a noted British physician, about the possibility of conducting an extensive first-hand survey of leprosaria throughout the Far East.⁵² Though this project never materialised, Cantlie and his wife decided to bring in the New Year by visiting leprosaria in Canton and Macao; his friend Sun Yat-sen accompanied them as an interpreter in Canton.⁵³ Cantlie claimed that the visit provided an ideal opportunity to contrast Chinese and European segregation methods. Following the visit he concluded:

The example of the Chinese leper asylum is the antithesis of what is desirable – money “squeezing”, fornication, vice & corruption sum up the life in this “philanthropic” home. The system – if such [illegible] can be called – instead of being a means of

⁵¹ Ibid., 81-83.

⁵² Neil Cantlie and George Seaver, *Sir James Cantlie: A Romance in Medicine* (London: John Murray, 1939), 72.

⁵³ James Cantlie, “Two leper settlements in China: Canton & Macao”, ca. 1891, MS 1477, Wellcome; Cantlie, ed., *Report*, 63-65, 70-72; Leung, *Leprosy in China*, 155.

arresting the spread of leprosy is, as we have shown, a hot bed for the incubation, growth & spread of leprosy.⁵⁴

By contrast he upheld the settlement in Macao as a model of European methods, because it “fulfils all the requirements; not only is segregation absolute, but celibacy is the law”.⁵⁵ Contemporary international medical discourse advocated sexual segregation as the only means of controlling the disease.⁵⁶ Segregation on Macao was absolute. Not only were the patients confined to an island from which there was “no escape for a leper unless aided by friends”, but the Portuguese authorities had recently established a separate asylum for female patients on a neighbouring island.⁵⁷

Yet the Cantlies’ visit to the European-style leprosarium in Macao was profoundly disturbing. Cantlie reported that some forty men and boys lived on the desolate and isolated island. On arrival the Cantlies found the group at solemn prayer. Whereas Cantlie and his wife had marvelled at the air of joy in the Cantonese settlement, they were deeply troubled by what they saw:

On leaving the Macao settlement we felt depressed & uncommunicative, when we did find our tongues, it was in short sentences expressing how glad we were to be away. We agreed that it was the most depressing sight we had ever seen & believed the vision of the place would haunt us. It was a realisation of what many have tried to depict in fiction. The hopelessness described in *Paradise Lost*, the *Inferno*, or in *Letters from Hell*, was here a reality, a picture of a living inferno.⁵⁸

The experience was so unsettling that the group abandoned its intention of visiting the adjacent island settlement for female leprosy sufferers.⁵⁹ Cantlie and his wife were so moved by their visit that they returned to Macao in the summer to offer free consultations. They also visited the leprosy sufferers on the island of “St. John”, where they distributed provisions and operated on the most afflicted sufferer.⁶⁰ In her biography of her grandparents, Jean Cantlie Stewart claimed that the Cantlies established the settlement on the island of St. John within a few months of their visit to the leprosaria in Canton and Macao. *The China Mail* allegedly “blew” the story” of their involvement that summer. Moreover she cited an address to the Royal Society of Queensland by Cantlie’s friend S. J. B. Skertchly as evidence that this island was actually the island of Cheung Chau, i.e. a small island just off Hong Kong (and, ironically,

⁵⁴ Cantlie, “Two leper settlements in China”, MS 1477, Wellcome. The absence of any segregation of the sexes in this asylum doubtless contributed to the erosion of Cantlie’s doubts about the sexual transmission of the disease. For instance he observed that, “The Cantonese village annuls any possibility of good by allowing free entrance & exit to all and sundry; ... the non-leprous and leprous dwelling alongside each other; marriage & concubinage are allowed; a leper man living with his healthy wife and non-leprous children”.

⁵⁵ Ibid.

⁵⁶ Edmond, *Leprosy and Empire*, 99; Alison Bashford, *Imperial Hygiene: A Critical History of Colonialism, Nationalism and Public Health* (Basingstoke: Palgrave Macmillan, 2004), 83-88.

⁵⁷ Cantlie, “Two leper settlements in China”, MS 1477, Wellcome.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ “Local and General,” *China Mail*, June 27, 1891, 2.

just to the south of Hay Ling Chau).⁶¹ Significantly Stewart implied that the colony's first domestic leprosarium was established in the early 1890s on an island only 10 miles west of Hong Kong Island (map 4).



Map 4. The Islands of Dom João (Blue) and Cheung Chau (Red).⁶²

I disagree with Stewart's identification of the island and I seriously doubt her claims regarding the Cantlies' involvement in establishing a leprosarium. Firstly *The China Mail* article which allegedly 'blew the story' was in fact drawn from *The Macaense*, a newspaper published in Macao. Rather than sensationally revealing the Cantlies' involvement in establishing an island settlement, the article soberly reported that the Cantlies went to the island of "St. John" whilst visiting Macao – visiting Cheung Chau would have been far more convenient from Hong Kong, and doubtless would have been reported by one of the colony's newspapers, such as *The China Mail*, rather than a Macanese newspaper (map 4).⁶³ Secondly neither Cantlie nor any of his colleagues ever mentioned his involvement in establishing a leprosarium of any kind, though it is certainly possibly that he and his wife entertained the hope of doing so.⁶⁴

⁶¹ Jean Cantlie Stewart, *The Quality of Mercy: The Lives of Sir James and Lady Cantlie*, (London: George Allen & Unwin, 1983), 58.

⁶² Source of map: <http://nla.gov.au/nla.map-brsc31>.

⁶³ "Local and General," *China Mail*, June 27, 1891, 2. This article did, however, alarm some of Cantlie's foreign clients in Hong Kong. Cantlie and Seaver, *Sir James Cantlie*, 72-73.

⁶⁴ Although Skertchly did indeed inform the Royal Society of Queensland that there was a "colony of lepers" on Cheung Chau, and that this settlement was distinct from that on a Macanese island, he made no mention of Cantlie's involvement in establishing the settlement. Given that the subject of Skertchly's address was his collaborative research with Cantlie, the absence of any reference to his colleague's relationship with the island is highly suggestive. Skertchly's paper was largely drawn from the chapter that he contributed to Cantlie's monograph. Yet neither he nor Cantlie made any reference to the Cantlies' leprosarium. In all likelihood, Skertchly confused Cheung Chau with the similar-sounding Dom João during his Queensland presentation. Sydney B. Skertchly, "The

The island of St. John was thus in fact Dom João Island, home to the leprosarium for male patients that the Cantlie's had visited earlier that year.⁶⁵ Ultimately James Cantlie's dreams of establishing an asylum envisioned along European lines never materialised, but were instead forever haunted by memories of the 'living inferno'.

Cantlie's collaborative investigation with Skertchly represented his most ambitious investigation into leprosy. In February 1894 news reached him that the National Leprosy Commission had announced a competition for the best reports on the prevalence or diminution of leprosy in different parts of the world.⁶⁶ With less than nine months to complete his assignment, he drafted a circular of nine questions (in English and in French), which he despatched to 383 to European "doctors in general practice, missionary doctors, consuls, mission bodies, customs and commissioners" throughout East Asia, Southeast Asia and the Pacific; he dismissed non-European medical men as ignorant.⁶⁷ Cantlie collated his own observations from his visits to Canton and Macao with the responses that arrived in time and he also appended an extract from his *Leprosy in Hongkong*.⁶⁸ Cantlie's *Report On The Conditions Under Which Leprosy Occurs* was remarkable in its scope, and it was one of only five papers that received the National Leprosy Fund's prize of 50 guineas.⁶⁹

His *Report* held coolies from China's southeastern provinces responsible for spreading leprosy throughout much of the Pacific. Moreover he posited Hong Kong at the epicentre of this pandemic.⁷⁰ Whereas Cantlie's earlier work on Hong Kong had advocated the need for domestic segregation, Cantlie now advocated that "deportation, and not segregation, is the

Ethnography of Leprosy in the Far East," *Proceedings of the Royal Society of Queensland*, no. 13 (1898): 1-22, 7; Sydney B.J. Skertchly, "On the Physical and Ethnological Conditions under which Leprosy Occurs in China, The East Indian Archipelago, and Oceania. Prepared for Mr. Cantlie's Report on Leprosy," in *Report On The Conditions Under Which Leprosy Occurs*, ed. James Cantlie (London: MacMillan and Co., 1897), 157-167.

⁶⁵ Cantlie, ed., *Report*, 70-75; Mora and Soares, "Leprosy in Macao," 721-725, 722.

⁶⁶ Cantlie read the National Leprosy Fund's advertisement in *The British Medical Journal*. Cantlie, ed., *Report*, 5-6; "The National Leprosy Fund," *British Medical Journal*, Jan. 13, 1894, 95.

⁶⁷ Cantlie, ed., *Report*, 9. This approach mirrored the technique that he had used to collect information about Eurasians living throughout the Pacific. His *Report* also mirrored Dr. Thin's reliance on published works including Gordon's *Epitome of the Reports of the Medical Officers to the Chinese Imperial Maritime Customs Service* (1884), as well as Cantlie's own pamphlet *Leprosy in Hongkong*. Thin also elicited responses from medical men, including missionaries, "in China and other parts of the East". James Cantlie, "Enquiry into the life-history of Eurasians", ca. 1888, MS 1499, Wellcome; G. Thin, *Leprosy*, vi, 52-53

⁶⁸ Cantlie, ed., *Report*, 6, 9, 63-65, 70-73, 169-175. The *Report* also included Skertchly's 'On the Physical and Ethnological Conditions under which Leprosy Occurs'. Cantlie, ed., *Report*, 157-167.

⁶⁹ "The Prize Essays of the Leprosy Fund," *British Medical Journal*, Apr. 13, 1895, 831. Cantlie shared extracts of his report with his colleagues in Hong Kong and with the Epidemiological Society in London in December 1897. Hong Kong Medical Society, *Minutes of Meetings*, 13 Apr. 1895; James Cantlie, "On the Physical and Ethnological Conditions under which Leprosy Occurs In China, The Malay Peninsula, The East Indian Archipelago, And The Islands of The Pacific," *Transactions of the Epidemiological Society of London*, no. 17 (1898): 15-40.

⁷⁰ Cantlie, ed., *Report*, 10-12, 174-175.

proper method of dealing with the Chinese leper in (to him) foreign countries".⁷¹ Strikingly the passages he extracted from his earlier pamphlet did not include his discussion on the relative merits of domestic segregation, nor did he repeat his recommendation that the government of Hong Kong should establish its own island 'leper retreat'.⁷² Instead he called on Britain and all the other imperial powers to exert greater control over the migration of Chinese coolies, and specifically drew Hong Kong's attention to the fact that, "If not legally compelled to interfere, surely a moral duty is incumbent upon the ruling power under whose control is the cleansing of this foul region".⁷³ Cantlie's earlier objection to the repatriation of foreign cases of leprosy also seems to have softened. At a meeting of the colony's medical society his peers advised him to admit the "Roumanian woman suffering from 'Anæsthetic Leprosy'" to the Government Civil Hospital because "in all likelihood the Government would take the necessary steps & have her transferred to her own country".⁷⁴ Ultimately the government remained dedicated to its deportation policy and staunch opposition to domestic segregation – a dual policy that Cantlie had once considered ruthless and dishonest, but now wholeheartedly endorsed.⁷⁵

Dual Policy: Au Tau and Deportation

The acquisition of a Chinese village of leprosy sufferers at the turn of the century appeared to mark a shift in the government's management of the disease. With the extension of colonial rule into the New Territories in 1898, Hong Kong unwittingly assimilated a small village of twenty-two leprosy sufferers near Au Tau.⁷⁶ The Governor himself visited this "wretched settlement".⁷⁷ By sheer coincidence the acquisition of Au Tau coincided with the Secretary of State's endorsement of domestic segregation, as recommended by the First International Leprosy Conference (Berlin, 1897).⁷⁸ As Secretary of State, Joseph Chamberlain favoured plans for "regular leper communities where, as far as possible, family life can be

⁷¹ Ibid., 12.

⁷² Ibid., 169-175, 174-175.

⁷³ Ibid., 12, 174. By contrast L. P. Marques, Medical Officer of the Gaol Hospital, argued that the creation of a dispensary in Kowloon would dissuade Chinese leprosy sufferers from migrating to Hong Kong Island, but his suggestion was dismissed. P. B. C. Ayres, *Sessional Papers: The Colonial Surgeon's Report for 1893*, July 11, 1894, HKGRO, 404; P. B. C. Ayres, *Sessional Papers: The Colonial Surgeon's Report for 1894*, Apr. 28, 1895, HKGRO, 515-516.

⁷⁴ Cantlie, *Leprosy in Hongkong*, 59; Hong Kong Medical Society, *Minutes of Meetings*, 16 Dec. 1893. Her fate, as well as that of an Indian case of leprosy, is unclear. Hong Kong Medical Society, *Minutes of Meetings*, 10 June 1892.

⁷⁵ In 1898 for instance, 11 prisoners were discharged from the Gaol and "handed over to the police for deportation from the Colony". J. M. Atkinson, *Sessional Papers: Report of the Principal Civil Medical Officer for 1898*, May 9, 1899, HKGRO, 456.

⁷⁶ J. M. Atkinson (P.C.M.O.) to (Col. Sec.), 19 Apr. 1909, The National Archives, London (hereafter TNA), CO129/356/107, 112.

⁷⁷ H. A. Blake (Governor) to J. Chamberlain (Sec. of State for the Colonies), 5 Feb. 1901, TNA, CO129/304/40, 167.

⁷⁸ For an analysis of the conference and its leading figures see S. S. Pandya, "The First International Leprosy Conference, Berlin, 1897: the politics of segregation," *História, Ciências, Saúde –Manguinhos* 10, no. S 1 (2003): 161-77.

enjoyed, and the atmosphere of home may prevail over that of the prison".⁷⁹ Governor Blake promptly instructed the Public Works Department to erect twelve wooden huts on the hill opposite the sufferers' village; the only other permanent buildings that were erected in the New Territories during this period were seven new police stations, including one at Au Tau. Ostensibly the scheme relocated Au Tau's leprosy sufferers away from a plot of swampy land – at a time, as we shall see in chapter four, when the authorities were investigating the prevalence of malaria-carrying mosquitoes in the New Territories. The move also enabled the authorities to encircle the village with a bamboo fence, though this served primarily to delineate, rather than rigorously segregate, the community.⁸⁰

Blake envisioned the community's continued reliance on the charity of the local Chinese villagers.⁸¹ A newspaper correspondent who visited the site shortly afterwards lamented that the huts actually appeared deserted:

You cannot hustle the East, and even the leper of the East refuses to be hustled into new tracks by a benevolent government... [T]he fresh whitewash showed that this benevolent care for the Au Tau Leper was unappreciated, and the missionary effort of the Hongkong Government in this obscure corner of the King's dominion must be pronounced a failure.⁸²

Despite the community's initial rejection of the government's support, the Government Medical Officer in the New Territories nevertheless paid weekly visits and the group received provisions from the local police station.⁸³ Au Tau thus represented the colony's first domestic government-supported community of leprosy sufferers – a fact that has long since been forgotten. Moreover the village's pre-colonial origins strongly suggest that this asylum originally resembled a "traditional" Chinese asylum.⁸⁴ My research has thus uncovered a unique example of a Chinese leprosarium that lay beyond Leung's tripartite spectrum.

The authorities made no attempt, however, to incorporate the Au Tau settlement into the existing framework for dealing with leprosy sufferers. Between 1899 and 1912, over forty prisoners suffering from leprosy were discharged from the Victoria Gaol and sent to the mainland, at least 8 of whom were specifically sent to a "Leper Home" in Canton.⁸⁵ The

⁷⁹ *Hong Kong Government Gazette*, Sept. 2, 1899, HKGRO, 1444-1447, 1445. The local press summarised Chamberlain's circular. Press coverage of the conference was limited to brief announcements.

⁸⁰ W. Chatham, *Sessional Papers: Report of the Director of Public Works, for the Year 1901*, Dec. 8, 1902, HKGRO, 16; J. H. Stewart Lockhart, *Sessional Papers: Report of the New Territory, for the Year 1901*, Mar. 22, 1902, HKGRO, 567-568, 570.

⁸¹ Blake to Chamberlain, 5 Feb. 1901, CO129/304/40, 167.

⁸² "Lepers in the New Territory: Interesting Particulars," *China Mail*, May 3, 1902, 5.

⁸³ Atkinson to (Col Sec.), 19 Apr. 1909, CO129/356/107, 112; F. H. May (Officer Administering the Government) to the Earl of Crewe (Sec. of State for the Colonies), 10 Sept. 1910, TNA, CO129/368/306, 550. In 1904 the Legislative Council voted \$300 under the heading of "Police – Other Charges" to provide rations for Au Tau's sufferers. *Hong Kong Hansard*, Jan. 1, 1904, HKGRO, 4.

⁸⁴ Leung, *Leprosy in China*, 155-158.

⁸⁵ Of all the annual medical reports on the Gaol Hospital, only Koch's report for 1903 specified that the prisoners were discharged to a "Leper Home" in Canton. See J. M. Atkinson, *Sessional Papers: Report of the Principal Civil Medical Officer, for the Year 1903*, Mar. 30, 1904, HKGRO, 441.

Registrar General's Office and the Tung Wah Hospital also deported thirty-two female leprosy sufferers during this period: two were sent to the Church Missionary Society's Leper Hospital in Pakhoi, four to the Rhenish Leper Asylum at Tungkun, one to the female asylum in Macao, and the rest to their relatives or homes on the mainland (map 5). Hong Kong's relationships with these mainland institutions complicate Leung's tripartite conceptualisation of Chinese leprosaria by highlighting a distinctive sub-set of "missionary" leprosaria that accommodated deported patients. By contrast only five leprosy sufferers were admitted to Au Tau during the first decade of the 20th century (table 2.1). Their unique fate did not, however, represent a new colonial policy: their admission was simply a matter of convenience, all five of them being nearby residents of the Au Tau settlement.

Table 2.1. Leprosy Deportations and Admissions, 1899-1912.⁸⁶

Year	Deported to China from the Victoria Goal	Deported to China by the Registrar General & the Tung Wah Hospital	Admitted to the Leprosy Village at Au Tau
1899		1	
1900			
1901	6	1	
1902	20		
1903	8		
1904	n/a [†]		
1905			
1906			
1907	3		3
1908			2
1909	3		
1910		18	
1911	4	16	
1912		4	

The authorities thus continued to rely primarily on deportation rather domestic segregation. In 1904, for instance, W. V. M. Koch, the medical officer in charge of the Victoria Gaol reported:

It seems a pity that such cases cannot be properly isolated and treated in this Colony, but there seems to be great aversion and fear of this disease among the people, who I understand regard it as highly contagious.⁸⁷

The absence of any reference to the settlement at Au Tau is telling given that Koch had previously served as a temporary medical superintendent in a leprosarium in Trinidad.⁸⁸ The

⁸⁶ Data from the annual reports of the Principal Civil Medical Officer and of the Registrar General.

[†] The precise number of leprosy prisoners deported in this year is unclear as the report simply noted 22 prisoners were "discharged on medical grounds (leprosy, lung disease, &c.)". J. M. Atkinson, *Sessional Papers: Report of the Principal Civil Medical Officer, for the Year 1904*, Feb. 28, 1905, HKGRO, 285.

⁸⁷ Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1903*, Mar. 30, 1904, HKGRO, 441.

⁸⁸ He briefly assumed the post from 12 Aug. to 29 Sept. 1893. W. V. M. Koch to the A. Lyttelton (Sec. of State for the Colonies), 20 Oct. 1903, TNA, CO129/319/502, 489-499, 490b, 499; "Public Health:

government's limited support for the Au Tau leprosy village supplemented rather than supplanted the government's deportation policy.

The official marginalisation of the Au Tau settlement stood in stark contrast to the growth of popular interest in the efforts of European doctors and missionaries in neighbouring Guangdong Province. For instance *The China Mail's* correspondent in Canton encouraged the government in Hong Kong to support the efforts of Dr. Razlag, an Austrian-American missionary who ran a leprosarium in Canton; at least one of his patients was born in the colony.⁸⁹ The correspondent also announced the dedication of a new "Leper Church" next to a Cantonese leprosy village run by Dr. Beattie of the American Presbyterian Mission.⁹⁰ The local press enabled the American Presbyterian Mission to elicit financial and material donations from European and Asian individuals, clubs, schools and communities in Hong Kong, Canton and Macao. Beattie used *The China Mail* as a vehicle to appeal for subscriptions to his 'Canton Lepers' Fund' in the winter of 1903-1904.⁹¹ When the subscription list was re-launched the following winter, the newspaper's editors called on the colony's wealthy Chinese community to match the generosity of their European counterparts.⁹² These donations assuaged popular fears about an influx of contagion by ensuring the continued upkeep of the very institutions that underpinned the colony's deportation policy. Sensational reports of suicidal leprosy sufferers merely served to heighten the sense of 'despair' attendant upon the disease.⁹³ Towards the end of the decade the press also helped raise awareness of, and generate support for, the Rhenish Mission's asylum at Tungkun and a Roman Catholic asylum

Trinidad," *British Medical Journal*, May 27, 1893, 1140; W. V. M. Koch, *Report on Leprosy and the Trinidad Leper Asylum for the Year 1891* (Port of Spain: The Government Printing Office, 1892). Koch renewed his interest in the subject of leprosy, presenting a case of "Leprosy in a young European" at a meeting of the Medical Society followed just over a year later with "a very thorough & exhaustive treatise on Leprosy based on his experiences & researches". Hong Kong Medical Society, *Minutes of Meetings*, 28 Dec. 1906; *Ibid.*, 23 Jan. 1908; *Ibid.*, 27 Feb. 1908.

⁸⁹ "Caring for the Lepers," Canton Notes, *China Mail*, July 12, 1902, 5; Robert M. McWade, review of *Treatment and cure of leprosy in south China*, by Dr. Adolph Razlag, *Public Health Reports* 18, no. 5 (1903): 142-150. Three decades later Razlag sent a copy of his pamphlet *Leprosy in South China* (1902) to the International Settlement's Commissioner of Public Health. A. Razlag to J. H. Jordan (C.P.H., International Settlement of Shanghai), 5 Feb. 1934, Shanghai Municipal Archives (hereafter SMA), U1/16/2619, 35-53.

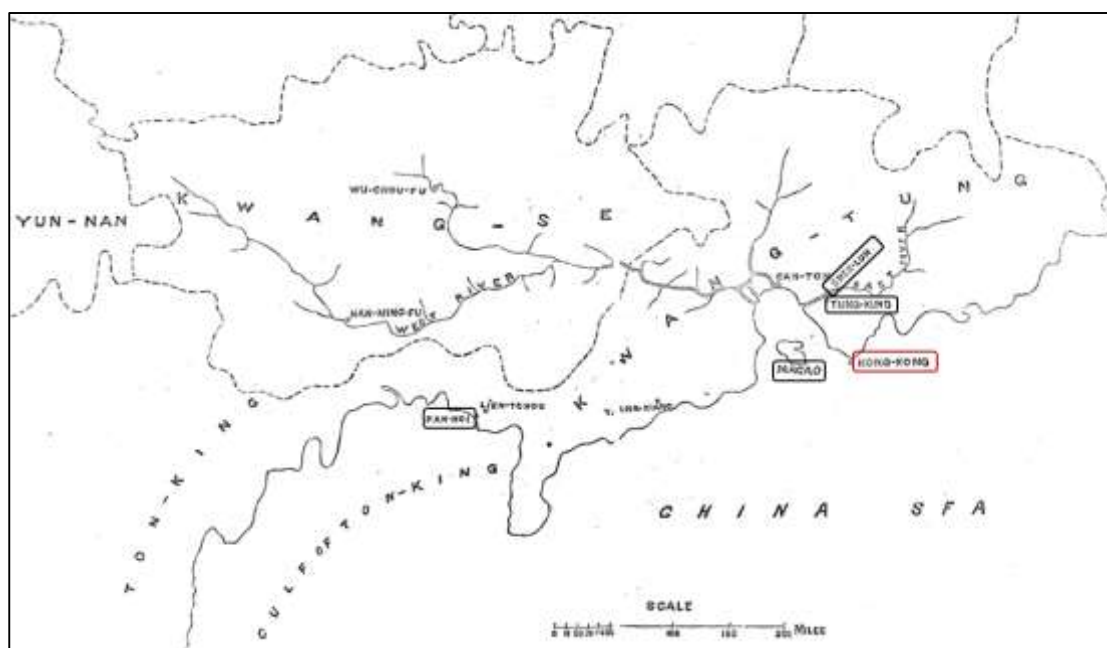
⁹⁰ "A Leper Church," Canton Notes, *China Mail*, July 12, 1902, 5. Dr. Razlag was in attendance.

⁹¹ "The Lepers of Canton: Hundreds Suffering from Want," *China Mail*, Dec. 14, 1903, 4. The closure of the subscription list was postponed by several weeks, and an appeal made to the Chinese community: "So far the wealthy Chinese have been backward in sending in donations, and since the fund is for the alleviation of their suffering kinsmen we think it should have their strong support." "Canton Lepers' Fund: 'China Mail's' Subscription List," *China Mail*, Jan. 30, 1904, 4.

⁹² Andrew Beattie, "The Lepers of Canton: An Appeal for Help," *China Mail*, Nov. 2, 1904, 5. This time *The Hongkong Telegraph* supported Beattie's appeal as well. Similar appeals were made every winter through January 1909. See for example "Leper Relief Work in Canton," *China Mail*, Jan. 8, 1909, 4.

⁹³ "A Leper's Despair," Canton Day by Day, *Hongkong Telegraph*, Sept. 9, 1907, 4.

at Sheklung (map 5).⁹⁴ Hong Kong's popular support for these institutions complicates our understanding of Chinese missionary leprosaria further: as well as distinguishing between those "missionary" models that accommodated deported leprosy sufferers and those that didn't, we should also distinguish between those that received popular support from abroad and those that relied on local donations. Popular interest in the Tungkun asylum evaporated within the space of a few years, possibly as a result of the growth of wartime anti-German sentiment, but the asylum at Sheklung, as we shall see, came to play a major role in the colony's management of the disease.



Map 5. Mainland Leprosaria.⁹⁵

Shift in Policy? The Lepers Ordinance (1910)

The greatest indication that the government was preparing to radically alter the way it managed leprosy sufferers came at the end of the decade. The Second International Leprosy Conference (Bergen, 1909) reaffirmed segregation as the principal method of controlling the disease.⁹⁶ The following year the Legislative Council in Hong Kong drafted "An Ordinance to provide for the segregation and treatment of lepers" (hereafter the 'Lepers Ordinance

⁹⁴ See for instance "The New Leper Asylum at Tungkun: A Worthy Institution," *China Mail*, Sept. 25, 1905, 4; "The Lepers' Priest: Father Conrardy on his Way to Establish Colony For Afflicted," *China Mail*, May 7, 1908, 5.

⁹⁵ P. B. C. Ayres, *Sessional Papers: The Colonial Surgeon's Report for 1896*, Apr. 28, 1897, HKGRO, 460.

⁹⁶ Simone Horwitz, "Leprosy in South Africa: A Case Study of Westfort Leper Institution, 1898-1948," *African Studies* 65, no. 2 (2006): 275. Atkinson (P.C.M.O) was unable to attend the conference but the Colonial Office forwarded his brief report describing the management of the Au Tau leprosy sufferers and the colony's practice of deporting non-resident leprosy sufferers to Canton. Atkinson to (Col. Sec.), 19 Apr. 1909, CO129/356/107, 112; J. M. Green (Colonial Office) to Cox (Colonial Office), 25 Oct. 1910, TNA, CO129/368/306, 548.

(1910)'), allegedly in an effort to align the government's policy with the conference's recommendations.⁹⁷ Only one of the draft Ordinance's fourteen clauses was devoted to the deportation of non-British subjects.⁹⁸ Instead the ordinance formally recognised the settlement at Au Tau as a "leper asylum"; empowered the Governor-in-Council to establish new asylums; and outlined regulations for the management of those institutions.⁹⁹ Thus the ordinance appeared to endorse the domestic isolation of British subjects, irrespective of their ethnicity. Within two months of the Legislative Council's approval of the ordinance, the authorities used the ordinance to appoint the Government Infectious Diseases Hospital at Kennedy Town as "a Leper Asylum".¹⁰⁰ This hospital's designation as an 'asylum' was rather peculiar. Historically this institution served primarily as a hospital for cases of plague. Even as an 'asylum', the hospital continued to admit non-leprosy sufferers, and in much greater numbers, than leprosy patients (table 2.2). This hospital was therefore certainly not a leprosaria in the conventional sense, merely a government-run medical facility that treated (but did not confine) leprosy sufferers.

⁹⁷ *Hong Kong Hansard*, Aug. 4, 1910, HKGRO, 67; *Hong Kong Government Gazette (Supplement)*, Aug. 5, 1910, HKGRO, 308-310; *Hong Kong Hansard*, Aug. 18, 1910, HKGRO, 73-75. The Attorney-General modelled the ordinance on ordinances in Ceylon and Cyprus; as a former member of the Executive Council in Cyprus, he had been responsible for regularly inspecting the island's leprosy asylums.

⁹⁸ *Hong Kong Government Gazette (Supplement)*, Aug. 5, 1910, HKGRO, 308-310, 310.

⁹⁹ *Ibid.*, 308-310, 308.

¹⁰⁰ *Hong Kong Government Gazette*, Oct. 14, 1910, HKGRO, 485; *Hong Kong Hansard*, Sept. 1, 1910, HKGRO, 84-85.

Table 2.1. Returns at the Government Infectious Diseases Hospital at Kennedy Town, 1898-1914.
(R)emaining from previous year, (A)dmissions, and (D)eaths.¹⁰¹

Year	Leprosy			Plague			Smallpox			Cholera			Other		
	R	A	D	R	A	D	R	A	D	R	A	D	R	A	D
1898				n/a	379	310	n/a	70	16				46	2	
1899				n/a	266	85	n/a	37	7						
1900		4	1		107	83	3	18	3				32	1	
1901		1			204	156	1	42	12	15	10		1	1	
1902					94	80	1	17	3	52	33		42	3	
1903					301	176	1	37	7	2	1		28	2	
1904					77	63				5	3		5	4	
1905							n/a								
1906							n/a								
1907		1			16	10	8	1					37	1	
1908		1			3	3	11	2		3	2		41	7	
1909							2	2							
1910		1					9	1		7			2		
1911	1	1					13			1			1		
1912							35	1							
1913							9								

“Leper
Asylum”

These developments nevertheless appeared to formalise the transition that had been under way since the turn of the century. Not only were Au Tau’s leprosy sufferers left unmolested, they were actively supported. Not only was the colonial administration *prepared* to designate additional leprosy asylums within the colony, it actually did so. The proximity of the Government Infectious Diseases Hospital at Kennedy Town to the city of Victoria – the political, economic and social hub of the colony – was surely the harbinger of a positive change in popular and official attitudes towards the disease. In reality, the contrary was true. In forwarding the draft ordinance to the Colonial Office, Francis May, the Officer Administering the Government, openly admitted that, “There is not at present any intention of building a Leper Asylum as it is possible that the provision of such an establishment may not be necessary”.¹⁰² He also declared the government’s intention of dispersing the thirteen remaining Au Tau leprosy sufferers to the mainland by threatening them with confinement in order to precipitate their departure the mainland.¹⁰³ The ordinance was thus primarily intended to empower the government’s deportation policy.

The Colonial Office did not object to the policy in principle but raised concerns about the legislation’s geo-political ramifications. Hong Kong’s recent geo-political expansion complicated the status of those living in the newly-acquired New Territories, *including* the

¹⁰¹ J. Bell, *Sessional Papers: Report of the Acting Principal Civil Medical Officer for the Year 1900*, Jan. 23, 1901, HKGRO, 269.

¹⁰² May to the Earl of Crewe, 10 Sept. 1910, CO129/368/306, 550. He made similar comments during the Legislative Council’s second reading of the bill. *Hong Kong Hansard*, Aug. 18, 1910, HKGRO, 75.

¹⁰³ May to the Earl of Crewe, 10 Sept. 1910, CO129/368/306, 550-551. Inexplicably May’s letter predated the colony’s appointment of the Government Infectious Diseases Hospital at Kennedy Town as a ‘leper asylum’ by just over a month.

leprosy sufferers at Au Tau. The Colonial Office debated whether the authorities in Hong Kong could legally banish lepers discovered in the New Territories, many of whom had spent the last decade living under British rule. One colonial official minuted:

I don't think that a Chinaman resident in the New Territory at the time of the transfer of that territory to H.M.G. is either a "natural-born" or a "naturalized" British subject – but he is a British subject to us – though not so regarded by the Chinese Govt....In view of our controversy with China on the question of the nationality of New Territory Chinaman, it would be a pity to give our case away by banishing a few lepers who – according to our contention – are British subjects.¹⁰⁴

By contrast another official, drawing on Cantlie's *Leprosy in Hongkong*, feared that a leprosarium would lure "alien lepers" to the colony, adding: "healthy Chinese readily associate with and conceal them, so that lepers would enter the Colony and New Territory without difficulty".¹⁰⁵ Ultimately the Colonial Office informed Hong Kong that they objected to "the banishment of a sick person against his will from British territory to China", preferring instead that the ordinance should enable the Governor to deport leprosy sufferers to specific settlements in China.¹⁰⁶

The 'Lepers Amendment Ordinance (1911)' was a hollow compromise. The colonial administration in Hong Kong amended the controversial clause, such that all non-British subjects suffering from the disease were prohibited from entering the colony on pain of deportation.¹⁰⁷ British subjects were to be isolated within the colony, either in an asylum, or else in their own homes providing that the Governor was satisfied that they could provide for their own "effective isolation and medical treatment" (as per the original ordinance).¹⁰⁸ But as far as the colonial authorities were concerned the only "resident lepers", i.e. British Chinese leprosy sufferers, were those living at Au Tau.¹⁰⁹ In 1911 the government demolished the village, including the buildings that it had erected only a decade previously, and forced the thirteen remaining leprosy sufferers to flee to the mainland.¹¹⁰ Subsequent references to the village's destruction by fire absolved the government of closing the settlement.¹¹¹ The colonial administration also rescinded the eighteen-month old appointment of the Government

¹⁰⁴ Colonial Office minute, 24 Oct. 1910, TNA, CO129/368/306, 547b.

¹⁰⁵ Ibid, 548b.

¹⁰⁶ The Earl of Crewe (Sec. of State for the Colonies) to F. H. May (Officer Administering the Government), draft, 4 Nov. 1910, TNA, CO129/368/306, 554.

¹⁰⁷ *Hong Kong Government Gazette*, Feb. 24, 1911, HKGRO, 56.

¹⁰⁸ *Hong Kong Government Gazette (Supplement)*, Aug. 5, 1910, HKGRO, 309.

¹⁰⁹ Atkinson to (Col Sec.), 19 Apr. 1909, CO129/356/107, 112.

¹¹⁰ Hong Kong Government, *Administrative Reports: Medical and Sanitary Reports*, Feb. 18, 1911, HKGRO, 51.

¹¹¹ Hong Kong Government, *Administrative Reports: Medical & Sanitary Report for the Year 1929, 1930*, HKGRO, 20. The fact that Wellington, a medical officer who only arrived in Hong Kong in the late 1920s in order to assume the newly-inaugurated position of Director of the Medical and Sanitary Services, reported that the huts at Au Tau were "discontinued" suggests that the government's role in dismantling the village was never truly forgotten. A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1931, 1932*, HKGRO, 88.

Infectious Diseases Hospital at Kennedy Town as a 'leper asylum'.¹¹² Thus within the space of two years the government abolished all of the colony's existing leprosy settlements, banished all known 'resident' cases, and criminalised any hope of return. Having expelled all known 'sources' of infection, the authorities presumed that any newly-discovered cases would *ipso facto* be non-residents, and would therefore be liable to deportation.

Foreign and International Philanthropy

Popular interest in leprosy was renewed by foreign missionaries during the interwar period. Wartime inflation left many leprosaria struggling to cope with their expenses.¹¹³ Dr. Bradley of the Church Missionary Society's Leper Hospital in Pakhoi therefore attempted to elicit donations from Hong Kong by delivering a lecture on the subject to the Helena May Institute.¹¹⁴ Bradley tried to dispel the commonly-held "peculiar ideas" about leprosy by highlighting the fact that hygienic practices were sufficient to prevent the transmission of the disease. He also contrasted British efforts in India with the Chinese government's total lack of concern for its own leprosy sufferers.¹¹⁵ St. Stephen's Girls' College, Bishop Lander and his wife, and Miss Innes of the Matilda Hospital all responded to Bradley's call for support by donating clothes, medical supplies and money.¹¹⁶ The following year two Cathedral Hall concerts were organised in aid of the Pakhoi Hospital, the former presided over by the colony's Bishop, the latter under the patronage of the Governor's wife.¹¹⁷ Governor Stubbs even forwarded a letter from the Sister in charge of the Hospital describing the institution's successful use of Chaulmoogra oil to the Colonial Office.¹¹⁸ Bradley's lecture did little, however, to dispel rumours about an "invasion" of Cantonese leprosy sufferers seeking refuge in Hong Kong and Macao.¹¹⁹

The Principal Civil Medical Officer's detailed entry on leprosy in his annual report for 1922 bore testament to the increasing official importance accorded to the disease for the very first time. The disease featured in the introduction of this annual report. Dr. Johnson (P.C.M.O.) argued that the best hypothesis explaining the disease's geographical distribution and transmission was the consumption of "imperfectly cured or salted fish" – an outdated theory advocated by the late Sir Hutchinson.¹²⁰ The colony's medical and lay communities were well

¹¹² *Hong Kong Government Gazette*, Mar. 29, 1912, HKGRO, 182.

¹¹³ "The Leper Hospital at Pakhoi: High Exchange Hampers Medical Missions," *China Mail*, Jan. 18, 1918, 4.

¹¹⁴ Lady May, the Governor's wife, founded the institute in 1916 to support women living and working away from home.

¹¹⁵ "Work Among Lepers in China: Dr. Bradley's Work," *China Mail*, Mar. 12, 1919, 4.

¹¹⁶ "Pakhoi Leper Hospital," *Hongkong Daily Press*, Mar. 25, 1920, 4.

¹¹⁷ "Pakhoi Lepers: Successful Cathedral Hall Concert," *China Mail*, Dec. 8, 1921, 4.

¹¹⁸ R. E. Stubbs (Governor) to W. Churchill (Sec. of State for the Colonies), 12 June 1922, TNA, CO129/475/225, 376.

¹¹⁹ *The China Mail* accused the *Morning Post* of scare-mongering. "The Morning Post's Leper Scare," *China Mail*, Nov. 14, 1921, 4.

¹²⁰ Hong Kong Government, *Administrative Reports: Medical Report for the Year 1922, 1923*, HKGRO, 11-13, 11.

aware of Hutchinson's research in India and his 'fish theory'.¹²¹ Indeed in 1904 a member of the Legislative Council had called for the appointment of an enquiry into Hutchinson's hypothesis, but the Acting Colonial Secretary had informed him that the disease was not prevalent in the colony.¹²² By the 1920s, however, Johnson claimed there was sufficient evidence to support the hypothesis, having "seen a fair amount of leprosy in Africa and some in China" himself, though others noted that he did not advance any fresh supporting evidence.¹²³

The widely-proclaimed establishment of an imperial effort to eradicate leprosy drew popular attention to the lack of parallel efforts within the colony. In the summer of 1923 Lord Chelmsford presided over the formation of the British Empire Leprosy Relief Association (B.E.L.R.A.).¹²⁴ The association confidently asserted that a new chaulmoogra oil-based remedy would swiftly eradicate the 'scourge' of leprosy. B.E.L.R.A.'s announcement of a campaign to raise £250,000 to provide better treatment and "to segregate the begging and pauper classes who spread infection" made the front page of several of Hong Kong's newspapers.¹²⁵ The colony's Medical Officer of Health assured the press that there was "nothing to be scared about in Hongkong" as the disease was extremely rare.¹²⁶ But the discovery of a murdered Chinese leprosy sufferer later that year triggered popular concerns about the lack of proper treatment facilities in the colony. Dr. Addison, who succeeded Johnson as P.C.M.O., denied claims that leprosy sufferers mingled freely with other patients in the colony's hospitals, though he conceded that neither the medical nor police authorities could segregate local leprosy sufferers against their will.¹²⁷ Describing the murder as "undoubtedly the crime of some person or persons whose dominant idea was that of self-protection against infection", *The Hongkong Telegraph* called on the government to emulate practices in Manila by providing domestic treatment facilities.¹²⁸ Significantly these discussions (and the murder) came at a critical time for the health authorities:

So much has been said of late regarding the need of a new Government Department charged solely with the care of public health, that we would only add that if such a Department be created, as it should be, the question of the isolation and treatment of leper patients should be one of the first to be considered, in the task of eliminating our past sins of omission.¹²⁹

¹²¹ "Leprosy," Telegrams, *China Mail*, Dec. 1, 1902, 4.

¹²² May, the Officer Administering the Government, cast the deciding vote against the motion. *Hong Kong Hansard*, Mar. 21, 1904, HKGRO, 11-13.

¹²³ Hong Kong Government, *Medical Report for the Year 1922, 1923*, HKGRO, 12.

¹²⁴ "Plan to Eradicate Leprosy," *Hongkong Telegraph*, July 14, 1923, 5.

¹²⁵ "Leprosy Cure: Banishing the Disease in a Generation," *Hongkong Daily Press*, Jan. 28, 1924, 8.

¹²⁶ "Colony's Health," *China Mail*, Feb. 2, 1924, 4.

¹²⁷ "Hongkong Lepers: No Official Provision for Treatment," *Hongkong Telegraph*, Oct. 14, 1924, 1.

¹²⁸ "Leprosy in Hongkong," *Hongkong Telegraph*, Oct. 15, 1924, 6.

¹²⁹ *Ibid.*, 6.

Although the prosecution of a Chinese woman brought the case of the murdered leprosy sufferer to a close, concern about the absence of domestic isolation facilities became more pressing.¹³⁰

The timing of the murder was doubly unfortunate. Just three months later the colony hosted two back-to-back medical conferences during which leprosy prevention and treatment were high on the agenda. Some of the most eminent leprologists participated in a joint meeting of the colony's medical society and the China Medical Missionary Association (C.M.M.A.), including Henry Fowler of Shanghai and Ernest Muir of the School of Tropical Medicine in Calcutta.¹³¹ In his 'A Survey of Leprosy in China', Fowler repeated the well-established claim that leprosy was most widespread in neighbouring Guangdong Province.¹³² *The China Medical Journal* dedicated its July edition to these leprosy presentations; as we shall see in the next chapter, the journal's editor secured an editorial from Dr. Davis, the International Settlement's Commissioner of Public Health.¹³³ The C.M.M.A.'s seventeenth biennial conference, which followed immediately after the joint meeting, included an evening session specifically dedicated to "Leper Administration", chaired by a medical missionary from Canton.¹³⁴ Strikingly neither conference referred to the management of the disease within the colony itself, nor did any of the colony's medical officers play a prominent role in the leprosy proceedings.

The conference provided Rev. John Lake, the founder of the Tai-Kam Leper Colony, with an ideal opportunity to raise the profile of his work. Located on a small island to the west of Macao, and roughly 80 miles from Hong Kong, the colony was established in 1921 with the generous assistance of Wu Ting-fang, the Chinese Minister of Foreign Affairs.¹³⁵ Prior to the conference the colony's Anglophone press had only referred to Lake's leprosarium on a handful of occasions. Lake's offer of a guided tour to Muir, his fellow conference delegate and a figure whom the local press had taken a keen interest in, kindled the press's interest.¹³⁶ *The China Mail*, for instance, published a photograph of a leprosy sufferer along with Lake's interview.¹³⁷ "A Typical Leper" epitomised the plight of Lake's colony (fig. 3). This was the first photograph of a leprosy sufferer ever to have been published in the colony's Anglophone

¹³⁰ "The Leper Murder: Chinese Woman Charged," *Hongkong Telegraph*, Oct. 20, 1924, 1.

¹³¹ *Joint Conference of the China Medical Missionary Association and the British Medical Association (Hong Kong and China Branch). Also the Seventeenth Biennial Conference of the China Medical Missionary Association. Hong Kong University, January 20th to January 28th, 1925* (Hong Kong: South China Morning Post, 1925), 12; "40 Years in China: Interesting Medical Reminiscences," *Hongkong Telegraph*, Jan. 22, 1925, 1.

¹³² Henry Fowler, "A Survey of Leprosy in China," *China Medical Journal* 39, no. 7 (1925): 584-590, 585, 590.

¹³³ C. Noel Davis, "Leprosy," *China Medical Journal* 39, no. 7 (1925): 632-634.

¹³⁴ *Joint Conference*, 23; "Proceedings of the C.M.M.A. Conference: Hongkong, January, 1925," *China Medical Journal* 39, no. 3 (1925): 250.

¹³⁵ "Leper Colony For Canton: Site to Be Selected," *Hongkong Telegraph*, Oct. 25, 1921, 5; Wang Eu-Kam, "Dr. Wu Ting-Fang and the Tai-Kam Leper Colony," *Leper Quarterly* 2 (1927): 22-25.

¹³⁶ "Among Lepers: Island Settlement Near Hongkong," *China Mail*, Jan. 31, 1925, 1. For the press's coverage of Muir see "Watch Your Nails: Medical Congress Advice," *China Mail*, Jan. 23, 1925, 1.

¹³⁷ "Among Lepers," *China Mail*, Jan. 31, 1925, 1.

press.¹³⁸ For many of the colony's residents, this was probably the very first leprosy sufferer that they had ever paused to look at. The image's prominence on the front-page ensured that the pitiable condition of China's leprosy sufferers was inescapable. Whilst Tai-Kam was never officially incorporated into Hong Kong's deportation policy, the colony nevertheless maintained important informal links with Tai-Kam's leprosy sufferers through the early 1930s.



Figure 3. A Typical Leper.¹³⁹

Caring for Hong Kong's Chinese British Lepers

The growing disparity between international efforts to eradicate leprosy and the lack of treatment facilities within the colony ensured that the situation was ripe for change. The seeds of change were initially sown by the Americans, but harvested by the Chinese. In April 1926 William Danner, the General Secretary of the American Mission to Lepers, visited the colony as part of his tour of southern China.¹⁴⁰ At a luncheon hosted by "a body of young Chinese professional and business gentlemen interested in cultural and social matters", Danner urged the establishment of a local auxiliary of the recently-established Chinese Mission to Lepers (C.M.L.).¹⁴¹ Headquartered in the Chinese city of Shanghai, the C.M.L. hoped to improve the plight of China's leprosy sufferers by actively supporting leprosaria, leprosy clinics and dispensaries throughout the country. *The China Mail* endorsed Danner's recommendation:

¹³⁸ The colony's Anglophone press only published four different photographs relating to the subject of leprosy prior to the Second World War. Two showed the buildings at Tai-Kam, whilst the fourth picture depicted a doctor treating a young patient, probably in Shanghai. "South China Leper Colony: First Buildings Now Erected," *Hongkong Telegraph*, June 16, 1928, 3, 9; "Treatment of Leprosy: Latest Methods for China," *Hongkong Daily Press*, Apr. 28, 1938, 8.

¹³⁹ "Among Lepers," *China Mail*, Jan. 31, 1925, 1. This paper reprinted the photograph later that year, again on the front-page. "Curing Leprosy: How to Deal with the Disease," *China Mail*, Nov. 7, 1925, 1.

¹⁴⁰ His visit included trips to the leprosy asylums at Tai-Kam, Sheklung, and Macao. "New Hope: Work Among South China's Lepers," *China Mail*, Apr. 13, 1926, 1.

¹⁴¹ "Leper Work: A Hongkong Auxiliary," *China Mail*, Apr. 16, 1926, 6.

Should a local auxiliary be formed it should prove but another instance of the possibility of Chinese and foreigners combining in a common effort that has nothing to do with race, colour or creed; but sets itself to relieve the sufferings of those unable to help themselves.¹⁴²

Within months of the Mission's establishment Rev. T. C. Wu, the Mission's first General Secretary, embarked on a four-month tour of south-eastern coastal China with the specific aim of establishing auxiliaries in Swatow (Shantou), Canton, Hong Kong, Amoy and Foochow (Fuzhou).¹⁴³ He took advantage of his trip to visit the leprosy asylums at Sheklung, Tungkung and Tai-Kam – the latter through the assistance of his former classmate General Chiang Kai-shek – before travelling to Hong Kong.¹⁴⁴ Wu elicited donations from several schools and Chinese congregations in the colony.¹⁴⁵ More importantly, he announced the establishment of the Hongkong Auxiliary of the Chinese Mission to Lepers.

The Hongkong Auxiliary of the Chinese Mission to Lepers played a pivotal role in challenging the government's management of the disease. The organising committee consisted almost exclusively of members of the Chinese and Eurasian elite (fig. 4).¹⁴⁶ For instance Li Chor-chi of the Ho Hong Bank served as the Auxiliary's chairman from its establishment until his death in March 1940.¹⁴⁷ The Auxiliary's primary objective was to support mainland leprosaria by remitting local donations to the Shanghai headquarters of the Chinese Mission to Lepers.¹⁴⁸ Li Chor-chi initially reported that, "It is hard to get anything here from individuals, so we are relying on such clubs and societies which give regularly to charity".¹⁴⁹ The Auxiliary hosted popular fund-raising events, including cinema performances and charity concerts, and also raised donations through the colony's schools; the Auxiliary's Secretary, Prof. Andrew Ling, was headmaster of St. Stephen's College for Boys.¹⁵⁰ From 1929

¹⁴² "Leprosy," *China Mail*, Apr. 21, 1926, 6.

¹⁴³ T. C. Wu, "A Report of My Trip to South China," *Leper Quarterly* 1 (1927): 13-28, 13.

¹⁴⁴ *Ibid.*, 15-21; "Work Among The Lepers: Visit of Rev. T.C. Wu From Shanghai," *Hongkong Daily Press*, June 11, 1926, 6.

¹⁴⁵ Wu, "A Report of My Trip to South China," 21-22; "Work Among The Lepers: Mission in Need of Financial Assistance," *Hongkong Daily Press*, June 14, 1926, 5; T. C. Wu, "Editorial," *Leper Quarterly* 1, no. 1 (1927): 3.

¹⁴⁶ The organising committee consisted of Li Chor-chi, Chinese secretary of the Ho Hong Bank (Chairman of the Auxiliary), Lo Po-yin of the Bank of China (first Vice-Chairman), Mrs Wang Kwoh-Shuen, wife of the manager of the National and Commercial Savings Banks (second Vice-Chairman), Mrs Ma Wing-chan, wife of the manager of the Sincere Co. (Treasurer), Prof. Andrew Ling, Chinese headmaster of St. Stephen's College for Boys (Secretary), Mr Wong Hin-chiu (Publicity Agent), Miss T.H. Shin, Mrs Wong See Koo, Miss Wong Shuet Hing, Dr. Arthur Woo of the Rotary Club, Andrew Cheung, Cheung Wing Kue, James Y. Lee, the brother of William Y. Lee, the first president of the Chinese Mission to Lepers, and Mr. John Geldart (Honorary Adviser). Wu, "A Report of My Trip to South China," 23-24; "Chinese Mission to Lepers: Hongkong Auxiliary Formed," *Hongkong Daily Press*, June 22, 1926, 5.

¹⁴⁷ "News Brevities," *Leper Quarterly* 14, no. 2 (1940): 114. The Auxiliary ceased functioning with Li's death. "News Brevities," *Leper Quarterly* 15, no. 4 (1941): 146.

¹⁴⁸ "Hongkong Auxiliary Formed," *Hongkong Daily Press*, June 22, 1926, 5.

¹⁴⁹ Li Chor-chi, letter to the editor, *Leper Quarterly* 2, no. 3 (1928): 40-41, 41.

¹⁵⁰ "Charity Performances: In Aid of the Mission to Lepers," *Hongkong Telegraph*, Nov. 25, 1926, 2; "Leper Mission: Concert in St. Stephen's Girls' College," *China Mail*, June 7, 1929, 6; "Mission to Lepers: Subscription List," *China Mail*, July 8, 1926, 12.

these events focused on supporting Lake's Tai-Kam leprosy asylum. For instance the colony's support enabled the appointment of a trained medical doctor.¹⁵¹ Li Chor-chi and Lake organised a guided tour of the asylum for a group of Hong Kong's and Canton's European and Chinese elite including: Dr. S. W. Ts'o (O.B.E.), a Chinese member of the Legislative Council and a patron of the Auxiliary, as well as his wife and daughter; Dr. Clifts, Visiting Medical Officer to the Chinese hospitals in Hong Kong; and Dr. W. W. Cadbury, Superintendent of the Canton Hospital.¹⁵² In thanking Rev. Lake on the guests' behalf, Ts'o "stressed that in view of the large number of lepers in South China people interested public welfare should take deep interest in the treatment of lepers and their isolation in properly designated places".¹⁵³



Figure 4. *Board of Directors, Hongkong Auxiliary, ca. 1927.*¹⁵⁴

The establishment of the Chinese Mission to Lepers and the Hongkong Auxiliary profoundly challenged the colonial government's reluctance to establish domestic facilities for the isolation of leprosy sufferers. Previously, local support for international philanthropic organisations such as the American Mission to Lepers and B.E.L.R.A. was limited to the European and Chinese elites in Hong Kong. By contrast the Chinese Mission to Lepers appealed to the Chinese inhabitants of both the mainland *and* the neighbouring territories. The Auxiliary did not contest deportation and segregation as a means of treating leprosy sufferers. Instead they contested the indiscriminate deportation of *all* Chinese leprosy

¹⁵¹ Rev. Lake attended the concert at the Stephen's Girls' College Hall in June 1929. "Leper Mission on Tai Kam: Beautiful Wooded Spot," *Hongkong Daily Press*, June 10, 1929, 4; T. C. Wu, "A Review of the Year's Work," *Leper Quarterly* 3, no. 1 (1929): 3.

¹⁵² "Tai Kam Leper Colony: Visiting Party Returns," *Hongkong Daily Press*, June 25, 1934, 9. Ts'o and Sir Shou-son Chow (Kt. C.M.G.) were patrons of the Auxiliary. "Lepers' Mission: Benefit Concert a Success," *China Mail*, June 10, 1929, 11.

¹⁵³ "Leper Colony at Tai-Kam: Local Residents Make Survey," *China Mail*, June, 25, 1934, 8.

¹⁵⁴ Li Chor-chi, the Auxiliary's chairman, is seated in the middle. *Leper Quarterly* 1, no.1 (1927).

sufferers, irrespective of whether they were British subjects or not. The Auxiliary's proactive stance threw a critical light on the colonial government's passive attitude. In the Mission's bilingual mouthpiece, *The Leper Quarterly*, Jonas A. Lee, a former leprosy sufferer in the Pakhoi asylum, lamented:

The Government [in Hong Kong] is at present adopting on the one hand, an unconcerned, "let-things-go" sort of attitude, while, on the other, is trying to keep the Colony respectable without incurring whatever expense by passing the great economic, sanitary, social and vexing leper problem on, by declaring the Colony a forbidden land to lepers.¹⁵⁵

Lee saw the establishment of the Hong Kong Auxiliary as "truly magnificent and congratulatory" and he suggested that the establishment of a domestic leprosarium, possibly in the New Territories, would "serve as a salutary [*sic*] incentive to more serious endeavours on the part of the Chinese in the Republic".¹⁵⁶ The *South China Morning Post's* editorial sympathised with Lee's concerns, but argued that "all charitable efforts in the Colony are menaced with abuse" by immigrants from the mainland.¹⁵⁷ The trope of the leprous mendicant from the mainland and the colonial El Dorado thus continued to underpin the colony's objection to domestic treatment facilities almost forty years after the publication of Cantlie's pamphlet on Hong Kong.

Internal calls for reform inadvertently entrenched the government's deportation policy by formalising the colony's relationship with a mainland leprosarium. In July 1930 M. K. Lo, a prominent Eurasian lawyer and member of the Sanitary Board, questioned the Board about the colony's management of leprosy.¹⁵⁸ The Board's president stated that whilst a few "British subjects" had been treated in the colony's hospitals, "Chinese subjects are removed by the Police to Canton where they are handed over to the local police".¹⁵⁹ Significantly Lo's questions came just over a month after the local press had reported on a court case against a deported "leper mendicant" that exemplified the impossibility of enforcing the deportation policy.¹⁶⁰ But the newly-appointed Director of the Medical & Sanitary Services countered Lo's recommendation that the colony should establish a domestic leprosarium.¹⁶¹ Having visited the leprosy asylums at Tai-Kam and Sheklung the year before, Wellington suggested that the

¹⁵⁵ J. A. Lee, "Hongkong and the Leper War," *Leper Quarterly* 2, no. 1 (1928): 20.

¹⁵⁶ *Ibid.*, 21, 23.

¹⁵⁷ The editorial did, however, concede that Hong Kong's reliance on the deportation policy precluded it from contributing to global efforts to eradicate the disease. "Leprosy in Hongkong," *Leper Quarterly* 2, no. 1 (1928): 28-30, 28.

¹⁵⁸ His motion made front-page news. "Hongkong's Leper Problem: Batch of Questions for Sanitary Board," *Hongkong Telegraph*, July 7, 1930, 1; "Leprosy in the Colony: Facilities for Treatment and Cure?," *China Mail*, July 7, 1930, 1. Lo Man Kam was the son-in-law of Sir Robert Ho Tung. Chan Wai Kwan, *The Making of Hong Kong Society: Three Studies of Class Formation in Early Hong Kong* (Oxford: Clarendon Press, 1991), 115.

¹⁵⁹ "Local Lepers: Sanitary Board Meeting Questions," *Hongkong Telegraph*, July 9, 1930, 2. He reported that the police had deported 237 leprosy sufferers that year.

¹⁶⁰ "Leper Mendicant Problem: Man Who Will Persist In Returning," *Hongkong Telegraph*, May 30, 1930, 7.

¹⁶¹ "Local Lepers: Sanitary Board Meeting Questions," *Hongkong Telegraph*, July 9, 1930, 2.

government should enter into negotiations with the latter for the transfer of “Hongkong lepers”.¹⁶² Wellington’s suggestion represented an important shift towards a more coherent official deportation policy – one that relied on a single mainland leprosarium.

As previously noted the colony’s Anglophone press provided a medium for eliciting popular colonial support for the Sheklung asylum during the early 20th century. The press had demonstrated a keen interest in the Sheklung asylum’s early development and in its founder, the Belgian Father Conrardy. A close friend of Father Damien – the Belgian missionary who famously succumbed to the disease whilst working in the Molokai leprosarium in Hawaii – Conrardy had originally hoped to develop the asylum along the same lines as Molokai.¹⁶³ Conrardy’s successor, Father Deswazières highlighted the parallels between the two institutions, going so far as to claim, “There is no other Leper Asylum in the world to which it may be compared, except that of Molokai, whose daughter it is”.¹⁶⁴ But Sheklung’s foreign missionaries were forced to make concessions to the Republican authorities in the absence of support from the French government. Consequently the Republican government sent the first “assignment of lepers”, some 700 men and women, in the autumn of 1913.¹⁶⁵ The institution rapidly developed into the largest leprosarium in China, housing more than a 1,000 patients in the early 1920s. But its reliance on the local Cantonese authorities left the institution vulnerable to political instability, and the foreign missionaries regularly appealed for donations from abroad.¹⁶⁶ Moreover as a Catholic leprosarium, the Sheklung asylum received only a limited degree of attention and support from the Protestant Chinese Mission to Lepers.¹⁶⁷ Wellington’s proposal to support the Sheklung asylum therefore came at a crucial moment for the institution.

The government’s support for the Sheklung asylum marked an important shift in the colony’s deportation policy. Prior to the 1930s the government had largely ignored the question of ‘British Chinese’ leprosy sufferers. Now they were incorporated into the government’s deportation policy and uniquely maintained in a mainland leprosarium through an unprecedented annual grant. The Legislative Council approved a grant of \$5,000, though the asylum did not receive the sum until the following year “owing to retrenchment” in Hong Kong.¹⁶⁸ Previously the authorities had only ever paid for the maintenance of a single Chinese leprosy sufferer in a mainland institution, principally because he had been a “Hong Kong

¹⁶² Hong Kong Government, *Medical & Sanitary Report for the Year 1929, 1930*, HKGRO, 21; A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1930, 1931*, HKGRO, 23. The asylum’s proximity to the Kowloon-Canton railway informed Wellington’s selection of Sheklung over Tai-Kam. Leung, *Leprosy in China*, 169.

¹⁶³ Leung, *Leprosy in China*, 166-167.

¹⁶⁴ G. Deswazières, *With the Chinese Lepers at Shek-lung, Kwangtung, China* (Hong Kong: Nazareth Printing Press, 1925), 3-5, 19.

¹⁶⁵ Leung put the figure at 750. *Ibid.*, 166-168, 167.

¹⁶⁶ Leung, *Leprosy in China*, 168.

¹⁶⁷ *Ibid.*, 161. *The Leper Quarterly*, the Mission’s bilingual mouthpiece, included far more articles and photographs on Protestant leprosaria in the region, such as Tungkung, Pakhoi and Tai-kam.

¹⁶⁸ *Hong Kong Hansard*, Sept. 3, 1931, HKGRO, 92.

Government employee".¹⁶⁹ Wellington subsequently affirmed that an "actual liability" rested on the government for the maintenance of "British Chinese lepers".¹⁷⁰ Moreover he reported that 70 British Chinese leprosy sufferers, roughly equivalent to a tenth of the asylum's population, had been deported to Sheklung in the early 1930s.¹⁷¹ The colonial authorities in Hong Kong approved annual grants of \$2,500, and later \$4,000 during the mid-1930s.¹⁷² Popular fund-raising events, such as a bridge, mah-jong & whist afternoon in a local church hall supplemented the government's financial support for Sheklung.¹⁷³ According to Leung the colony's support soon accounted for almost 80% of the asylum's revenue.¹⁷⁴ This annual grant-in-aid therefore formally tied the colony to a mainland institution, though the grant itself bore little correlation to the number of deported leprosy sufferers.

The colonial authorities detained leprosy sufferers "until a certain number had been collected" and then conveyed them to Sheklung "in a special [railway] coach or a portion of a special coach" which was disinfected before being put back into regular service.¹⁷⁵ A "responsible person", presumably a member of the police or medical department, accompanied Hong Kong's leprosy sufferers on their journey; the Railway Ordinance of 1909 prohibited leprosy sufferers from travelling by themselves.¹⁷⁶ The Public Health Department in the International Settlement of Shanghai similarly 'escorted' leprosy patients by train to the Church Missionary Society's Hospital in Hangzhou during the first half of the 1930s. As we shall see in the next chapter, the International Settlement's support for a mainland leprosarium was calculated to the day for every single Settlement patient.

The government's support for the Sheklung Asylum failed, however, to placate the Sanitary Board. Lo once again motioned for the government to review its objection to the establishment of a domestic leprosarium.¹⁷⁷ For the first time criticism was levelled at the trope of the leprous mendicant from the mainland as an excuse:

I am aware of the stock argument against the provision of any asylum for lepers in the Colony. It is suggested that all the lepers from Kwangtung would flock to it. But is this really a valid argument for not providing reasonable facilities in the Colony for the

¹⁶⁹ Unfortunately no details about this patient have survived. *Hong Kong Hansard*, Sept. 3, 1931, HKGRO, 92.

¹⁷⁰ *Hong Kong Hansard*, Oct. 1, 1931, HKGRO, 104.

¹⁷¹ Wellington, *Medical & Sanitary Report for the Year 1931, 1932*, HKGRO, 30.

¹⁷² The annual grant was raised for 1936. *Hong Kong Hansard*, Sept. 12, 1935, HKGRO, 168-169.

¹⁷³ "Sheklung Lepers' Fund: Further Bridge & Whist Drives To Be Held," *China Mail*, Apr. 6, 1935, 12.

¹⁷⁴ Leung, *Leprosy in China*, 168.

¹⁷⁵ (Gen. Mgr., Railway) to P. S. Selwyn-Clarke (D.M.S.S.), 29 July 1949, HKPRO, HKRS48/1/204.

¹⁷⁶ *Hong Kong Government Gazette*, Sept. 2, 1910, HKGRO, 376. Individuals suffering from other infectious or contagious diseases were only permitted to travel if a) they reserved a private compartment, b) they remained segregated from all passengers and staff and c) due precautions were taken to prevent contagion. Leprosy sufferers were not exempted, and whenever one "recognised as such is found on the train", they were to be handed over to the police. (Gen. Mgr, Railway) to Selwyn-Clarke, 29 July 1949, HKPRO, HKRS48/1/204.

¹⁷⁷ "Sanitary Board: Motion for the Review of the Leper Problem," *Hongkong Telegraph*, Aug. 27, 1934, 5.

segregation, treatment and cure of lepers, especially as regards those who have been resident in the Colony for a substantial period?¹⁷⁸

In contrast to the negative reception that Lo's motion had received four years earlier, all but one unofficial board member supported his proposal. Dr. Li Shu-Fan, for example, argued that the indiscriminate segregation of leprosy sufferers induced the concealment of cases. He added that unless they were "treated humanely and scientifically as is being done elsewhere such as in India and the Phillipines [*sic*] we are not doing our duty".¹⁷⁹ A combination of humanitarian concern and anxiety underpinned the Board's support for Lo's motion. The temporary detention of leprosy sufferers in the Tung Wah Infectious Diseases Hospital at Kennedy Town, pending their transfer to Sheklung by rail, alarmed the Board's members. One member, for instance, reported that as a Justice of the Hospitals he had drawn the Tung Wah Directors' attention "to the improper housing of lepers with other patients", but lamented that leprosy sufferers had been sent to the Tung Wah Infectious Diseases Hospital ever since.¹⁸⁰ Admissions to the Chinese Hospitals certainly appeared to be on the increase (table 2.3). Lo's motion also received the support of the Legislative Council, most notably from Dr. Ts'o, who had recently joined the group of prominent European and Chinese residents from Hong Kong and Canton on Lake's guided tour of the Tai-Kam asylum.¹⁸¹ The government finally relented, appointing a four-man committee consisting of Wellington (D.M.S.S.), the Secretary for Chinese Affairs, Lo and Li Chor-chi, chairman of the Hongkong Auxiliary, to investigate the matter.¹⁸²

Table 2.2. Return of Leprosy Admissions and Deaths, 1928-35.¹⁸³

	Government Hospitals			Chinese Hospitals		
	Admissions	Total Treated	Deaths	Admissions	Total Treated	Deaths
1928	10	10	0	7	7	0
1929	15	15	3	5	5	1
1930	12	13	0	1	1	0
1931	15	17	0	3	3	0
1932	21	21	6	14	14	1
1933	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
1934	9	12	0	25	27	1
1935	3	5	0	21	21	2

¹⁷⁸ "Government and the Leper Problem: Strong Criticisms by Members of the Sanitary Board," *Hongkong Daily Press*, Aug. 28, 1934, 7.

¹⁷⁹ *Ibid.*, 7.

¹⁸⁰ *Ibid.*, 7.

¹⁸¹ *Hong Kong Hansard*, Sept. 27, 1934, HKGRO, 165, 168; "Unofficials Criticise High Cost of Administrative Machine: Lepers in the Colony," *Hongkong Daily Press*, Sept. 28, 1934, 10.

¹⁸² Hong Kong Government, *Administrative Reports: Annual Medical Report for the Year ending 31st December, 1934, 1935*, HKGRO, 38.

¹⁸³ Data from annual medical reports. 'Total Treated' includes new admissions and patients remaining from previous year. The Government Hospitals consisted of the Queen Mary Hospital, the Civil Hospital, the Victoria Hospital, the Mental Hospital, the Kowloon Hospital, the Tsan Yuk Hospital and the Kennedy Town Hospital. The Chinese Hospitals consisted of the Tung Wah Hospital, the Tung Wah Eastern Hospital and the Kwong Wah Hospital.

Shift in Policy? Lepers Ordinance (1935)

The four-man committee's report appeared to prompt a fundamental shift in the colony's management of the disease. With the assistance of Dr. James Maxwell, and Professor Dr. B. Nocht, formerly the President of the 1930 International Commission on Leprosy, the committee estimated that there were between 800 and 1,000 leprosy sufferers within the colony, though they were "conscious that any estimate must be almost purely conjectural".¹⁸⁴ Tellingly popular revulsion informed the committee's recommendations just as much as contemporary medical thought:

It might seem attractive simply to recommend the complete repeal of Ordinance No.24 of 1910 [the 'Lepers Ordinance (1910)'] and to allow leprosy to take its chance like tuberculosis, the infectivity of which is much greater. But the revolting nature of the disease in its advanced stages and the horror with which it is commonly regarded seem to us to call for some special legislation alike for the protection of the public from distressing spectacles and still more for the amelioration of the leper's own unhappy lot.¹⁸⁵

The committee therefore recommended that a missionary or philanthropic organisation should establish a small leprosy asylum in the New Territories. This recommendation ran contrary to the entrenched belief that the provision of domestic facilities would turn the colony into an El Dorado for destitute leprosy sufferers from the mainland. The committee was confident, however, that a residency clause of three years, "regardless of the question of British nationality", would ensure that only "genuine residents" were admitted.¹⁸⁶ Non-residents were to be summarily deported. Moreover the committee conditioned its support for voluntary rather than compulsory segregation by suggesting that the Director of Medical and Sanitary Services (i.e. Wellington) should be granted the discretion to legally enforce the segregation of advanced, destitute cases: "in this we are equally influenced, as above, by the rights of the public to be spared the distressing sight of lepers in the streets".¹⁸⁷

The committee's report informed the drafting of new legislation which not only repealed the 'Lepers Ordinance (1910)', but appeared to mark a new era by sanctioning domestic leprosaria. Officially the 'Lepers Ordinance (1935)' moved "away from the idea that a leper settlement or asylum is to be regarded as a prison and regards it instead as a centre for treatment and as a retreat for severe cases or those who are deserted by their relatives".¹⁸⁸ The Colonial Office not only approved the ordinance, but considered using it as a model for Malaya.¹⁸⁹ Four months after the ordinance was approved delegates from all over China, including twelve from Shanghai, gathered for the Chinese Mission to Lepers' Second National

¹⁸⁴ N. L. Smith et al., *Sessional Papers: Report of the Committee on Lepers*, Jan. 11, 1935, HKGRO, 1.

¹⁸⁵ *Ibid.*, 2.

¹⁸⁶ *Ibid.*, 2.

¹⁸⁷ *Ibid.*, 2.

¹⁸⁸ *Hong Kong Hansard*, May 16, 1935, HKGRO, 104. William Y. Lee, the first president of the Chinese Mission to Lepers, repeated this statement in his article for the Mission's bilingual journal. Wm. Yinson Lee, "Hongkong Plans to Care for Lepers," *Leper Quarterly* 9, no. 2 (1935): 238-240.

¹⁸⁹ J. S. Calder to Duncan and Cowell, 31 May 1938, TNA, CO129/554/16, 4.

Leprosy Conference (Canton, 1935).¹⁹⁰ The Mission explained that the primary reason for hosting the conference in Canton was “to call the attention of the authorities of South China to the grave situation of leprosy in their territory”.¹⁹¹ Although this critical international spotlight focused primarily on mainland China, Hong Kong and Macao were also under scrutiny by sheer dint of their proximity.¹⁹² Whereas the subject of Hong Kong was markedly absent from the joint medical conferences that the colony had hosted in 1925, as well as from the C.M.L.’s First National Leprosy Conference (Shanghai, 1932), this time the colony took to the stage. Wellington informed his fellow conference delegates that the colony’s leprosy legislation had been “radically changed” with the introduction of a new ordinance that provided for “the same sympathetic treatment of lepers as in the case of tuberculosis”.¹⁹³ He also announced that the colony planned to establish a leprosarium that would “adequately provide for all lepers within the Colony”.¹⁹⁴ The president of Chinese Mission to Lepers referred to the Ordinance as an “encouraging” sign.¹⁹⁵

In reality the ‘Lepers Ordinance (1935)’ drew heavily on the old ordinance, whilst efforts to establish a domestic leprosarium soon faltered. For instance, the Governor-in-Council retained the power to appoint leprosy asylums or hospitals; to enact regulations concerning their management; and to banish alien leprosy sufferers.¹⁹⁶ Obsolete clauses, such as the reference to the Au Tau settlement, were dropped.¹⁹⁷ The ‘radical’ changes were limited to the inclusion of a clause detailing the appointment of visiting justices of the peace and the removal of the prohibition against the establishment of private asylums. The latter change was motivated by the government’s desire to relegate the responsibility of establishing and managing a domestic leprosarium to a missionary or philanthropic organisation.¹⁹⁸ The

¹⁹⁰ *Hong Kong Government Gazette*, June 14, 1935, HKGRO, 649-650; *Hong Kong Government Gazette*, Sept. 27, 1935, HKGRO, 990; “Delegates of the Second National Leprosy Conference,” *Leper Quarterly* 9, no. 4 (1935): 288-290. The Shanghai delegates included Drs. D. G. Lai, J. L. Maxwell, Szeming Sze, F. C. Yen and Rev. Wu. Also in attendance was Dr. Lee Huizenga, an American missionary who worked at Jukao in Kiangsu province during the 1920s and early 1930s before moving to Shanghai.

¹⁹¹ “The Second National Leprosy Conference,” *Leper Quarterly* 9, no. 4 (1935): 287-288, 287.

¹⁹² Macao’s Director of Health and Sanitation discussed the evolution of Macao’s management of the disease since the 15th century. “Leprosy in China,” *Leper Quarterly* 9, no. 4 (1935): 294-298, 295. See also bibliography.

¹⁹³ *Ibid.*, 297. Indeed in his annual report for 1935 Wellington reported “the net result of the 1910 act was to make the position worse than it was before”. A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1935*, 1936, HKGRO, 38.

¹⁹⁴ “Leprosy in China,” 297.

¹⁹⁵ F. C. Yen, “President’s Opening Address,” *Leper Quarterly* 9, no. 4 (1935): 299-300, 300.

¹⁹⁶ The Draft Bill included a ‘Table of Correspondence’ detailing how the new ordinance related to that of 1910. *Hong Kong Hansard (Supplement)*, May, 10, 1935, HKGRO, 1287-1290, 1290. ‘The Quarantine and Prevention of Disease Ordinance, 1936’ incorporated the clause penalising every master of any vessel found guilty of ‘importing’ leprosy sufferers. This legislation prohibited the importation of leprosy sufferers by air as well as by sea. *Hong Kong Government Gazette*, Jan. 31, 1936, HKGRO, 118.

¹⁹⁷ The clause prohibiting unauthorised entry into an asylum was also removed.

¹⁹⁸ Smith et al., *Report of the Committee on Lepers*, Jan. 11, 1935, HKGRO, 2.

government initiated discussions with the Canadian Sisters of the Immaculate Conception, who now ran the Sheklung asylum, but the scheme was deemed prohibitively expensive:

But as it would have involved Government in an initial expenditure of \$50,000 on buildings alone for only twenty inmates, it did not seem that the scheme was one which should be embarked upon in the midst of a depression. It has therefore been decided not to proceed with the home until times have improved.¹⁹⁹

Instead the Legislative Council approved an increase in the annual grant to Sheklung – a decision that predated the conference in Canton by a month.²⁰⁰ Wellington made no mention of this fact in his address, though he must have been aware of it. Instead he simply stated that the location and the degree of co-operation between the government and missionary organisations had yet to be settled.²⁰¹ At a stroke the Council had rendered much of the ‘radically’ new ordinance void.

“Open House” at Hong Kong’s Leprosarium

Official and popular concerns about unregulated communities of leprosy sufferers within the colony undermined the government’s refusal to implement the new ordinance. From the mid-1930s the medical authorities relied increasingly on the Tung Wah Infectious Diseases Hospital at Kennedy as a temporary detention centre for the colony’s leprosy sufferers, pending transfers to Sheklung.²⁰² Established in 1902 for the “herbal treatment of smallpox cases”, the hospital had recently fallen into a state of disrepair.²⁰³ By the time the colonial authorities secured the Tung Wah Hospital Committee’s permission for the hospital to serve as a “refuge for lepers”, Wellington reported that the buildings were without heating and running water and the only staff consisted of a Chinese coolie caretaker and an amah.²⁰⁴ Indeed Wellington reported:

There being no trained staff resident and the control being such as it is there must be grave doubts regarding the efficiency of the disinfection processes and the means taken to prevent dissemination of disease by patients, contacts and fomites [*sic*]....
...There can be no doubt that conditions at this so called hospital are most unsatisfactory both from the point of view of the public and the patients. For some time past it has been badly upkept and it is now in a very dilapidated [*sic*] state and unworthy to be called a hospital. As an institution for the segregation and treatment of the infectious sick it has outlived its usefulness and is now obsolete.²⁰⁵

¹⁹⁹ *Hong Kong Hansard*, Sept. 12, 1935, HKGRO, 168.

²⁰⁰ *Ibid.*, 168-169.

²⁰¹ “Leprosy in China,” 294-299, 297.

²⁰² Wellington, *Medical & Sanitary Report for the Year 1935*, 1936, HKGRO, 39, 88.

²⁰³ The annual report for 1931 reported that the accommodation was good, but the following year the medical authorities reported that “for some years this institution has been neglected with the result that the fabric is now in a very dilapidated condition”. Wellington, *Medical & Sanitary Report for the Year 1931*, 1932, HKGRO, 79; A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1932*, 1933, HKGRO, 88.

²⁰⁴ Wellington, *Medical & Sanitary Report for the Year 1935*, 1936, HKGRO, 39, 88.

²⁰⁵ *Ibid.*, 88.

Nevertheless the colonial authorities admitted 44 leprosy sufferers to this temporary detention facility in 1935, at least a quarter of whom were still there the following year (see table 2.4). Lo's ignorance of this arrangement is striking given that the government's negotiations with the Tung Wah Hospital Committee took place just a few months after Lo and the other members of the four-man committee published their report.²⁰⁶ The fact that Wellington hoped for a revival of the scheme for a domestic leprosarium run by the Sisters of the Immaculate Conception suggests that the Tung Wah Infectious Diseases Hospital was viewed as a temporary expedient. Moreover the authorities were probably anxious to avoid sparking popular fears about contagion by publicising the hospital's new role, especially given the institution's dilapidated condition and its proximity to the city of Victoria.

Despite the existence of temporary accommodation for leprosy sufferers in the Tung Wah Hospital at Kennedy Town, rumours of unregulated communities of leprosy sufferers abounded, prompting one residents' association to take action. The press reported rumours of a "colony" of leprosy sufferers living in Sham Shui Po in northwestern Kowloon. *The Hongkong Daily Press* reported the rumours as false but the *Hong Kong Sunday Herald's* informant sensationally reported that there was a "definite 'colony' of lepers" that mingled freely with the local population under the cover of darkness.²⁰⁷ Wellington's deputy anxiously sought to reassure the general public (and the press) that the rumours were false; that leprosy did not pose a public threat; and that leprosy sufferers were either admitted to the 'Leper Hospital' at Kennedy Town (and thence to the Sheklung Asylum) or else treated as out-patients.²⁰⁸ But the General Committee of the Kowloon Residents' Association (K.R.A.), of which Li Chor-chi was a member, was so alarmed by the rumours that it formally called upon the medical and sanitary authorities to take immediate action.²⁰⁹ Dr. Chau of the Urban Council questioned the Council's chairman about the government's response to the rumoured 'colony' at Shamshuipo, and about its management of leprosy more generally.²¹⁰ According to the health authorities, the 'colony' was little more than a community of squatters, only some of whom were suffering from leprosy. Much to the Committee's disbelief the government simply demolished the squatter's shacks rather than 'rounding' the leprosy sufferers up.²¹¹

²⁰⁶ The patients received food at the government's expense, and underwent biweekly injections.

"Sanitary Board: Leprosy and Malaria Questions," *Hongkong Telegraph*, Nov. 20, 1935, 12.

²⁰⁷ "Leper Colony: Sham Shui Po Rumours," *Hongkong Daily Press*, Aug. 17, 1936, 6; "Lepers At Large: Shamshuipo Colony?," *Hong Kong Sunday Herald*, Aug. 16, 1936, 1.

²⁰⁸ "Lepers At Large," *Hong Kong Sunday Herald*, Aug. 16, 1936, 1.

²⁰⁹ "Kowloon Matters Probed: K.R.A.'s Year of Useful Work," *Hongkong Telegraph*, Feb. 23, 1937, 4.

²¹⁰ "Leper Colony in Hong Kong," *Hongkong Daily Press*, Jan. 20, 1937, 7. Chau also complained about "the frequent extravagant advertisements in the Chinese Press by quacks who claim to be able to effect cures" against leprosy.

²¹¹ "Local Leper Question: Denial That Colony Exists," *China Mail*, Jan. 20, 1937, 6.

Not content with the government's response, the K.R.A. resolved to take matters into its own hands by appointing a sub-committee to investigate the matter. This sub-committee circulated a letter and questionnaire to medical practitioners and leprosy workers in Hong Kong, China and the Philippines.²¹² According to the Association, the Shamshuipo 'colony' epitomised the failings of the government's laissez-faire attitude and the paramount importance of establishing a domestic leprosy asylum:

We are not afraid of leprosy: what we are more concerned about is the fate of our lepers. We think that in this Government is palpably evading its responsibility. We have suggested the use of the now abandoned Laichikok Gaol as a Leprosarium. Whether Government adopts this suggestion or can offer a better one remains to be seen. But what we particularly wish to emphasize is that Kowloon residents cannot indefinitely view with equanimity the sight of poor, helpless lepers having their homes torn down, while the lepers themselves are dispersed among the community, without medical attention, food or adequate shelter.²¹³

Popular stigma undoubtedly lurked beneath the association's apparently genuine humanitarian rhetoric. The government briefly considered erecting a settlement on Lamma Island but Li Shu Fan, a member of the Legislative Council, voiced a concern about the scheme's proximity to "one of our most beautiful bathing beaches".²¹⁴ His objection was somewhat surprising given his attendance at the First National Leprosy Conference (Shanghai, 1932) and his earlier insistence that leprosy sufferers should be treated 'humanely'.²¹⁵ The K.R.A., however, was adamant that the government should establish "a properly equipped Leper Asylum for the accommodation of Hong Kong-born lepers...at the earliest possible date".²¹⁶ The Association's report also urged the Government to open free leprosy clinics and "to encourage private practitioners, hospitals and health centres to treat leprosy by recognized methods".²¹⁷ Whilst the issue of establishing a domestic asylum remained a subject of debate and speculation, the medical authorities admitted an increasing number of leprosy sufferers to the Tung Wah Infectious Diseases Hospital at Kennedy Town (see table 2.4 and fig. 6).

²¹² "Leper Asylum Urged: K.R.A. Also Urges Free Clinics," *Hongkong Telegraph*, July 28, 1937, 14.

²¹³ "Residents' Association Annual Meeting: Bad Street Lighting Not Improved," *Hongkong Daily Press*, Mar. 5, 1937, 7.

²¹⁴ He recognised that his objections were primarily aesthetic. *Hong Kong Hansard*, Oct. 13, 1937, HKGRO, 132.

²¹⁵ "Minutes of the First National Leprosy Conference in China," *Leper Quarterly* 6, no. 4 (1932): 3.

²¹⁶ "Leper Asylum Urged By K.R.A.," *Hongkong Daily Press*, July 29, 1937, 10.

²¹⁷ "Leper Asylum Urged: K.R.A. Also Urges Free Clinics," *Hongkong Telegraph*, July 28, 1937, 14.

Figure 5. The Hongkong Sunday Herald's Sensational Article about the Kennedy Town Asylum.²¹⁸



The lack of confinement measures heightened popular fears about the unregulated movement of large numbers of leprosy sufferers within the colony. The number of escapes from the Tung Wah Infectious Diseases Hospital rose from 21 patients in 1936 to 35 in 1937, the latter equivalent to roughly a fifth of the total number of cases treated that year (see table 2.4). The local press, for instance, reported that two “certified lepers...broke out of the Leper Home in Kennedy Town” and were “at large”; one of them was “found and returned to the Home”.²¹⁹ *The Hong Kong Sunday Herald* stoked these fears with a sensational piece entitled “‘Open House’ At Hong Kong’ Leprosarium” (fig. 5). The article claimed that a government committee had been appointed following reports that a female patient had escaped in order “to attack a woman whom she accused of notifying the authorities of her complaint”.²²⁰ The *Sunday Herald’s* coverage of local events was notoriously sensational but the escapes nevertheless highlighted the government’s inability to confine the patients. Even though the hospital was popularly known as a leprosarium, the medical authorities could not legally prevent the hospital’s inmates from leaving – as per clause 6 of the ‘Lepers Ordinance (1935)’ – because the hospital was not officially designated a leprosy asylum until July 1938.²²¹ The authorities were unable to enforce the segregation of the colony’s patients precisely because the Tung Wah Infectious Diseases Hospital at Kennedy Town was a *de facto* but not a *de jure* leprosy settlement.

²¹⁸ “‘Open House’ at Hong Kong’s Leprosarium: Victims Come Or Go At Will,” *Hong Kong Sunday Herald*, May 30, 1937, 4.

²¹⁹ “Lepers At Large,” *Hongkong Telegraph*, Apr. 5, 1937, 4; “Escaped Leper Found,” *Hongkong Telegraph*, Apr. 7, 1937, 16. The press reported further escapes the following month.

²²⁰ “‘Open House’ at Hong Kong’s Leprosarium: Victims Come Or Go At Will,” *Hong Kong Sunday Herald*, May 30, 1937, 4.

²²¹ Hong Kong Government, *Administrative Reports: Report of the Medical Department for the Year 1937, 1938*, HKGRO, 18; *Hong Kong Government Gazette*, June 14, 1935, HKGRO, 649-650; *Hong Kong Government Gazette*, July 22, 1938, HKGRO, 528. Selwyn-Clarke admitted as much in his report the following year. Hong Kong Government, *Administrative Reports: Annual Medical Report for the Year 1938, 1939*, HKGRO, 12.

The Kennedy Town Leprosarium

Official recognition for the Kennedy Town Leprosarium was a matter of necessity rather than choice. As late as June 1938, members of the Legislative Council continued to oppose the establishment of a domestic, government-run isolation facility. During a Legislative Council debate about a maintenance grant of \$9,000 for the Tung Wah Infectious Diseases Hospital at Kennedy Town, Li Shu Fan stated that the monthly cost of maintaining an inmate at Sheklung was only \$5, as opposed to \$9 for an inmate in the Kennedy Hospital. "As this is a difference of almost 50 per cent. in upkeep," he pointed out, "I think an understanding between this Government and the Mission should be reached with a view to entering into some satisfactory arrangement".²²² The colonial authorities actually increased the provisional annual grant to the Sheklung Asylum to \$36,400 in order to expand the asylum's accommodation.²²³ The project aimed to reduce the necessity of relying on the temporary detention facilities at Kennedy Town by increasing Sheklung's capacity to accommodate deported leprosy sufferers. But the negotiations fell through as a result of the Japanese invasion of southern China. The hostilities had a profound impact upon mainland leprosaria: the Japanese Navy temporarily occupied the Tai-Kam Leper Colony; some of the 72 leprosy sufferers transferred from Hong Kong to Sheklung in July of that year "drifted back" back to the colony; Warren L. Winter, Superintendent of the Tsingyuen Leprosarium in Guangdong Province, was forced to seek refuge in Hong Kong; and, as we shall see in the next chapter, the Chinese Mission to Lepers was forced to evacuate the National Leprosarium of Shanghai three times in the space of a single year.²²⁴ Faced with a critical influx of refugees, including leprosy sufferers, the government in Hong Kong had little choice but to purchase the "dilapidated and dangerous" premises of the Infectious Diseases Hospital at Kennedy Town from the Tung Wah Committee at a cost of \$50,000, formally proclaiming it as the colony's official 'leper settlement'.²²⁵ The timing of the proclamation was fortuitous. Less than a

²²² *Hong Kong Hansard*, June 16, 1938, HKGRO, 49.

²²³ Hong Kong Government, *Annual Medical Report for the Year 1938, 1939*, HKGRO, 12, 17; Hong Kong Government, *Sessional Papers: Abstract Showing the Differences between the Approved Estimates of Expenditure for 1938 and the Approved Estimates of Expenditure for 1939*, 1938, HKGRO, 326. The initial phase of the project intended to provide accommodation for 200 patients. The second phase aimed to be double this figure.

²²⁴ Rev. Lake was in America at the time, recovering from an illness. For Tai-Kam see "News Brevities," *Leper Quarterly* 12, no. 2 (1938): 99; "The Leper World: Taikam Leper Colony," *Leper Quarterly* 12, no. 4 (1938): 167; "The Leper World: Taikam Leper Colony Still Intact," *Leper Quarterly* 13, no. 1 (1939): 24-25. For Tsingyuen see "The Leper World Tsingyuen Leprosarium," *Leper Quarterly* 12, no. 4 (1938): 167; "The Leper World: Tsing Yuen Leprosarium Safe, though City Half Destroyed," *Leper Quarterly* 13, no. 1 (1939), 26. For Sheklung see Hong Kong Government, *Annual Medical Report for the Year 1938, 1939*, HKGRO, 12.

²²⁵ Hong Kong Government, *Annual Medical Report for the Year 1938, 1939*, HKGRO, 17, 48; *Hong Kong Government Gazette*, July 22, 1938, HKGRO, 528. As outlined in the introduction of this dissertation, some modern scholars have cursorily acknowledged this take-over. Arthur Starling et al., eds., *Plague, SARS and the Story of Medicine in Hong Kong* (Hong Kong: Hong Kong Museum of Medical Sciences Society, 2006), 25; Kerrie L. MacPherson, "Invisible borders: Hong Kong, China and the imperatives of public health," in *Public Health in Asia and the Pacific: Historical and comparative perspectives*, eds. Milton J. Lewis and Kerrie L. MacPherson, (Abingdon: Routledge, 2008), 20; Ka-che

fortnight had passed since the sensational “Peak Murder Case” had triggered fears about the racial threat of unconfined leprosy sufferers. The accused, a mentally-unsound 30-year old cookboy, claimed that he had been so enraged by his masters’ taunts that he was a leprosy sufferer that he murdered his mistress Mrs. S. R. Challinor.²²⁶

The government immediately set about imposing discipline even before the handover of the institution was complete. Within months the leprosarium was encircled by a wire fence, beyond which was a “continuous police patrol”.²²⁷ The official proclamation also enabled the medical officer in charge to exercise a greater degree of control over the “unruly and turbulent body” of inmates.²²⁸ The Director of the Medical and Sanitary Services conceded that “the change in administration was not altogether [as] popular as might be expected”.²²⁹ The patients objected to their enforced confinement, but “in this manner the annoyance previously caused in the town by wandering lepers has been overcome and the risk of spreading the disease is lessened”.²³⁰ Whereas a total of 29 patients successfully requested to be discharged prior to 1938, none were permitted to do so once the government took over the management of the institution. The authorities reported a decline in the number of escapes from 91 in 1938 to 67 in 1939, though this was still nearly double the number of escapes in 1937 (see fig. 6 and table 2.4).²³¹ This probably reflected the leprosarium’s transformation from a *de facto* institution in which segregation was voluntary to a *de jure* leper settlement in which it was enforced. The colonial administration was nevertheless gladdened by the savings its new management was able to effect.²³²

Yip, “Segregation, Isolation, and Quarantine: Protecting Hong Kong from Diseases in the Pre-war Period,” *Journal of Comparative Asian Development* 11, no. 1 (2012): 16.

²²⁶ “Accused’s Admission In Peak Murder Case: Expert Evidence Given By Dr. M. O. Pfister At Criminal Sessions,” *Hongkong Daily Press*, July 13, 1938, 1, 2, 8.

²²⁷ Hong Kong Government, *Annual Medical Report for the Year 1938, 1939*, HKGRO, 12.

²²⁸ *Ibid.*, 48.

²²⁹ Hong Kong Government, *Administrative Reports: Annual Medical Report for the Year 1939, 1940*, HKGRO, 54.

²³⁰ Hong Kong Government, *Annual Medical Report for the Year 1938, 1939*, HKGRO, 48; Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 21.

²³¹ Interestingly the annual report for 1938 contained a discrepancy regarding these 91 patients: the section on leprosy stated that they were discharged at the patients’ requests whilst the section on the “Leper Settlement” reported them as escapes. This probably reflected the leprosarium’s transformation from a *de facto* institution in which segregation was voluntary to a *de jure* leper settlement in which it was enforced. Hong Kong Government, *Annual Medical Report for the Year 1938, 1939*, HKGRO, 12, 49.

²³² Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 54.

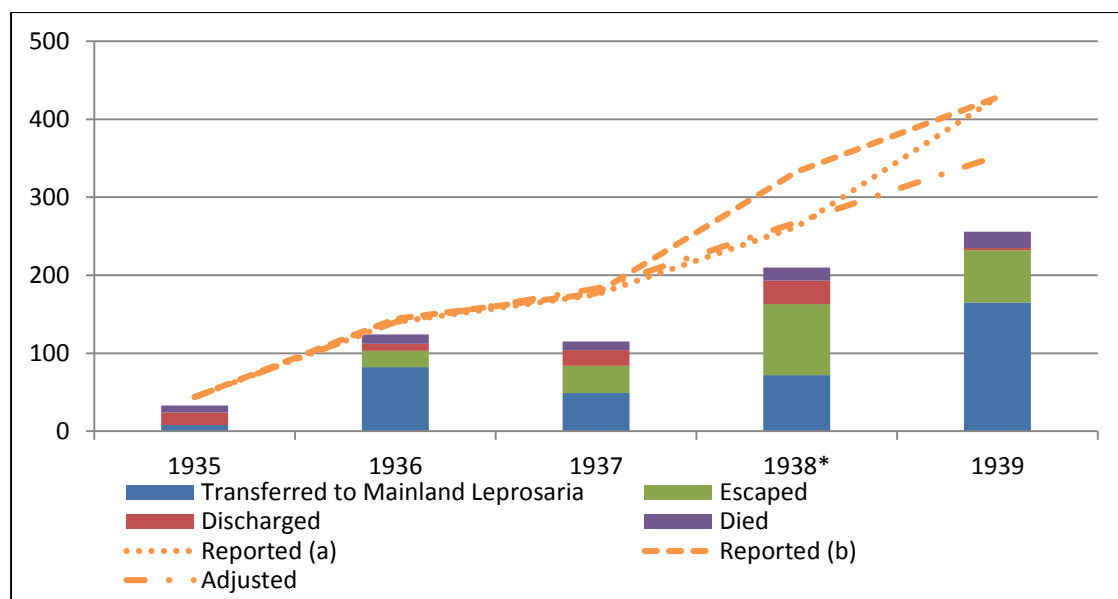


Figure 6. The Kennedy Town Leprosarium, 1935-39.

Table 2.3. The Kennedy Town Leprosarium, 1935-39.²³³

Year	Remaining from previous yr.	New Admissions	Transferred to Mainland Leprosaria	Discharged Total (on request)	Escaped	Died	Remaining at end of yr.	Total Annual Population		
								Reported (a)	Reported (b)	Adjusted
1935	-	44	8	16 (8)	-	9	11	44	44	44
1936	15	129	82	9 (7)	21	12	8	140	144	140
1937	10	167	49	20 (14)	35	11	62	175	177	183
1938*	133	200	72	30 (-)	91	17	133	262	333	268
1939	133	295	165	3 (-)	67	21	172	428	428	353

The government also made provisions for the isolation of prisoners suffering from leprosy. Wellington explained:

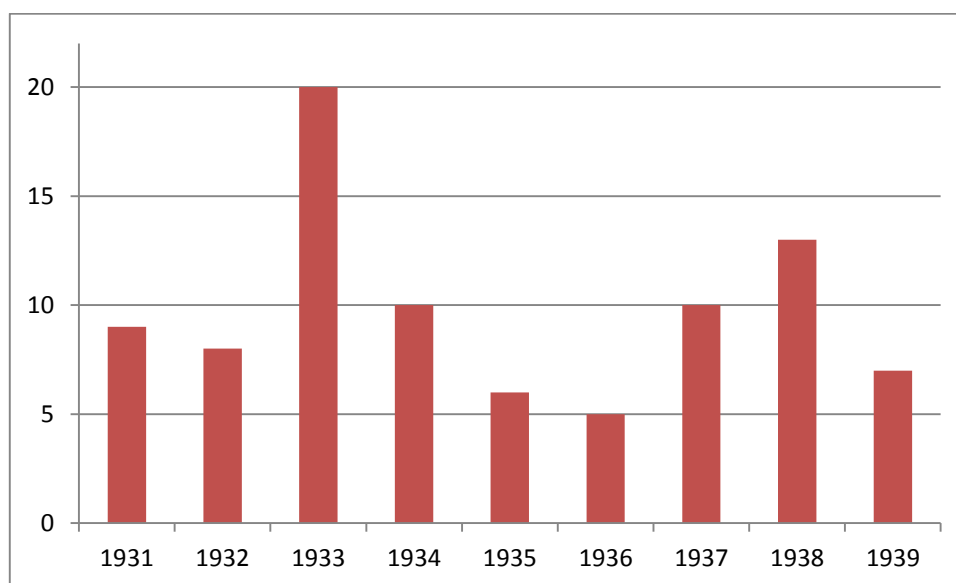
This will do away with the highly unsatisfactory system prevailing at the moment whereby a leper is convicted for theft or attempted murder, sent to prison, released from prison immediately and transferred to the leper settlement from which he escapes without difficulty to repeat once more the felony or misdemeanour for which he was originally sent to prison, and so on any number of times!²³⁴

²³³ Data from the annual medical reports. Discrepancies in the annual reported statistics complicate the task of calculating the annual 'population' of the leprosarium. Specifically the total number of patients "remaining at the end of year" in one report does not correspond with the total number of patients "remaining from the previous year" in the following report. The 'Reported (a) Total Annual Population' is the sum of the new admissions and the number of patients remaining at the end of the year. The 'Report (b)' population is the sum of the new admissions and the number of patients remaining from the previous year. The 'Adjusted' annual population is calculated on the basis of an adjusted figure for the number of patients remaining at the end of the year.

²³⁴ Hong Kong Government, *Annual Medical Report for the Year 1938, 1939*, HKGRO, 48.

The late circulation of the government's tender delayed the construction of an isolation block at the Stanley Bay prison until the end of the year.²³⁵ In the meantime, prisoners suffering from leprosy continued to be released from the colony's prisons (fig. 7). Once constructed, the block was popularly known as a "Leprosarium": the Allied personnel who were interned in Stanley Bay during the Second World War preserved this nickname, though the building itself was converted into a sanatorium for prisoners of war suffering from pulmonary tuberculosis.²³⁶ This isolation block was not a leprosarium in the same sense as that at Kennedy Town. Instead it was reminiscent of the colony's very first leprosy isolation facility in the late 19th century: the Victoria Gaol's "Leper Cell". But whereas the cell served as a site of temporary detention, the Stanley Bay Leprosarium was intended as a permanent isolation facility.

Figure 7. Prisoners discharged from the colony's prisons with leprosy, 1931-39.²³⁷



Whilst the government concentrated on confining a growing number of leprosy sufferers within the Kennedy Town Leprosarium, a young American missionary attempted to establish a small leprosy clinic within the colony. Miss Ethel R. Groce, a graduate of the Presbyterian Hospital of Chicago, arrived in Hong Kong in 1938 as a member of the South China Boat Mission.²³⁸ She began by assisting Warren Winter, the founder and superintendent of Tsingyuen Leprosarium who had been forced to seek refuge in the colony following the

²³⁵ "Stanley Isolation Block for Lepers," *Hongkong Telegraph*, Sept. 19, 1939, 20; Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 129.

²³⁶ P. S. Selwyn-Clarke, *Report on Medical and Health Conditions in Hong Kong. For the period 1st January, 1942 – 31st August, 1945* (London: His Majesty's Stationary Office, 1946), 21. See for example Jean Gittins, *Stanley: Behind Barbed Wire* (Hong Kong: Hong Kong University Press, 1982), 52; G.C. Emerson, *Hong Kong Internment, 1942 to 1945: Live in the Japanese Civilian Camp at Stanley* (Hong Kong: Hong Kong University Press, 2008), 46, 101; Bernice Archer, *The Internment of Western Civilians Under the Japanese, 1941 – 1945: A Patchwork of Internment* (London: Routledge Curzon, 2005), 89.

²³⁷ Data from annual medical reports.

²³⁸ "The Leper World: Tsingyuen Leprosarium," *Leper Quarterly* 12, no. 4 (1938): 167; Ethel R. Groce, "Brothering the Leper," *Leper Quarterly* 15, no. 3 (1941): 101-109.

outbreak of the hostilities in southern China. Winter reported that he had attempted to secure “permission to start a leper home here in Hongkong, but have not been able to make much headway”.²³⁹ Groce took over during Winter’s furlough to the United States and she travelled to the Tsingyuen Leprosarium on a number of occasions and also visited the Kennedy Town Leprosarium (fig. 8).²⁴⁰ It is unclear whether her hopes of establishing a leprosy clinic in Hong Kong ever materialised, though she noted that there were two public out-patient clinics in the colony during a C.M.L.-hosted radio broadcast in Shanghai in August 1941.²⁴¹ Until now no historian has recognised her independent efforts to support the colony’s leprosy sufferers at a crucial juncture in the colony’s domestic management of the disease.



Figure 8. *A Modern Nightingale. Miss Ethel R. Groce ministering to a female leper in Hong Kong.*²⁴²

Resigned to the existence of a domestic leprosarium, the colony made an effort to improve conditions for the inmates in the final years before the Japanese invasion of Hong Kong. The government finally provided the inmates with beds and a properly balanced diet, and continued to give the patients “weekly intramuscular injections of the iodised esters of chaulmoogra oil”.²⁴³ The Botanical and Forestry Department donated some seedlings to enable the patients to engage in some therapeutic gardening, and the inmates’ “necessarily

²³⁹ “The Leper World: Tsing Yuen Leprosarium Safe, though Half City Destroyed,” *Leper Quarterly* 13, no. 1 (1939): 26.

²⁴⁰ “News Brevities,” *Leper Quarterly* 13, no. 2 (1939): 88; Groce, “Brothering the Leper,” 104-105; “The Leper World: Tsingyuen Leper Colony has a record enrollment [sic],” *Leper Quarterly* 15, no. 3 (1941): 122. Winter returned to Hong Kong in July 1941. “News Brevities,” *Leper Quarterly* 15, no. 3 (1941): 125-126.

²⁴¹ Wu had asked Groce to speak at the Christian Broadcasting Station about leprosy – “one of the gravest problems confronting the people of China today” – during her three-week vacation to Shanghai in the summer of 1941. Groce spoke highly of Shanghai’s leprologists including Reiss, Huizenga, and Tseu. Groce, “Brothering the Leper,” 101, 105, 106-7; “News Brevities,” *Leper Quarterly* 15, no.3 (1941): 125-126.

²⁴² *Leper Quarterly* 13, no. 2 (1939). This is the first and only photograph from Hong Kong published in *The Leper Quarterly*.

²⁴³ The government had been responsible for the provision of medical treatment when the leprosarium was managed by the Tung Wah Hospitals Committee. Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 21, 54-55.

restricted and monotonous lives [were] brightened” by Dr. Ho Kom Tong’s (O.B.E.) gifts, which included “a radio set, pingpong, cards, mah-jong, dominoes, daily newspapers, monthly magazines, and so on”.²⁴⁴ The medical authorities also reported a marked improvement in discipline and cleanliness as a result of the promotion of three patients (two men and one woman) as “heads”.²⁴⁵ Selwyn-Clarke, who succeeded Wellington as Director of the Medical and Sanitary Services, reported:

True, sixty-seven lepers escaped from the premises in spite of a small police guard, but there was a cessation of the former custom of regarding the place as a convenient institution in which to avoid paying rent and from which to sally forth to streets, markets, tea-houses, restaurants, cinemas, etc., at will and to “sell” their disease to others.²⁴⁶

Western physicians in China, including figures such as Patrick Manson, had long been aware of the Chinese belief that leprosy could allegedly be cured or ‘sold off’ through sexual intercourse.²⁴⁷ The medical authorities also pointed to the return of 20 of the 40 inmates who had been transferred to an island asylum near Swatow (Shantou) as evidence that “the conditions were generally appreciated by the inmates”.²⁴⁸ In fact they made the 20-day journey on foot, “some with perforating ulcers of the feet”, to seek readmission because they were bombed out of the Swatow Settlement (figs. 9 and 10).²⁴⁹

²⁴⁴ Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 21, 54.

²⁴⁵ Two men and one woman, each of whom was paid a monthly stipend of \$5. Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 21.

²⁴⁶ Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 54.

²⁴⁷ Leung, *Leprosy in China*, 149. The subject was discussed at the Second International Leprosy Conference (Canton, 1935). “Leprosy in China,” 296. For further discussion about the origins of this belief, see Leung, *Leprosy in China*, 64, 117, 120-123.

²⁴⁸ Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 54.

²⁴⁹ Ibid.; T. C. Wu, “Leprosy Situation in War-Torn China,” *Leper Quarterly* 13, no. 4 (1939): 151. The air-raid reportedly killed 24 of the Swatow Municipal Leprosarium’s patients and wounded a further 29.



Figure 9. *The Swatow Municipal Leprosarium after air-raid on May 5, 1939.*²⁵⁰

Figure 10. *Some Victims among the patients of the ill-fated Leprosarium.*²⁵¹



Nevertheless Selwyn-Clarke was genuinely concerned about the provision of adequate accommodation “for Hong Kong citizens who fall victim to the disease”²⁵² A scheme to replace the building – estimated at \$16,000 and later revised to \$18,000 – was initially favoured. By 1940 though, Selwyn-Clarke favoured the Director of Public Work’s more cost-effective renovation scheme.²⁵³ Securing official support for this plan was not, however, a foregone conclusion. Li Shu Fan, who had previously raised ‘aesthetic objections’ to the establishment of a leprosarium on Lamma Island, voiced concerns about the proximity of

²⁵⁰ *Leper Quarterly* 13, no. 4 (1939)

²⁵¹ *Leper Quarterly* 13, no. 4 (1939)

²⁵² Hong Kong Government, *Annual Medical Report for the Year 1939, 1940*, HKGRO, 21, 54-55, 54.

²⁵³ *Report of the Technical Committee for the Reorganization and Improvement of Existing Official Hospital and Clinical Facilities of the Colony of Hong Kong, 1938-1939*, ca. 1939, HKPRO, 91-92; *Hong Kong Hansard*, July 25, 1940, HKGRO, 109.

“such an institution knowing it houses contagious diseases” to “a vegetable market, slaughter house and so on” within the confines of Victoria City.²⁵⁴ The domestic segregation of Hong Kong’s leprosy sufferers thus remained a contentious issue as late as the early 1940s.



Figure 11. Lt. Gen. Norton’s visit to the Kennedy Town Leprosarium made front-page news.²⁵⁵

The Acting Governor’s visit to the Kennedy Town Leprosarium in December 1940 marked a defining moment in the history of the colony’s management of the disease. Lt. Gen. Edward Norton was welcomed by a “guard-of-honour” of patients. His tour included a visit to the men’s “Northcote Ward”, named after the Governor, and the women’s “Norton Ward”. The leprosarium’s 223 patients included the group of former deportees who had been “bombed out” of the leprosy settlement in Swatow.²⁵⁶ The colonial authorities had successfully resisted the establishment of a permanent domestic isolation facility for almost a century. The authorities had forced the 13 remaining leprosy sufferers in the Au Tau ‘asylum’ to flee to the mainland in 1911. Yet almost thirty years later the Acting Governor found himself touring a

²⁵⁴ *Hong Kong Hansard*, July 25, 1940, HKGRO, 109.

²⁵⁵ “Governor Pays Visit to Leper Settlement,” *Hongkong Daily Press*, Dec. 10, 1940, 1.

²⁵⁶ “Governor Pays Visit to Leper Settlement: Interested In Occupational Aspect of Treatment,” *Hongkong Daily Press*, Dec. 10, 1940, 1.

government-run leprosarium for both British and non-British subjects with a ward named after himself (fig. 11). Ironically the Kennedy Town leprosarium stood adjacent to the Government Infectious Diseases Hospital, which had briefly served as a 'leprosy asylum' in the early 1910s. Whereas the government rescinded its appointment of the latter institution after just 18 months, the outbreak of war in the Pacific ultimately spelt the end of the Kennedy Town Leprosarium. Within a year of Norton's visit, the colonial government was forced to surrender to the invading Japanese forces. Following his release from the Stanley internment camp, Selwyn-Clarke reported that the Japanese authorities had "soon allowed the Leper Settlement at Kennedy Town to disintegrate".²⁵⁷ When he returned to the leprosarium in August 1945, he discovered that "all roofs, floors, doors, windows, and sanitary structures had been removed for firewood".²⁵⁸

The Immediate Post-War Period: Stanley Prison, Sandy Bay and Hay Ling Chau

The colonial authorities reinstated the practice of deporting all Chinese leprosy sufferers, irrespective of their citizenship, to the Sheklung Asylum in the months immediately after the war. For instance a Chinese leprosy sufferer who was allegedly born in Happy Valley in Hong Kong was deported in February 1946.²⁵⁹ Leprosy sufferers were "collected" at the Tung Wah Hospital pending deportation.²⁶⁰ An exception was made, however, for prisoners suffering from the disease. Selwyn-Clarke, who resumed his position as Director of the Medical and Sanitary Services, was adamant that the Stanley Bay Leprosarium should be reopened as a result of the discovery of "our first [post-war] leper prisoner":

It would be quite out of the question to evade responsibility for our own criminals by off-loading them to the Sisters of the Immaculate Conception at Sheklung Leper Asylum [*sic*]. I recommend rehabilitation of the Prison leprosarium & that the leper be segregated meanwhile in the Prison hospital, unless he is a burnt-out non-infective case & suitable for an ordinary prison cell.²⁶¹

By contrast Selwyn-Clarke's efforts to enlist the support of the colony's railway authorities in returning leprosy sufferers to the Chinese mainland during the late 1940s proved unsuccessful. Despite the Crown Solicitor's reassurances that the railway authorities "could legitimately make rules for segregating these persons [i.e. Chinese leprosy sufferers] and locking them in until they arrive at some appointed destination, e.g. Canton" – providing of course that the rules were "reasonably humane" – the General Manager of the Kowloon-

²⁵⁷ Selwyn-Clarke, *Report on Medical and Health Conditions*, 7.

²⁵⁸ *Ibid.*

²⁵⁹ The newspaper article simply stated, "He was taken to the Leprosy Asylum". This was most probably the Sheklung asylum given that the Kennedy Town Leprosarium was never reopened and the confinement of prisoners suffering from leprosy was not discussed until the following year. "Leper Walks Into Police Station," *China Mail*, Feb. 16, 1946, 6.

²⁶⁰ Selwyn-Clarke to (Col. Sec.), 30 June 1950, HKPRO, HKRS156/1/2835.

²⁶¹ P. S. Selwyn-Clarke (D.M.S.S.) to P. A. (Col. Sec.), 3 Jan. 1947, HKPRO, HKRS47/1/2910. The Commissioner of Police, who made the reference to "our first leper prisoner", had suggested deporting him to Sheklung. (Com. Police) to (Col Sec.), 28 Jan. 1947, HKPRO, HKRS47/1/2910.

Canton Railway insisted that the medical department should convey leprosy sufferers to Canton by boat instead.²⁶² Ultimately the closure of the mainland's borders following the establishment of the People's Republic of China rendered the debate moot.

The government responded by erecting a temporary leprosarium on the western edge of Hong Kong Island that ultimately paved the way for the establishment of the Hay Ling Chau Leprosarium. The government granted \$60,000 to the Tung Wah Hospitals Committee to establish a "leprosarium" enclosed by barbed wire at Sandy Bay on the west coast of Hong Kong Island.²⁶³ In the meantime an increasing number of leprosy sufferers were isolated in the Tung Wah Hospital in a ward designed for just 18 patients; the hospital housed 161 patients by the time the accommodation huts were finished at Sandy Bay in December 1950.²⁶⁴ The reported prevalence of the disease continued to rise dramatically: the number of patients in the temporary leprosarium increased by over 75% within the first year.²⁶⁵ Unsurprisingly the trope of the "El Dorado to the leprous Chinaman from the mainland" reared its head once again. One colonial official reported:

The word seems to have gone round that we are providing new accommodation for lepers and they have been flocking in. Very few of these lepers have any claim on Hong Kong, but if they are thrown out of the leprosarium they will only beg on the streets. The Communist authorities will not re-admit them into China and it will, therefore, be very difficult to get rid of them.²⁶⁶

Left with no other choice, the authorities began to develop the Sandy Bay Leprosarium into a modern leprosy asylum. Dr. Olaf K. Skinsnes, a newly-arrived member of the University of Hong Kong's Department of Pathology, introduced "intensive and methodical medical work".²⁶⁷ Therapeutic work such as carpentry, gardening, stone cutting and domestic work was also encouraged and religious services were held regularly – an unprecedented development in terms of the colony's management of the disease. Over half of the patients that entered Sandy Bay in 1950 were already Christians. Ironically the colony's pre-war deportation policy was partly responsible for this evangelisation: the leprosarium accommodated some 23 Protestant patients who had previously been confined to the Rhenish Mission's asylum in Tungkun and 70 Catholic patients from Sheklung.²⁶⁸ But a further 40 patients were baptised just over a year later on Christmas Day.²⁶⁹ The temporary leprosarium

²⁶² (Crown Solicitor) to (Gen. Mgr., Railway), 16 Aug. 1949, HKRPO, HKRS48/1/204; (Gen. Mgr., Railway), to Selwyn-Clarke, 17 Aug. 1949, HKPRO, HKRS48/1/204. For the correspondence between Selwyn-Clarke and the General Manager see HKPRO, HKRS48/1/204.

²⁶³ Twenty-two local residents protested the government's decision, claiming that "the presence of a Lepers' Home in this district will spoil its amenities and render it undesirable for respectable residents". Li Tse Fong et al. to (Col. Sec.), 22 July 1950, HKRPO, HKRS156/1/2835.

²⁶⁴ (Col Sec.) to Executive Council, 18 Sept. 1950, HKPRO, HKRS156/1/2835; Hong Kong Auxiliary, *First Annual Report*, 4.

²⁶⁵ The figure stood at 285, of whom 50 were outpatients. Hong Kong Auxiliary, *First Annual Report*, 4.

²⁶⁶ (F.S.) to (A.S.6), 18 Dec. 1950, HKPRO, HKRS156/1/2835.

²⁶⁷ Hong Kong Auxiliary, *First Annual Report*, 4.

²⁶⁸ *Ibid.*, 4, 15-17; The Mission to Lepers Hong Kong Auxiliary, *Annual Report, 1952* (Hong Kong, 1953), 10-17.

²⁶⁹ Hong Kong Auxiliary, *First Annual Report*, 16.

also finally prompted the fulfilment of one of the new clauses of the ‘radical’ ‘Lepers Ordinance (1935)’: regular inspections by Justices of the Peace.²⁷⁰ Unlike Hong Kong’s previous asylums, the Sandy Bay Leprosarium was jointly administered by a missionary organisation, the recently-formed Mission to Lepers Hong Kong Auxiliary – a body completely unrelated to the pre-war Chinese Mission to Lepers Hong Kong Auxiliary – and the Board of Directors of the Tung Wah Hospitals.²⁷¹ A group of 16 prominent local foreign and Chinese women, many of whom were either Auxiliary members or members’ wives, established the Marianne Reichl Aid to Lepers Group to raise financial support for the Auxiliary’s activities and to “promote a better understanding of the leprosy problem”.²⁷²

The Sandy Bay Leprosarium was only ever destined to be a temporary facility. Even before the leprosarium opened its doors Dr. Fraser, part-time secretary for China to the Mission to Lepers (London), initiated discussions with the colonial government to establish a permanent leprosarium.²⁷³ A number of sites in the New Territories and outlying islands were debated, but all of them were dismissed in the face of local residents’ complaints.²⁷⁴ Many were “shocked” to hear that the government intended to establish a leprosarium in their district.²⁷⁵ Local residents feared the patients’ alleged lasciviousness and worried that other communities would ostracise their village by sheer dint of their proximity to the leprosarium.²⁷⁶ The District Commissioner for the New Territories informed the colonial authorities that “We have to overcome a rooted prejudice against leprosy, and a deep dread that your male leper will find his chance to rape some woman not infected”.²⁷⁷ Writing over a decade later Governor Grantham reported that Fraser had been at “his wits’ end” searching for a suitable site.²⁷⁸ Eventually, however, the authorities settled on Nai Gu Chau (‘Nun Island’), a sparsely settled island to the west of Hong Kong Island, which the Mission accepted

²⁷⁰ See HKPRO, HKRS41/1/5724; HKRPO, HKRS41/1/5725; HKPRO, HKRS41/1/5726.

²⁷¹ The latter were responsible for providing food and fuel, the former for medical treatment and the patients’ welfare. Hong Kong Auxiliary, *First Annual Report*, 4.

²⁷² Mrs. Skinner, joint vice-president of the Marianne Reichl Group, was the wife of the first chairman of Council of the Mission to Lepers Hong Kong Auxiliary; Mrs. Ching, the other vice-president, was one of the first board members of the Hay Ling Chau Leprosarium. Skinsnes’s wife served as the Group’s programme officer. *Ibid.*, 21-22, 21. The group was named in honour of Marianne Reichl, a missionary who worked with leprosy sufferers in Sumatra immediately before the Second World War, and who was murdered in an air attack in Canton in 1950 whilst taking a few days holiday from her work with the Rhenish Mission’s leprosy asylum in Tungkun.

²⁷³ See for instance D. C. Barty (for Col. Sec.) to N. D. Fraser, 4 Jan. 1951, HKPRO, HKRS503/2/12. Before the war, Fraser treated leprosy patients at the Mission Hospital in Swatow. See bibliography.

²⁷⁴ Hong Kong Auxiliary, *First Annual Report*, 5.

²⁷⁵ Yeung Ting Sham (Village Rep., Yaum Kam Tau Village, Tsun Wan) to (D.C.N.T.), 19 Apr. 1951, HKRPO, HKRS503/2/12.

²⁷⁶ See for instance Chan Wing On (Chairman, Tsun Wan Rural Committee) to J. Barrow (D.C.N.T.), 21 Apr. 1951, HKPRO, HKRS503-2-12.

²⁷⁷ Barrow to (Col. Sec.), Confidential, 23 Apr. 1951, HKPRO, HKRS503/2/12.

²⁷⁸ Alexander Grantham, *Via Ports: From Hong Kong to Hong Kong*, rev. ed. (1965, Hong Kong: Hong Kong University Press, 2012), 160. Grantham was also elected as the Mission to Lepers Hong Kong Auxiliary’s first president. On relinquishing the governorship he joined his wife as a honorary life member.

after some misgivings.²⁷⁹ The Sandy Bay leprosarium was maintained as an “admission centre” whilst a “pioneer party” of 22 patients were transferred to the island, which was renamed Hay Ling Chau, ‘The Isle of Happy Healing’. A local Chinese construction company as well as volunteers from the Royal Engineers and other regiments helped erect a small staff hut and a larger accommodation block known as the “workshop” enabling a further 38 patients to be transferred from Sandy Bay.²⁸⁰ These buildings laid the foundations for the Hay Ling Chau Leprosarium and ushered in a new era in domestic segregation in Hong Kong.

The brief *resumption* of the colony’s practice of deporting all leprosy sufferers except prisoners during the immediate post-war period begs a number of important questions regarding the broader evolution of domestic segregation within colonial Hong Kong. How are we to understand the combined impacts of the out-break of the Sino-Japanese War, the Japanese occupation of Hong Kong, and the establishment of the People’s Republic of China upon the colony’s management of the disease given the staunch opposition to domestic segregation that emerged in the 1870s, was formalised by ordinance in the 1910s, and vigorously resisted through the early 1930s. Did the outbreak of the Sino-Japanese war impose a phenomenon that might never have emerged? After all the Kennedy Town Leprosarium was considered little more than an undesirable and temporary solution pending the return of peace on the mainland – a solution, moreover, that was all but abandoned immediately after the British reoccupation of Hong Kong in 1945. Or did the Second World War interrupt and temporarily reverse an inevitable progression towards domestic segregation? Had the British managed to retain control of Hong Kong whilst war continued to wage on the mainland, the Kennedy Town Leprosarium and the Stanley Bay Isolation Unit might have continued to accommodate leprosy sufferers well into the 1940s. A preliminary survey of the source material suggests that the arrival of eminent leprologists such as Dr. N. D. Fraser and Dr. O. K. Skinsnes played a pivotal role in promoting a new humanitarian approach to the segregation of leprosy sufferers.²⁸¹ This dissertation’s original analysis of the pre-war period demonstrates the need for a critical re-evaluation of the post-war period.

²⁷⁹ “Executive Council Meeting”, 5 June 1951, HKPRO, HKRS503/2/12; Hong Kong Auxiliary, *First Annual Report*, 5. For the government’s report on the island and the issue of compensation for the island’s inhabitants see HKPRO, HKRS503/2/11.

²⁸⁰ Barty to Fraser, 17 Aug. 1951, HKPRO, HKRS156/1/2835; Hong Kong Auxiliary, *First Annual Report*, 5-6.

²⁸¹ In a joint article on the construction of Hay Ling Chau, the two men detailed seven basic purposes of leprosaria, including: the provision of medical treatment facilities; providing “for the general welfare, educational growth and spiritual care of resident patients”; promoting “the rehabilitation of patients cured of leprosy by every available means”; and “lead[ing] the way in attacking society’s misconceptions regarding leprosy and its maltreatment of persons suffering from leprosy”. Olaf K. Skinsnes and Neil D. Fraser, “The Design of a Leprosarium (Hay Ling Chau, Hong Kong),” *International Journal of Leprosy* 37, no.2 (1969): 183-193, 186.

Conclusion

This chapter has presented the very first analysis of Hong Kong's management of leprosy, charting the evolution of the colony's reliance on deportation and its staunch opposition to domestic segregation from the mid-19th through the mid-20th centuries. This chapter has fundamentally revised the limited historiography and revealed that pre-war Hong Kong was in fact home to four institutions that were officially or popularly recognised as leprosaria: a leprosy village and a leprosy hospital in the early 20th century, and a leprosarium and a leprosy prison cell during the late 1930s. Comparing these institutions on the basis of their contemporary designations would lead to erroneous conclusions. For instance both the leprosy village at Au Tau and the Government Infectious Diseases Hospital in Kennedy Town were briefly designated as 'leper asylums'. Yet the former was a colonial hybrid of a traditional Chinese leprosy village whilst the latter was simply a hospital that treated a small number of leprosy sufferers. Nevertheless these two pairs of institutions appeared to mark shift in the government's attitude towards confinement and segregation. Geo-politics, contemporary international medical discourse and the village's remote location informed the government's initial laissez-faire attitude in the early 20th century. Although the authorities encircled the leprosy village at Au Tau with bamboo fences, the Governor acknowledged the regular interactions between the village and the neighbouring communities. Moreover the leprosy villagers at Au Tau were not internally segregated by sex. Despite the paucity of source material, it is clear that men, women and even children resided alongside one another; one woman even gave birth to a baby girl "with macules on her body" who was promptly sent to the Tung Wah Hospital "by order of the local Magistrate".²⁸² This laissez-faire attitude in no way reflected, however, the government's support for domestic segregation as a permanent means of managing the disease. The Au Tau community was expelled to the mainland and the appointment of the Government Hospital at Kennedy Town was rescinded almost before the ink on the 'Leper Ordinance (1910)' had dried.

This attitude hardened during the ensuing decades, and confinement was *de rigueur* in the late 1930s. War-time disruptions prompted the colonial authorities to detain an increasing number of sufferers for an increasing length of time within the Tung Wah Infectious Diseases Hospital at Kennedy Town. Sensational reports about the unregulated movements of this community of sufferers and of other 'colonies' heightened popular fears about the threat of infection. The government was finally forced to assume control of this *de facto* leprosarium and recognise it as a *de jure* leprosy settlement precisely in order to quell this popular anxiety. Both the government-run Kennedy Town Leprosarium and the Stanley Bay Prison Leprosarium rigidly enforced confinement – the latter, as an isolation unit within a prison, doubly so. Moreover Lt. Gen. Norton's inspection of the male and female wards in the

²⁸² Reports that rice was issued to ten of the thirteen patients in the latter part of the decade suggests that three were too young (or perhaps too incapacitated) to receive these provisions. See for instance Hong Kong Government, *Sessional Papers: Report on the Health and Sanitary Condition of the Colony of Hongkong, for the Year 1905, 1906*, HKGRO, 350. The baby's fate is unclear. The fact that the mother was not a recent admission suggests that sexual relations within or possibly even without the community were tolerated, at least as far as the colonial officials were concerned.

former institution in December 1940 clearly indicated that the patients were segregated by sex. In some ways, the Kennedy Town Leprosarium thus paralleled the segregation of leprosy sufferers that Cantlie had witnessed in Macao half a century earlier, though the intensity of the Kennedy Town patients' suffering was perhaps not quite akin to the Macanese 'living inferno'. The intervening decades witnessed repeated and ultimately successful attacks against Cantlie's trope of the "El Dorado to the leprous mainland", from without and increasingly from within. The challenge to the government's management of the disease from the local Chinese elite centred not on the segregation of Chinese leprosy sufferers, but the indiscriminate deportation of British Chinese subjects. The objection focused not on *how* these diseased bodies were managed, but *where* they were institutionalised. Chapter two explores how this trope underpinned the International Settlement of Shanghai's parallel management of the disease during this period.

Chapter 3: Leprosy in the International Settlement of Shanghai

The International Settlement's conceptualisation of leprosy as a mainland Chinese disease mirrored that of Hong Kong. But whereas the disease was a concern within decades of the colony's establishment, the International Settlement's public health authorities regarded leprosy as a rarity up until as late as the 1920s. The International Settlement's management of the disease was thus confined largely to the second quarter of the 20th century. The Settlement's strategy during this period nevertheless paralleled that of Hong Kong in many ways. A report by a local missionary dispensary on the prevalence of the disease immediately beyond its northern border precipitated the deportation of Chinese leprosy sufferers to a mainland leprosarium, albeit on a much smaller scale and during a much shorter time-frame. The Settlement's authorities similarly opposed the establishment of domestic leprosaria on the grounds that such facilities would serve as a beacon to hordes of Chinese leprosy sufferers. Moreover just as Chinese agency challenged Hong Kong's reliance on deportation, so too did the Chinese Mission to Lepers confront the Settlement's management of the disease though in a much more direct manner. For one thing the Mission was, at its core, a Shanghai organisation – it was founded and headquartered in the city by a group of local Chinese Christians. The Mission therefore took a much more proactive role in establishing local treatment facilities within city. Whilst the Settlement successfully resisted the Mission's efforts within its own borders, the sheer proximity of the Mission's activities beyond its borders inevitably complicated the Settlement's reliance on deportation.

'The Very Rarest of Rarities'

In contrast to Hong Kong, the reported incidence of leprosy was remarkably rare in the International Settlement of Shanghai during the 19th century. Early commentators, however, suggested that the disease was prevalent in the countryside beyond the city, and within the province of Jiangsu more generally. James Henderson, a medical missionary who worked in Shanghai from 1860 until shortly before his death in 1865, informed the Royal College of Physicians that he had encountered 75 cases.¹ The following decade the distinguished French physician C. L. M. Durand-Fardel, who was regarded by the French government as an expert on treaty-port sanitation, reported, "Il n'y a pas de lépreux à Shanghai, ou du moins on n'en rencontre que rarement".² He expressed similar statements in an extensive article on the prevalence of the disease in China.³ Two decades later R. A.

¹ George Edward Eyre, and William Spottiswoode eds., *Report on Leprosy by the Royal College of Physicians prepared for, and published by her Majesty's Secretary of State for the Colonies, with an appendix* (London: 1867), 77-78; James Henderson, *Memorials of James Henderson, M.D., medical missionary to China* (London: James Nisbet and Co., 1867).

² Max. Durand-Fardel, *La Chine et les Conditions Sanitaires des Ports ouvert au commerce étranger* (Paris: Librairie J.B. Baillière & Fils, 1877), 173. Durand-Fardel spent the winter of 1875-76 in Shanghai, tasked by the French Ministry of Agriculture and Commerce with "une mission qui me faisait un devoir particulier de porter mon attention sur les sujets de nature à intéresser la médecine et l'hygiène." Durand-Fardel, *La Chine et les Conditions Sanitaires*, 6.

³ Max Durand-Fardel, "La Lèpre en Chine; note pour servir à l'histoire de la lèpre," pt.1, *Gazette médicale de Paris* 26 (1877): 318-319, 318. As Durand-Fardel had "peu d'occasions d'étudier personnellement la lèpre" during his stay, he drew on the annual medical reports of the Sociétés des

Jamieson, a physician who had worked in Shanghai since 1868, responded to Cantlie's circular on the distribution of leprosy by stating:

I should be very glad to answer your questions respecting leprosy if there were any specimens of the disease to be found here. It is the very rarest of rarities in Shanghai, so rare that I should be afraid to say how few cases I have seen in the twenty-six years during which I have been without interruption connected with large hospitals for natives.⁴

Cantlie actually despatched his colleague S. J. B. Skertchly to visit the Settlement's foreign and native hospitals in the "vain hope of finding a solitary leper".⁵ Skertchly alleged that "the Yangste Valley, from the neighbourhood of Shanghai is clean for four hundred miles".⁶ Cantlie warned, however, that Shanghai's "wealth of medical men" might yet trigger an influx of Chinese leprosy sufferers from the interior.⁷ He cited the example of one of his own patients, who had travelled from Yunnan Province to Hong Kong, "a distance of 900 miles as the crow flies", because word had reached him of Cantlie's skills as a foreign doctor.⁸ In time the Settlement's medical authorities would adopt the trope of the leprous migrant from the mainland to justify their opposition to establishing domestic treatment facilities.

The Settlement's Health Department gradually accorded the disease a limited degree of attention during the early 20th century. Leprosy was first mentioned in the department's *Annual Report* for 1902 as a result of the introduction in Shanghai of a new metropolitan-inspired method for the notification of infectious diseases.⁹ The department also began

missions évangéliques as well as the medical reports of the Chinese Maritime Customs, including the memorandum on leprosy by Dr. Wong of Canton – the article that drew attention to Wilson's report regarding the European leprosy sufferer from Hong Kong. For the full article see Max Durand-Fardel, "La Lèpre en Chine; note pour servir à l'histoire de la lèpre," pts. 1-5, *Gazette médicale de Paris* 26 (1877): 318-319; 28 (1877): 341-343; 30 (1877): 367-368; 33 (1877): 402-404; 34 (1877): 414-415.

⁴ James Cantlie, ed., *Report On The Conditions Under Which Leprosy Occurs in China, Indo-China, Malaya, The Archipelago, and Oceania. Compiled Chiefly During 1894* (London: MacMillan and Co., 1897), 44. Jamieson first arrived in Shanghai in 1862 after a brief stint in a consular post in Japan. He established the *Shanghai Recorder* and then became editor of the *North-China Herald*. After qualifying as a doctor in Great Britain (1866-1868) he returned to Shanghai and assumed the editorship of Chinese Maritime Customs *Medical Reports* (1871-1894). Only one of his half-yearly medical reports referred to leprosy in Shanghai. Alexander Jamieson, "Dr. Alexander Jamieson's Report on the Health of Shanghai for the half year ended 30th September, 1871," *Customs Gazette, Medical Reports* 11, no. 6 (Sept. 1871): 33-43, 42-43; Kerrie L. A. MacPherson, *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893* (Hong Kong: Oxford University Press, 1987), 60-61. For more on the Chinese Maritime Customs see Robert Bickers, "'Good work for China in every possible direction': The Foreign Inspectorate of the Chinese Maritime Customs, 1854-1950," in *Twentieth-century Colonialism in China: Localities, the everyday, and the world*, eds. Bryna Goodman and David S. G. Goodman (Abingdon: Routledge, 2012), 25-36.

⁵ Cantlie, ed., *Report*, 44.

⁶ He did not, however, mention his trip to Shanghai. Sydney B. Skertchly, "The Ethnography of Leprosy in the Far East," *Proceedings of the Royal Society of Queensland*, no. 13 (1898): 6.

⁷ Cantlie, ed., *Report*, 44.

⁸ Cantlie, ed., *Report*, 44.

⁹ Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1902* (Shanghai: Kelly & Walsh, 1903), Shanghai Municipal Archives (hereafter SMA), U1/16/4650, 23.

detailing the number of leprosy sufferers admitted to the Chinese Isolation Hospital: a grand total of 8 leprosy sufferers, including one foreign case, were admitted in the first decade of the 20th century (see table A2.2).¹⁰ Arthur Stanley, the Settlement's health officer first dedicated a separate, albeit brief, qualitative mention to the disease in his report for 1908:

Leprosy is a disease which so seldom concerns foreigners in Shanghai that its study is somewhat neglected. Cases are met with occasionally though it seldom figures in the death statement of either foreigners or natives. There appears to be no urgent call for preventive measures.¹¹

As in Hong Kong, leprosy was defined as a rare alien disease, though the Settlement placed less emphasis on its Chinese origins. Consequently Stanley's department ignored it in favour of other more pressing sanitary concerns. This neglect persisted throughout the following decade: Stanley reprinted this brief entry in every annual report through 1921.¹²

Instead the management of the International Settlement's leprosy sufferers during this period was relegated to its hospitals and out-patient facilities. Dr. E. S. Tyau, a Chinese physician recently returned from the University of Pennsylvania's School of Public Health and Tropical Medicine, was placed in charge of the laboratory and out-patient dispensary at St. Luke's Hospital in 1914.¹³ Tyau helped established a Skin Clinic as part of his efforts to co-ordinate the Settlement's out-patient dispensaries:

The first attempt at the scientific treatment of lepers was made in the spring of 1915, when Leprosy was about to enter the domain of curable and preventable diseases....
...In the course of about six months my attention was drawn to quite a few lepers in this Skin Clinic. As some of them were in the advanced stage, the hideous sight and obnoxious odor [*sic*] were very distressing to the other patients and it was felt necessary to have a separate clinic for the lepers. Thus the first clinic for the treatment and study of Leprosy in Shanghai was founded in a humble way.¹⁴

The importance of this early contribution should not be exaggerated. Tyau delivered this statement as part of a paper on the origins of the Chinese Mission to Lepers (C.M.L.) – entitled 'The History of Leprosy in Shanghai' – at the C.M.L.'s First National Leprosy Conference (Shanghai, 1932). As one of the Mission's founders and first vice-presidents, Tyau was eager to highlight the Mission's local Western-educated heritage at a time when the Mission was publicising its efforts to tackle what was by then a growing public health issue in Shanghai.

As far as the Settlement's medical authorities were concerned, however, leprosy continued to be regarded through to the early 1920s. Indeed Stanley's successor, C. Noel

¹⁰ Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1903* (Shanghai: Kelly & Walsh, 1904), SMA, U1/16/4650, 21. Despite the rarity of admissions, the disease retained a permanent entry in this hospital's annual morbidity and mortality table under successive heads of the Settlement's health department.

¹¹ Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1908* (Shanghai: Kelly & Walsh, 1909), SMA, U1/16/4651, 19.

¹² Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1921* (Shanghai: Kelly & Walsh, 1922), SMA, U1/16/4653, 20.

¹³ E. S. Tyau, "The History of Leprosy in Shanghai," *Leper Quarterly* 6, no. 4 (1932): 45-51, 46.

¹⁴ *Ibid.*, 46-47.

Davis, dropped all qualitative references to the disease from his annual reports. This absence is striking given the contemporary growth of international concern for the prevalence of the disease in China. For instance the conference on leprosy that was organised as part of the inauguration of the Peiping Union Medical College (P.U.M.C.) in 1921 estimated China's population of leprosy sufferers at ½ million.¹⁵ Davis's contribution to *The China Medical Journal's* "special 'Leprosy' number" in 1925 is especially revealing. The journal's editor invited him to submit a "leading article...on leprosy from the point of view of the Commissioner of Public Health of such a large city as Shanghai" for a forthcoming issue that would contain the papers on leprosy prevention and treatment from the joint medical conferences in Hong Kong.¹⁶ Davis's discussion on modern leprosy prevention emphasised the importance of public health propaganda; the necessity for confidential notifications of cases; the importance of segregating leprosy sufferers in dedicated institutions that "should give opportunities for full and attractive individual and corporate life"; and the desirability of specially-trained medical officers equipped with modern research facilities.¹⁷ Strikingly Davis's editorial made no reference to the International Settlement whatsoever. Instead he concluded:

Such a scheme would take years to carry out, and still more years to achieve the desired result, but it could and should be efficiently undertaken by the Ministry of Health of a powerful and stable Government, inspired by the highest humanitarian and scientific ideals.¹⁸

By referring to the 'Ministry of Health' as opposed to his own Public Health Department, Davis clearly considered leprosy to be an exclusively Chinese public health, and therefore a priority for the new Nationalist government.

The Early Practice of Deportation

Reports from a foreign missionary highlighting the prevalence of leprosy in Shanghai in the late 1920s inadvertently precipitated the International Settlement's emulation of Hong Kong's reliance on mainland leprosaria. Elizabeth Shapleigh, a medical missionary who established and ran the Hongkew General Dispensary, informed both the Chinese Mission to Lepers and the Health Bureau of the Greater Chinese Municipality that leprosy was "very

¹⁵ Peiping Union Medical College, *Addresses & Papers: Dedication Ceremonies and Medical Conferences, Peking Union Medical College, September 15 -22, 1921* (Peking, 1922), 274-275.

¹⁶ E. M. Merrins to C. N. Davis, 22 Apr. 1925, SMA, U1/16/2619, 22. See *China Medical Journal* 39, no. 7 (1925): 575-636.

¹⁷ C. Noel Davis, "Leprosy," *China Medical Journal*, 39, no. 7 (1925): 632-634. Davis's summary of the disease's dissemination from Ancient Egypt echoed that of Sir Leonard Rogers. Davis also noted that Chinese emigrants were held responsible for introducing the disease around the Pacific Rim, a clear reference to Cantlie's work some three decades earlier. See for example Leonard Rogers, "The Spread, Probable Mode of Infection, and Prophylaxis of Leprosy," *China Medical Journal* 36, no. 6 (1922): 474-486.

¹⁸ Davis, "Leprosy," *China Medical Journal*, 39, no. 7 (1925): 634.

prevalent” in Hongkew (Hongkou), the Japanese district that straddled the Settlement’s northern border.¹⁹ She estimated that there were between 100 and 200 leprosy sufferers, including those in hiding.²⁰ Shapleigh’s alarming report localised the nascent official and popular Chinese concern for the disease. The Chinese municipal health authorities tasked two Chinese medical experts to accompany Rev. T. C. Wu (Wu Zhijian), the Mission’s first general secretary, to conduct house-to-house enquiries in the Hongkew District.²¹ On the basis of their discovery of 8 “fully developed” cases *The Leper Quarterly*, the C.M.L.’s bilingual mouthpiece, stoked local Chinese and foreign fears about the unregulated prevalence of the disease within the city:

Those of us who have been living in good health and in comfort have never dreamed that Shanghai has so many lepers. The appalling condition of leprosy in our midst ought to be a challenge, both to the Chinese and Settlement authorities and to every right-thinking man and woman for immediate action.²²

Prior to Shapleigh’s report, the Chinese Mission to Lepers had only interrogated leprosy as a national issue. Indeed it had adopted the motto ‘Ridding China of Leprosy’. Indeed shortly after the Mission’s establishment Wu stated that he and his fellow founding members, who were prominent “Christian leaders in Shanghai, mostly Southerners”, had been “anxious” to support the leprosy sufferers in their native towns, but had not found “any chance to act in Shanghai” because the disease was considered “almost non-existent”.²³ Thus Shapleigh’s ‘discovery’ of leprosy sufferers in Hongkew prompted the Chinese Mission to Lepers to promote leprosy as a major *local* trans-municipal public health issue. The Mission promptly set up a “Leper Clinic” at the Dispensary, where Tyau and a Chinese nurse helped treat a small number patients (figs. 12 and 13).²⁴ The S.M.C.’s Public Health Department was sufficiently aroused by the local press coverage that the Deputy Commissioner of Public Health visited the clinic in December 1929.²⁵

¹⁹ Shapleigh established the Swarthmore Dispensary, on Tien Teh Road, in November 1925 but then relocated to Hongkew three years later. She ran the Hongkew dispensary until her death in 1930. Elizabeth Shapleigh, “Leprosy Prevalent in Shanghai,” *Leper Quarterly* 2, no. 4 (1928): 30; F. Y. Pan, “Shanghai: Hongkew General Dispensary,” *Chinese Medical Journal* 44, no. 8 (1930): 793.

²⁰ Shapleigh, “Leprosy Prevalent in Shanghai,” 30; “Investigation Reveals Much Leprosy in Shanghai,” *Leper Quarterly* 3, no. 1 (1929): 31.

²¹ “Investigation Reveals Much Leprosy in Shanghai,” 31. Shapleigh turned down Wu’s suggestion that she might conduct the survey herself in return for a fee of \$10 and free bandages for three months. Shapleigh complained about the lack of funding from the C.M.L. to the Settlement’s Deputy Commissioner of Public Health. W. Wolnizer (P.H.D.), “Visit of the D.C.P.H. to the Hong-Kew Leper Clinic on 12th December 1929,” 12 Dec. 1929, SMA, U1/16/2620, 43.

²² Rev. Wu probably wrote the article himself. “Investigation Reveals Much Leprosy in Shanghai,” 31.

²³ T. C. Wu, “Editorial,” *Leper Quarterly* 1 (1927): 1. As Leung has noted, many of the Mission’s board members were fervent Protestant Christians, including its president William Yinson Lee, general secretary Wu and vice presidents Drs. Fong F. See and E. S. Tyau. Angela Ki Che Leung, *Leprosy in China: A History* (New York: Columbia University Press, 2009), 161.

²⁴ “The Leper World: The Shanghai Leper Clinic,” *Leper Quarterly* 3, nos. 2&3 (1929): 42. The Mission attributed the low attendance rate to local ignorance about the effectiveness of modern treatment.

²⁵ (Actg. D.C.I. for Com. Police) to (C.P.H.), 25 Feb. 1929, SMA, U1/16/2620, 3-4; “Numbers of Lepers in Shanghai: Investigation by Mission and Chinese Authorities,” *North-China Herald*, Mar. 2, 1929, 358; “Local Work Among Lepers: Over 200 in Shanghai,” *North-China Herald*, July 27, 1929, 132; W.



Figure 12. E. S. Tyau (far left) and the Leper Clinic at the Hongkew General Dispensary, ca. 1929.²⁶

Figure 13. Staff and Patients at the C.M.L.'s Hongkew Clinic for Skin Diseases, ca. 1933.²⁷



Despite its proximity to the International Settlement the Hongkew General Dispensary, which was taken over by the C.M.L. and renamed the Hongkew Clinic for Skin Diseases following Shapleigh's death, nevertheless appeared to offer a convenient solution to the problem of accommodating the Settlement's leprosy sufferers. This is borne out by the case of Dong Siau Lau, a remanded prisoner admitted to the Chinese Isolation Hospital with a "moderately advanced stage of leprosy", who was ordered to be "removed" to the Hongkew

Wolnizer (P.H.D.), "Visit of the D.C.P.H. to the Hong-Kew Leper Clinic on 12th December 1929", 12 Dec. 1929, SMA, U1/16/2620, 43. See also C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1929* (Shanghai: Kelly & Walsh, 1930), SMA, U1/16/4655, 23; "Numbers of Lepers in Shanghai," *North-China Daily News*, Feb. 23, 1929, SMA, U1/16/2620, 2.

²⁶ *The Leper Quarterly* 3, nos. 2&3 (1929).

²⁷ *The Leper Quarterly* 7, no. 3 (1933).

Dispensary.²⁸ This order represented the first attempt to transfer a leprosy sufferer to a treatment facility beyond the Settlement's borders. But Dong was promptly returned to the Chinese Isolation Hospital owing to the absence of any beds at the Hongkew clinic: neither the police nor the medical authorities were aware that the clinic was only an out-patient facility.²⁹ Dong's status as a remanded prisoner presented the authorities with a unique problem as Duck, the Acting Commissioner of Public Health, reported:

The few lepers I have seen in Shanghai who had no means were advised to stay at their homes, and this would have been done already in the case in question if the charge were dismissed. If the case is remanded indefinitely it appears to me that the Police Department will bear the cost of a special guard for the remainder of his life, as he will not recover to any appreciable extent, and is likely to live many years.³⁰

As in Hong Kong, the incarceration of prisoners suffering from the disease heightened official fears of contagion. Resigned to the incurability of Dong's fate, the medical authorities considered alternative treatment facilities beyond the Settlement's borders.³¹ But the patient "refused" to be sent anywhere apart from his home in Chapei (Zhabei), the district adjacent to Hongkew.³² Whilst the medical authorities were anxious to resolve the situation as quickly as possible, even suggesting that the police might acquiesce to Dong's release, the police authorities secured a court order enforcing the prisoner's transfer to a missionary leprosarium in Hangzhou for medical treatment.³³

The Church Missionary Society had been treating Chinese leprosy sufferers in its hospital at Hangzhou since the 1880s. Duncan Main, the hospital's founder and medical superintendent, subsequently established a dedicated leprosy hospital, the Kwang Chi Leper Hospital, at the turn of the century.³⁴ By the late 1920s, the hospital accommodated more than sixty patients in gender-segregated homes, some of whom, including a young lady from Hong Kong, were sent by the Chinese Mission to Lepers.³⁵ The hospital was nationalised soon afterwards, much to the dismay of the Chinese Mission to Lepers and the European medical

²⁸ E. F. Duck (Assist. C.P.H.) to M.O. Springfield (Assist. Com. Police), 10 June 1930, SMA, U1/16/2621, 2; Springfield to Duck, 17 June 1930, U1/16/2621, 3.

²⁹ Duck to Springfield, 20 June 1930, SMA, U1/16/2621, 6. Wolnizer's report on the clinic had stated that it was primarily an out-patient facility.

³⁰ Duck to Springfield, 4 July 1930, SMA, U1/16/2621, 9.

³¹ When Dong's disease was first brought to Duck's attention, he stated, "There is no prospect whatever of permanent cure." Duck to Springfield, 10 June 1930, SMA, U1/16/2621, 2.

³² Minute by E. Stillwell (Matron, C.H.I.), 18 July 1930, SMA, U1/16/2621, 10.

³³ Duck to Springfield, 22 July 1930, SMA, U1/16/2621, 12; (Com. Police) to Duck, 12 Aug. 1930, SMA, U1/16/2621, 13.

³⁴ According to Wang the leprosy hospital was established in 1897 but Sturton stated that the temporary leprosy hospital was not established until 1903. Wang Lin-Zei, "A Brief History of the Hangchow Leper Hospital," *Leper Quarterly* 2 (1927): 20-22, 20; Phyllis Haddow and Sydney D. Sturton, "Hangchow," *Chinese Medical Journal* 44, no. 8 (1930): 789-792, 789-790; S. D. Sturton, "The Problem of Leprosy in Hangchow," *Chinese Medical Journal* 47, no. 3 (1933): 263-269, 263.

³⁵ Duncan Main, "The Hangchow Leper Hospital," *Leper Quarterly* 1 (1927): 31-32; Wang "A Brief History of the Hangchow Leper Hospital," 20-22.

staff.³⁶ The missionaries regained control of the hospital the following summer, but the institution was more strictly administered – according to Leung this institution exemplified the “Nationalist-hybrid” model.³⁷ Sturton, the Hospital’s Superintendent, therefore requested further particulars about the remanded prisoner:

I should be glad to know on what charge Dong Siau Lau was convicted, & if you consider him a dangerous character, such as an armed robber or kidnapper. We could not undertake to restrain such a patient in Hospital, & think it probable that he would break out by night. If he has been convicted for some minor or technical offence we shall be glad to go further into the matter with you.³⁸

In assuring Sturton that Dong had only been convicted of minor offences, Duck acknowledged that Sturton “would not take any precautions to restrain the patient in hospital, and would not be in any way responsible should he decide to leave eventually”.³⁹ Duck’s admission sat uneasily with the police’s insistence that Dong be transferred to Hangzhou rather than released to return home. Duck probably viewed Dong’s transfer as an unsatisfactory but necessary expedient given: the lack of suitable alternatives in and around the International Settlement; the urgency of freeing up Dong’s bed in the Chinese Isolation Hospital for other patients; and the fears of contagion that his presence provoked.⁴⁰

Dong’s admission to the Kwang Chi Leper Hospital in Hangzhou established a precedent. The following month the Public Health Department contacted Sturton to have a beggar suffering from an advanced stage of the disease transferred as soon as possible.⁴¹ Significantly the beggar’s consent for the transfer was sought.⁴² Three further cases were transferred, including “a beggar in advanced stage of the disease” and a Chinese policeman “in an early stage”.⁴³ Their transfers mirrored Dong’s removal, and indeed Hong Kong’s practice of transferring patients to Sheklung during the 1930s. As a result of Sturton’s stipulation that a plain-clothes member of the Shanghai Municipal Police accompany Dong on the journey to Hangzhou, all subsequent Settlement cases travelled by train under escort from a member of the Public Health Department and with the consent of the Shanghai railway authorities.⁴⁴ Indeed the latter insisted that both the leprosy cases and their respective medical ‘escorts’ travel by first class, allegedly in consideration of “disinfection and other

³⁶ “Chinese Mission to Lepers: Hangchow Hospital and Medical Training College Taken Over by Government,” *North-China Herald*, May 7, 1927, 246; Haddow and Sturton, “Hangchow,” 790; Sturton, “The Problem of Leprosy in Hangchow,” 263-269.

³⁷ Leung, *Leprosy in China*, 164-165.

³⁸ S. D. Sturton to Duck, 20 Aug. 1930, SMA, U1/16/2621, 15.

³⁹ Duck to Sturton, 26 Aug. 1930, SMA, U1/16/2621, 16.

⁴⁰ Duck to Springfield, 22 July 1930, SMA, U1/16/2621, 12.

⁴¹ H. Smith (P.H.D.) to Sturton, 12 Jan. 1931, SMA, U1-16-2621, 24.

⁴² (C.H.I., P.H.D.) to M. Weaves, 6 Nov. 1930, SMA, U1/16/752, 68.

⁴³ D. Allan (P.H.D.) to Sturton, 7 Jan. 1932, SMA, U1/16/2621, 30; E. L. Sergeant (Kwang Chi Leper Hospital) to Allan, 18 June 1933, SMA, U1/16/2621; C.M. Zao (P.H.D.) to D. Heathcote (P.H.D.), 20 June 1933, SMA, U1/16/2621, 43.

⁴⁴ U1-16-2621 Sturton to Duck, 20 Sept. 1930, SMA, U1/16/2621, 18.

routine preventive measures”.⁴⁵ Travelling in the less crowded first class compartments may have rendered the transfer less conspicuous, reducing the possibility of eliciting anxious objections from the general public.⁴⁶ The policy of transferring Shanghai’s lepers to the C.M.S. hospital Hangzhou necessitated only a limited expenditure: a \$5 admission fee, a single first class ticket for the patient and the travel expenses incurred by the sanitary inspector or cadet health inspector tasked with escorting the patient.⁴⁷ As Bashford explained, deportation removed sufferers beyond “Imperial or Commonwealth territory or systems of obligation”.⁴⁸ The Settlement’s reliance on Hangzhou thus mirrored Hong Kong’s early reliance on mainland leprosia such as those at Sheklung, Tungkun and Pakhoi. This reliance provides further evidence of a distinctive sub-set within Leung’s “missionary” model: those that accommodated deported patients.

The International Settlement’s reliance on deportation, however, was extremely limited compared to Hong Kong’s management of the disease. Only five patients were transferred to Hangzhou during this period. Deportation was restricted to destitute leprosy sufferers, and in all cases the transfer was consensual.⁴⁹ As we shall see, the authorities also removed patients to other mainland sites during this period.⁵⁰ Strikingly the Inspector responsible for reporting on these latter individuals was tasked with compiling a “Suggested Tour of Inspection” of eight of “the most outstanding cases” as part of the department’s preparations for the reception of delegates attending a medical conference in Nanjing.⁵¹ Ultimately the Settlement’s reliance on deportation to the hospital at Hangzhou was an intermittent practice rather than a concerted policy.

This practice was permanently interrupted in the mid-1930s as a result of changed circumstances between the hospital and the Hangzhou municipal authorities. The court authorities once again mistook the Hongkew Clinic for Skin Diseases for an in-patient facility: Zung Pong Sai, a prisoner diagnosed with leprosy on his admission to Ward Road Gaol, was

⁴⁵ W. K. Dunscombe (P.H.D.) to Sergeant, 20 June 1933, SMA, U1/16/2621, 42; U1-16-2621 T. F. Huang (Med, Officer, Rwy. Authorities) to Allan, 16 June 1933, SMA, U1/16/2621, 37.

⁴⁶ Cadet Zao stated that after transferring “the patient” to the Shanghai North Station by ambulance, he “was placed in a quite corner in the 1st class train.” C. M. Zao (P.H.D.) to D. Heathcote (P.H.D.), 20 June 1933, SMA, U1/16/2621, 43.

⁴⁷ Inspector Wolnizer budgeted \$34.62, including \$11.09 for a return 1st class ticket for himself, \$6.09 for the leprosy sufferer he was escorting, \$6.50 for food (for himself), a \$5 hospital admission fee, \$5 for incidental expenses in Hangzhou and \$1 in tips. Cadet Zao submitted a similar budget, though ticket prices had risen to \$12.38 and \$8.25 for a return and a single 1st class ticket respectively. Wolnizer to Heathcote, 19 Jan. 1931, SMA, U1/16/2621, 28; Zao to Heathcote, 17 May 1933, SMA, U1/16/2621, 33.

⁴⁸ Alison Bashford, *Imperial Hygiene: A Critical History of Colonialism, Nationalism and Public Health* (Basingstoke: Palgrave Macmillan, 2004), 89.

⁴⁹ Jordan noted that “it is not easy to arrange for the removal thither [i.e. to Hangzhou] of Shanghai lepers except with their consent”. “Extract from the Meeting of the Health Committee”, 4 May 1933, SMA, U1/16/753(1), 9.

⁵⁰ Others were ‘removed’ to Yangzhou, Nanjing, Canton, Kongpo and Suzhou. The department compiled details about the leprosy sufferers residing in all four districts, including those who were removed. H. J. Mentor (P.H.D.) to Heathcote, 4 Oct. 1934, SMA, U1/16/2690, 73-77.

⁵¹ Mentor to Heathcote, 5 Oct. 1934, SMA, U1/16/2690, 78.

ordered to be confined within the clinic.⁵² Following his inevitable rejection, the Settlement contacted Sturton in the hope of having the prisoner admitted to the Leper Hospital at Hangzhou. Sturton regretfully informed the Acting Commissioner of Police that the hospital now had “a ‘Gentlemen’s Agreement’ with the Hangchow Municipality to receive only local cases, which we usually interpret as meaning Chekiang [Zhejiang Province]”.⁵³ Miss Maud Henderson of the St. Faiths Settlement, which lay on Jessfield Road in the western extra-Settlement area, similarly failed to have Wang Kying-ziang, a young Chinese boy suffering from leprosy, admitted to the hospital in Hangzhou.⁵⁴ Ironically Wang was admitted to the hospital in Hangzhou in July 1937 ahead of the outbreak of the Sino-Japanese War. For the time being, however, he was kept in isolation in the Chinese Red Cross Hospital.⁵⁵ Ultimately the International Settlement’s reliance on this mainland leprosarium relied on the tacit support of the Nationalist authorities. By sheer coincidence an alternative solution materialised just as the Nationalists’ revoked their support – an alternative that was *much* closer to home.

The Emergence of a Public Health Issue: 2,000 Lepers in Shanghai

The Chinese Mission to Lepers was largely responsible for promoting leprosy as a public health issue of local as well as national importance during the 1930s. At one of the Mission’s meetings Dr. Herbert W. Wade, who was visiting from the Culion Leprosy Asylum in the Philippines, alleged that Shanghai’s population of leprosy sufferers stood at over 2,000 cases.⁵⁶ Having recently visited the Hongkew Clinic for Skin Diseases, he probably arrived at this figure by extrapolating Shapleigh’s estimate that there were between 100 and 200 leprosy sufferers in Hongkew alone. The Mission appropriated Wade’s speculative estimate, championing it as the official figure for the city for the rest of the decade.⁵⁷ Reiss, a noted dermatologist and leprologist in Shanghai who supported the Mission’s endeavours, informed a local meeting of the Royal Asiatic Society:

We are living in a modern settlement and lepers are running about without being recognized as such, not to speak of the sad fact that there is no suitable care taken for their treatment. The number of lepers in Shanghai who are attending various hospitals are about 100 to 250, but judging from the fact that lepers are appearing in

⁵² A. Groves, (Yangtzepoo Police Station), 19 Apr. 1935, SMA, U1/16/2621, 48.

⁵³ Sturton to (Actg Com. Police), 13 May 1935, SMA, U1/16/2621, 55.

⁵⁴ M. J. Henderson to Jordan, 10 May 1935, SMA, U1/16/2620, 52-53.

⁵⁵ M. J. Henderson to Jordan, 10 and 11 May 1935, SMA, U1/16/2620, 52-53; W. Noon (P.H.D.) to Heathcote, 11 May 1935, SMA, U1/16/2620, 55.

⁵⁶ O. S. Lieu (Health Committee) to Jordan, 19 May 1931, SMA, U1/16/2620, 5; “Lepers Healed,” *North-China Herald*, May 19, 1931, 223.

⁵⁷ See for example “The Need of a Modern Leprosarium in Shanghai,” *Leper Quarterly* 7 no. 4 (1933): 1-3, 2; “Fighting Shanghai Leprosy,” *Shanghai Evening Post*, Jan. 16, 1934, SMA, U1/16/752, 122; F. C. Yen, “Plans and Objectives for the Proposed Leprosarium for Shanghai,” *Leper Quarterly* 8, nos. 1&2 (1934): 25-30, 25, 28-29; “Dedication of the National Leprosarium of Shanghai,” *Leper Quarterly* 9, no. 3 (1935): 243-245, 243; T. C. Wu, “Leprosy Situation in War-Torn China,” *Leper Quarterly* 13, no. 4 (1939): 142-154, 149; “The Leper World: Shanghai has its Leprosy Problem,” *The Leper Quarterly* 14, no. 4 (1940): 168.

various clinics and disappearing, gives me the supposition that we must have in Shanghai several hundreds of lepers.⁵⁸

Both Wade's and Reiss's statements were primarily intended to generate support for the C.M.L.'s activities. But the notion that a large population of unregulated and unreported leprosy sufferers was roaming the city came as an alarming revelation to many, much to the dismay of the Settlement's Public Health Department.

Unsurprisingly the Settlement's Health Committee was anxious to know whether the Public Health Department could deal with the allegedly high prevalence of this "obnoxious disease".⁵⁹ Jordan, the Commissioner of Public Health, reassured the Committee that his own relatively recent investigations had revealed that Shapleigh's records were inaccurate "due to lack of staff and overwork", and that the four patients that had been traced to the Settlement were in fact "nomads of no fixed abode".⁶⁰ Moreover he objected to the Mission's adoption of Wade's estimate because it failed to distinguish the prevalence of the disease within each of Shanghai's different municipalities:

I have no doubt that the statistics may quite well be true, providing Shanghai is taken to include the limits of Greater Shanghai, which of course as you are aware, spreads over a very great area, and in certain Northern districts [i.e. Chapei and Hongkew] comprises inhabitants of what is known as Beggar or Squatter villages.⁶¹

Every time the Mission publicly referred to Wade's estimate the Settlement's Public Health Department appeared guilty: of negligence at the very least, at worst of failing to abate a major threat to the Settlement's health. The Mission's repeated promotion of this "plain untruth" increasingly frustrated Jordan.⁶² As Commissioner of Public Health, he undertook the task of providing the Health Committee (and the general public) with fresh reliable information.

Jordan initially turned to the Chinese Mission to Lepers in the hope of acquiring accurate information regarding the prevalence of leprosy within the city. He was soon disappointed. William Yinsom Lee, the Mission's President and brother to a member of the Hongkong Auxiliary's organising committee, ventured a figure of 1,000 sufferers as the most conservative estimate for the three municipal areas, and he confidently asserted that at least a quarter of them were to be found within the Settlement alone.⁶³ Lee's figures, however, met

⁵⁸ Reiss made his comments at a meeting of the Royal Asiatic Society in Shanghai. Frederick Reiss, "Leprosy and its Relationship to Shanghai," *Leper Quarterly* 5, no. 1 (1931): 3-7, 6. He had previously delivered presentations to the Chinese Mission to Lepers and the C.M.L.'s Shanghai Women's Auxiliary. Reiss spent 19 years working in China. In Shanghai he supervised patients with skin diseases at the Chinese Red Cross General Hospital and the Lester Chinese Hospital. He published a number of dermatological studies (in English and German) in dedicated scientific journals. See bibliography.

⁵⁹ Lieu to Jordan, 19 May 1931, SMA, U1/16/2620, 5.

⁶⁰ Jordan to Lieu, 20 May 1931, SMA, U1/16/2620, 6.

⁶¹ Jordan to Lieu, 20 May 1931, SMA, U1/16/2620, 6.

⁶² Jordan appended his comments to a newspaper clipping. "Leprosarium Construction to Start Soon," *China Press*, Feb. 13, 1935, SMA, U1/16/752, 148.

⁶³ W. Y. Lee (C.M.L.) to Jordan, ca. 20 May 1931, SMA, U1/16/2620, 9. He extrapolated from the number of reported cases in Shanghai's hospitals during the last four years – allegedly over 250 cases.

with the Public Health Department's scorn; the department's secretary informed Jordan, "I do not think there is any use wasting our time conducting further correspondence with Mr. Lee".⁶⁴ This disregard for Lee's estimates reflected the frustration evinced by the medical authorities at the absence of reliable statistics. Moreover it demonstrated that the Public Health Department viewed leprosy as an alien, mainland Chinese disease. The department was therefore disinclined to accept the high extrapolative ratios that the Chinese Mission to Lepers favoured to account for concealed cases.

Instead the Public Health Department initiated its own investigation in order to assuage the S.M.C.'s fears. By corresponding directly with Shanghai's hospitals, Jordan ascertained that only a handful of cases were from the Settlement. The Hongkew Clinic, for instance, eventually reported that thirty-four of the 100 cases that its staff had treated in the past year were from the Settlement.⁶⁵ But Jordan subsequently informed the Shanghai Municipal Council that seven of these thirty-four 'Settlement cases' resided outside the Settlement's jurisdiction. Moreover only six of the remaining twenty-seven cases could be traced to addresses provided by the Clinic. Jordan concluded:

Making due allowance for concealed and untreated cases, and bearing in mind the fact that most lepers are by virtue of circumstances, more or less compelled to lead a nomadic existence, I am of opinion [*sic*] that the result of this enquiry serves to show that the incidence of Leprosy in the Settlement has been overrated.⁶⁶

Crucially Jordan withheld from estimating how many unreported lepers were living in the Settlement. He was among a minority to do so. Reiss, the noted dermatologist, speculated that there were 400 to 500 cases within the Settlement.⁶⁷

Whilst Jordan was content to let the matter rest there, the Chinese Mission to Lepers was eager to draw international attention to its efforts by hosting the First National Leprosy Conference in Shanghai. This conference provided an ideal opportunity to showcase the Mission's local work including its management of the Hongkew Clinic. For instance the clinic's superintendents presented a detailed account of twenty-nine of the clinic's cases, twelve of whom "seemingly acquired the disease in Shanghai and its immediate neighbourhood".⁶⁸ Tyau, now Vice-President of the C.M.L., delivered his paper on 'The History of Leprosy in Shanghai', in which he summarised: his involvement in setting up and running the St Luke's Leper Clinic in the 1910s; the "epoch-making" establishment of the Chinese Mission to Lepers in 1926; and the Mission's management of the Hongkew Clinic for Skin Diseases.⁶⁹ He concluded:

⁶⁴ G. Turnbull (P.H.D.) to Jordan, 30 May 1931, SMA, U1/16/2620, 10.

⁶⁵ "Rough translation of Letter from Hongkew Leper Clinic", ca. July 1931, SMA, U1/16/2620, 18.

⁶⁶ Jordan to (Actg Sec., S.M.C.), 1 July 1931, SMA, U1/16/2620, 22-23, 23.

⁶⁷ F. Reiss to Jordan, 12 Aug. 1931, SMA, U1/16/2620, 26. See also Reiss, "Leprosy And Its Relationship To Shanghai," 2-7; F. Reiss, "The Present Conditions of Leprosy in Shanghai and the Future Outlook," *Leper Quarterly* 5, no. 4 (1931): 2-7.

⁶⁸ F. K. Chen and W. Y. Chen, "A Study of Cases of Leprosy as Observed in the Hongkew Clinic for Skin Diseases," *Leper Quarterly* 6, no. 4 (1932): 59-62.

⁶⁹ Tyau, "The History of Leprosy in Shanghai," 45-51.

The history of Leprosy in Shanghai is undeniably one of progress in every way. Surely the residents of Shanghai, particularly the medical men, should all join in the march, nay, the crusade against the further ravages of the disease.⁷⁰

The C.M.L. conference highlighted the importance of leprosy as a public health issue that transcended all three municipalities. The Hongkew Clinic's superintendents emphasised this fact in their annual report on the clinic, which was published in the following issue of *The Leper Quarterly*. The report included a map that suggested that many of the clinic's patients resided within the International Settlement and the French Concession.⁷¹ The map not only placed a number of leprosy sufferers within the Settlement's midst, but suggested that many more travelled through the Settlement (or at the very least up the Huangpu River past the Bund) in order to secure treatment at the clinic.

A Major Turning Point

Jordan's report 'Leprosy and the Medical Conference at Nanking' (1933) marked a significant turning point in the Settlement's management of the disease. Jordan, the Settlement's Commissioner of Public Health, found himself caught between a rock and a hard place. On the one hand he had misgivings about the Mission's "projected and possibly visionary developments".⁷² Away from the international spotlight the C.M.L.'s physicians were franker about the Clinic's limitations, notably the lack of temporary hospital accommodation.⁷³ The Mission therefore began to envisage the possibility of building a small leprosy hospital in Shanghai and a larger leprosarium on the city's outskirts.⁷⁴ On the other hand Jordan was anxious to avoid international criticism at the Ninth Congress of the Far Eastern Association of Tropical Medicine, which was scheduled to take place in Nanjing in October 1933. Consequently he informed the Shanghai Municipal Council:

It is highly probable that the whole subject of Leprosy will be ventilated at the Meetings in Nanking and that owing to a general confusion between the Leprosy statistics (mainly hypothetical) of the interior, and those in Shanghai, an attempt may be made to indicate a supine spirit in the health administration of various cities.⁷⁵

⁷⁰ Ibid., 51.

⁷¹ F. K. Chen and W. Y. Chen, "Report of the Hongkew Clinic for Skin Diseases," *Leper Quarterly* 7, no. 1 (1933): 41-48.

⁷² Jordan, "Leprosy and the Medical Conference at Nanking", 18 Apr. 1933, SMA, U1/16/753(1), 2.

⁷³ Chen and Chen, "Report of the Hongkew," 47. See also "Leprosy In Yangtze Valley Told To Rotarians," *Shanghai Times*, Apr., 1933, SMA, U1/16/2618, 104.

⁷⁴ Chen and Chen, "Report of the Hongkew Clinic," 47; "Leprosy In Yangtze Valley," *Shanghai Times*, Apr. 1933, SMA, U1/16/2618, 104; Jordan, "Leprosy and the Medical Conference at Nanking", 18 Apr. 1933, SMA, U1/16/753(1), 5-6.

⁷⁵ Jordan, "Leprosy and the Medical Conference at Nanking", 18 Apr. 1933, SMA, U1/16/753(1), 2-7, 2. The congress was postponed until October 1934. Reiss and D. G. Lai, who would later become the honorary superintendent of the National Leprosarium, both presented papers at the conference. Also in attendance were F. C. Yen, the C.M.L.'s president, and Drs. Wade and Huizenga, and Drs. Wellington, Jackson and Li Shu Fan from Hong Kong. See Wu Lien-teh and Chang Yao, eds., *Transactions of the Ninth Congress, held in Nanking, China, October 2-8, 1934* (Nanjing: National Health Administration 1935), 1:5-21.

Jordan rejected the Mission's estimate and he resented its recent exaggerations regarding the high prevalence of the disease in the municipal Gaol.⁷⁶ Not only had Reiss and other C.M.L. representatives failed to identify any new cases, but the Assistant Superintendent of Hospitals had recently confirmed that none of the prisoners were suffering from the disease.⁷⁷ Moreover Jordan pointed out that the present superintendent of the Gaol had served on the Visiting Committee of the Leprosy Commission in the Federated Malay States for three years, and was therefore "quite conversant with the appearances of Leprosy".⁷⁸

Jordan's report was distinctive for several reasons. Firstly, whereas the department's census in 1931 had stopped short of estimating the total number of sufferers within the Settlement, Jordan now posited that there were no more than 100 cases including the 40 cases already known to the authorities.⁷⁹ This represented the first official acknowledgement of a not inconsiderable number of local leprosy sufferers. Secondly, Jordan identified leprosy as "an imported disease", confined largely to the "nomadic and poorer populations, probably to be found mostly in the floating populations contained in beggar boats and Squatter villages".⁸⁰ The fear of migrating leprosy sufferers was heightened by the belief that this migration was likely to go largely undetected, and the imported cases "would [therefore] only have to remain concealed for a time in order to become residents".⁸¹ Jordan's assumptions about leprosy paralleled Hong Kong's fears of this Chinese disease.

Jordan's report also represented a radical departure from earlier discussions on the subject by actively seeking to revise the Settlement's management of leprosy. He acknowledged that the practice of relocating consenting homeless leprosy cases to the Kwang Chi Leper Hospital in Hangzhou was "quite embarrassing as there is no suitable machinery for dealing with them".⁸² Moreover he even conceded that other cases "perhaps 3 or 4 in number, could be located, but frankly at the moment we are not too desirous to search for them, as we do not know what to do with them when found".⁸³ The Mission's plan to establish a leprosy clinic within the Settlement only threatened to make things worse: "if the fame of a Leper

⁷⁶ Jordan, "Leprosy and the Medical Conference at Nanking", 18 Apr. 1933, SMA, U1/16/753(1), 2.

⁷⁷ D. Allan (P.H.D.) to Jordan, 19 Apr. 1933, SMA, U1/16/2620, 50-51. Reiss and three other Chinese "gentlemen" from the Chinese Mission to Lepers paid two visits to the Ward Road Gaol in January 1932 and examined several hundred prisoners. The only prisoner they diagnosed with leprosy was already under observation and had been isolated by the Gaol doctor. The outbreak of hostilities prevented Reiss and his companions from returning to conduct further investigations. Allan, the Assistant Superintendent of Hospitals reported that there was no evidence of the disease; he obliged all 6,677 inmates to strip for the medical examination. He was therefore perplexed by Reiss's exaggerated claims.

⁷⁸ Allan to Jordan, 19 Apr. 1933, SMA, U1/16/2620, 51.

⁷⁹ He was quick to point out that "it yet remains to be proved that there are 100 cases". Jordan, "Leprosy and the Medical Conference at Nanking", 18 Apr. 1933, SMA, U1/16/753(1), 4.

⁸⁰ Jordan, "Leprosy and the Medical Conference at Nanking", 18 Apr. 1933, SMA, U1/16/753(1), 4.

⁸¹ *Ibid.*, 4-5.

⁸² *Ibid.*, 5.

⁸³ *Ibid.*, 5.

Clinic in Shanghai becomes noised abroad it will serve as a magnet for cases and the Hospital will soon be filled, with the result that ambulatory cases in greater or lesser number will be found in this town".⁸⁴ As in Hong Kong, the trope of the leprous migrant from the mainland underpinned the Settlement's opposition to the establishment of domestic Western-style isolation facilities. Any increase in the number of resident lepers would not only threaten the health of the Settlement's population, but would also necessitate the transfer of "funds and resources from diseases already a problem in Shanghai to a more or less imported disease".⁸⁵ Jordan therefore advised the S.M.C. that "some main lines of thought should be decided upon".⁸⁶ The impending medical conference in Nanjing added a sense of urgency to these deliberations.

The Chinese Mission to Lepers was either unaware, or optimistically chose to ignore, the Council's staunch opposition to the establishment of treatment facilities within the Settlement. Following a meeting of the Health Committee, the S.M.C.'s Press Information Office released a very brief outline of Jordan's report along with the minutes of the Health Committee's meeting. The press release specifically noted that the report had highlighted the "desirability of avoiding any action which would encourage the migration of lepers from other parts of the country to Shanghai".⁸⁷ An ambiguously worded article in the Chinese press, however, encouraged the Mission to believe that Jordan actually *supported* the proposed relocation of the C.M.L. Hongkew Clinic to premises within the Settlement.⁸⁸ Allan, the Assistant Superintendent of Hospitals, avoided committing himself either way in front of the clinic's staff but in private he was adamant that leprosy was, and should remain an issue for the Chinese municipal authorities:

My visit to the clinic convinces me that in the surrounding districts of Shanghai there is a certain amount of Leprosy to be found, though how it compares with other parts of China, I cannot say, and a leper hospital, or a leper colony, preferably, would not be amiss in the district, providing it is far enough away from the Settlement, but I think that problem is mainly for the Chinese Authorities to settle. All we want is some working arrangement whereby we can get rid of the odd lepers which find their way into the Chinese Isolation Hospital.⁸⁹

The Shanghai Municipal Council promptly corrected the Mission's "fanciful interpretation of bare facts" by reaffirming the Settlement's staunch opposition to any such plans.⁹⁰ But the Settlement's victory was a hollow one. In asserting its authority over the management of leprosy within the confines of the Settlement, the Council was forced to recognise the

⁸⁴ Ibid., 6.

⁸⁵ Ibid., 5.

⁸⁶ Ibid., 7; Minutes of the Health Committee Meeting, 4 May 1933, SMA, U1/16/26, 47-48.

⁸⁷ S.M.C. Press Information Office, "Leprosy – Survey of Local Conditions", 12 May 1933, SMA, U1/4/763, 71.

⁸⁸ "Extract & translation from *China Times*: 'Leprosy – The Prevention of its Spread' ", 14 May 1933, SMA, U1/16/753(1), 13; T. C. Wu (C.M.L.) to E. F. Duck (D.C.P.H.), 12 July 1933, SMA, U1/16/753(1), 10-11.

⁸⁹ Allan to Jordan, 8 June 1933, SMA, U1/16/2620, 45.

⁹⁰ E. T. Nash (Sec., S.M.C.) to Health Committee, 18 July 1933, SMA, U1/4/763, 65.

jurisdictional limits of its opposition: the Settlement was powerless to oppose the construction of a C.M.L. leprosarium just a few miles north of the Settlement.

The National Leprosarium and 'Resident' Leprosy Sufferers

The National Leprosarium was a Chinese leprosarium unlike any other. Built with the support of the Chinese and French municipalities at Tazang (Dachang), the Chinese Mission to Lepers sincerely believed that this leprosarium was “destined to render a nationwide service as a model and training centre” for the rest of the country.⁹¹ Daniel G. Lai, the leprosarium’s honorary superintendent, hoped that the institution would emulate the National Leprosarium at Carville, Louisiana, by serving as a “‘Paradise’ to the Victims of Leprosy”.⁹² But the outbreak of the Sino-Japanese war shattered the Mission’s hopes. According to Leung the war “reduced” the National Leprosarium’s significance as a “Nationalist-hybrid model”.⁹³ But this institution bore none of the hallmarks of this hybrid model. Instead this institution, like Hong Kong’s village of sufferers at Au Tau, lay beyond Leung’s spectrum. The International Settlement’s fascinating relationship with the National Leprosarium defined and indeed increasingly underpinned this institution’s very existence.

Unable to obstruct the Mission’s plans to develop this institution on the northern outskirts of Shanghai, the Settlement’s medical authorities resigned themselves to developing a working relationship with this institution. After all, the leprosarium provided an expedient solution to the Settlement’s leprosy problem now that the Hangzhou hospital refused to accept the Settlement’s patients as a result of its ‘Gentlemen’s agreement’ with the local Chinese authorities.⁹⁴ But whereas the French Municipal Council donated \$10,000 towards the construction of the Leprosarium, the Shanghai Municipal Council stipulated that it was only prepared to pay \$1,200 per annum towards the maintenance of ten Settlement patients.⁹⁵ Dunscombe, who was serving as Acting Commissioner of Public Health in Jordan’s absence, justified this maximum expenditure on account of the rarity of the disease within the Settlement. Moreover he pointed to the Mission’s decision to name the institution ‘the National Leprosarium’ as evidence that it was “primarily a subject of national, rather than

⁹¹ “Dedication of the National Leprosarium of Shanghai,” 243.

⁹² Daniel G. Lai, “What the National Leprosarium of China May Serve,” *Leper Quarterly* 8, nos. 1&2 (1934): 3-7, 4. Lai was intimately familiar with this American institution, having spent time there in the latter half of 1932. During his stay Lai examined the clinical records of the Chinese patients that had been admitted to Carville and met with a number of the patients living there at the time. Daniel G. Lai, “Chinese Leprosy Cases in the U.S. National Leprosarium: A Clinical and Laboratory Study of 36 Patients with 7 Autopsy Reports,” *Chinese Medical Journal* 47, no. 8 (1933): 772-784.

⁹³ Leung, *Leprosy in China*, 163-171, 171. Leung used “Nationalist model” and “Nationalist-hybrid model” interchangeably; “nationalist” models referred to foreign institutions such as Molokai or Cullion. Her brief discussion of the National Leprosarium concluded her analysis of ‘Nationalist-hybrid models’ such as Swatow, Hangzhou and Sheklung.

⁹⁴ Dunscombe to Nash, 26 Jan. 1934, SMA, U1/16/753(1), 22.

⁹⁵ The equivalent of a rate of \$10 per capita per mensem. “Fund For Leper Hospital: Only \$14,000 Needed to Enable Work to be Started,” *North-China Herald*, Feb. 28, 1934, 28, 331; J. M. McKee (S.M.C. Deputy Sec.) to Wu, 22 Feb. 1934, SMA, U1/16/753(1), 25.

local, importance”.⁹⁶ The Settlement’s racialised conceptualisation of leprosy underpinned its reluctance to support this mainland leprosarium. Leprosy was considered a Chinese problem, not an Imperial one.

Almost immediately claims emerged that undermined the Council’s refusal to provide a grant-in-aid towards the construction of the National Leprosarium. The Chinese Mission to Lepers claimed that the number of sufferers residing within the Settlement was far greater than the Public Health Department alleged. Jordan informed his department that “Dr. Lai made a statement in his speech that there were 36 case of Leprosy in the Settlement now, and that the Council’s health report was in error”.⁹⁷ Jordan was so alarmed by Lai’s claims that he immediately issued the following staff memorandum:

- (a) Enquiries are to be made by the Hospital Division as to how their cases were admitted and kept in Hospital (i.e. was there any police assistance).
- (b) Enquiries to be made by the Inspectorial Staff and a Spot Map to be prepared of all the known cases. In the latter connexion enquiries should be made concerning the probable number of cases which have moved into the Settlement since the Sino-Japanese trouble.
- (c) Finally it is desirable to ascertain the number of cases notified by Dr. Lai.⁹⁸

Whereas Jordan’s earlier censuses were largely the product of his own enquiries, he now called for a full departmental investigation into the disease. This memorandum led to the identification of twenty-seven cases, and may have prompted the ‘removal’, referred to above, of eleven of these individuals, principally to Chapei.⁹⁹ Of the fifteen cases still residing in the Settlement, four were natives of Shanghai; a further seven, including a Russian woman, contracted the disease whilst living in the city.¹⁰⁰ The Settlement therefore concluded that its limited support for the National Leprosarium was fully justified. By contrast the Chinese Mission to Lepers continued to insist that a far greater number of the clinic’s patients were residents of the Settlement (table 3.1).

⁹⁶ Dunscombe to Nash, 26 Jan. 1934, SMA, U1/16/753(1), 21. Jordan actually donated \$30 towards the construction of the institution. See SMA, U1/16/4840, 18.

⁹⁷ Emphasis in the original. Jordan, “Staff Memo No.16: Leprosy”, 29 Mar. 1934, SMA, U1/16/2622, 171. Jordan also stated that Lai presented a map indicating the location of at least 11 different cases within the Settlement at a C.M.L. meeting. Bizarrely, Jordan then went on to detail the locations of 12-13 leprosy cases, though as he himself admitted, “It was only possible to glance at the map and hence locations are a bit vague”. Lai published his paper in *The Leper Quarterly*, though the article did not explicitly refer to the number of cases in the Settlement, or indeed the city, nor did it include the map. Lai may have used the map published by Drs. Chen and Chen in the clinic’s annual report. Lai, “What the National Leprosarium of China May Serve,” 2-7.

⁹⁸ Emphasis in the original. Jordan, “Staff Memo No.16: Leprosy”, 29 Mar. 1934, SMA, U1/16/2622, 171.

⁹⁹ H. J. Mentor (P.H.D.) to Heathcote, 4 Oct. 1934, SMA, U1/16/2690, 73-77. Jordan’s annual report noted that a total of 22 Chinese leprosy sufferers – 7 residents and 15 non-residents – were notified during the year, though his lists do not correspond exactly with Mentor’s. J. H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1934* (Shanghai: Kelly & Walsh, 1935), SMA, U1/16/4655, 20-22, 20.

¹⁰⁰ Mentor did not specify which Municipality they were natives of. H. J. Mentor (P.H.D.) to Heathcote, 4 Oct. 1934, SMA, U1/16/2690, 73-76.

Table 3.4. *Distribution in Shanghai: Out-patients at the Hongkew Clinic for Skin Diseases, 1934-35.*¹⁰¹

Origin	Cases	% of Total Cases
Chapei	83	40.4
International Settlement	68	33.1
French Concession	18	8.8
Nantao	29	14.1
Pudong	7	3.4
TOTAL	205	

The admission of leprosy sufferers from the Settlement to the National Leprosarium was a contentious issue from the moment the institution officially opened its doors in December 1935. When Kao Sz-ling, a young homeless beggar picked up by the police, was suspected of suffering from leprosy, the police attempted to transfer him to the National Leprosarium. Kao was the very first leprosy sufferer that the Public Health Department attempted to admit to this institution; Wang Kying Ziang, the young boy from the St. Faiths Settlement whose admission to the hospital in Hangzhou had been refused, had already been admitted to the National Leprosarium by the Chinese municipal authorities.¹⁰² Rev. Wu, the C.M.L.'s general secretary, refused to admit Kao without a letter of request from the Public Health Department.¹⁰³ The Department, however, refused to take responsibility for the patient because Kao Sz-ling was not considered a "bona-fide resident", having only recently arrived in Shanghai.¹⁰⁴ Duck therefore informed Wu:

Despite the fact that specific arrangements have not yet been concluded between the Mission and the Council for the care and maintenance of what may be described as "non-residents" of the Settlement, it is clear to me that the admission of Kao to the Leprosarium is a matter of urgency.¹⁰⁵

The Public Health Department expected the Leprosarium to admit cases from the Settlement, even if the Settlement refused to acknowledge them as 'residents' and therefore assume financial responsibility for their maintenance. Duck considered that it would be "manifestly unfair" for the Council to assume responsibility for these cases.¹⁰⁶ Given the philanthropic and humanitarian principles upon which the C.M.L. was founded, the size of the institution and the fact that the Leprosarium's inauguration coincided with the closure of the Hongkew Clinic,

¹⁰¹ W. Y. Chen, "Annual Report of the Hongkew Clinic for Skin Diseases, for the Year 1934-1935," *Leper Quarterly*, 9, no. 2 (1935): 235.

¹⁰² C.H.I. Bogomoloff reported that Wang was admitted to the National Leprosarium on November 1st. M. J. Henderson to Jordan, 10 May 1935, SMA, U1/16/2620, 52-53; A. E. C. Charlot (P.H.D.) to C. N. Bogomoloff (P.H.D.), 8 May 1936, SMA, U1/16/759(1), 6.

¹⁰³ A. W. Tucker (St. Luke's Hospt.) to Jordan, 17 Dec. 1935, SMA, U1/16/753(1), 38.

¹⁰⁴ From Tainan, Shandong Province. H. Smith (P.H.D.) to E.F. Duck (D.C.P.H.), 17 Dec. 1935, SMA, U1/16/753(1), 39.

¹⁰⁵ E. F. Duck (D.C.P.H.) to Wu (C.M.L.), 20 Dec. 1935, SMA, U1/4/232, 207.

¹⁰⁶ Duck to G. G. Phillips (Sec., S.M.C.), 21 Dec. 1935, SMA, U1/16/753(1), 37.

the Mission had no other choice but to admit Kao Sz-ling without the promise of financial support from the Settlement.¹⁰⁷



Figure 14. *Dedication of the National Leprosarium of Shanghai, Dec. 12, 1935.*¹⁰⁸

Tensions between the Mission and the Public Health Department continued to mount in the months immediately after the opening of the National Leprosarium. The department was concerned that the Settlement would be “debited with sundry ‘unwanted’ cases” unless it devised “some cut & dried formulae”; by now the Mission claimed that 6 of the Leprosarium’s first 25 patients were Settlement cases.¹⁰⁹ The medical authorities faced similar concerns regarding the maintenance of patients in the Mercy Hospital and the Ching Chong Tuberculosis Hospital.¹¹⁰ But according to Jordan the disproportionate number of beggars suffering from leprosy as opposed to mental illnesses or tuberculosis complicated the process of verifying patients’ residential qualifications. He believed that leprosy sufferers inevitably claimed that they were from the Settlement, and thus caused “erroneous calculations”.¹¹¹ The Council therefore conditioned its approval of the Mission’s request for an increase in the per capita maintenance rate to \$20 per month by emphasising that “cases should only be admitted as Settlement cases after the Public Health Department has been afforded the opportunity of checking their residential qualifications”.¹¹² Despite the Council’s attempt to clarify the admissions procedure significant confusion persisted. Within months of accepting Kao Sz-ling the Leprosarium rejected Li Chong Chiao, a ricksha coolie sent to them by the

¹⁰⁷ Wu to Duck, 23 Dec. 1935, SMA, U1/16/753(1), 42; T. C. Wu, “A Record Year of the Mission: The Annual Report of the General Secretary for 1935,” *Leper Quarterly* 10, no. 1 (1936): 21.

¹⁰⁸ *Leper Quarterly* 10, no.1 (1936).

¹⁰⁹ Turnbull (Sec., P.H.D.) to Jordan, 20 Mar. 1936, SMA, U1/16/753(1), 49; Wu to G.G. Phillips, 17 Mar. 1936, SMA, U1/16/753(1), 50.

¹¹⁰ Jordan to Phillips, 21 Mar. 1936, SMA, U1/16/753(1), 53; Jordan, “Staff Instruction No.20: Grant-Aided Hospital and Leprosarium – Residential Qualifications”, 6 Apr. 1936, SMA, U1/16/753(1), 65.

¹¹¹ Jordan to Phillips, 21 Mar. 1936, SMA, U1/16/753(1), 53.

¹¹² Emphasis in the original. Phillips to Wu, 28 Mar. 1936, SMA, U1/16/753(1), 54.

Ricksha Pullers' Mutual Aid Association, "on the ground that no poor leper could stay there without charges".¹¹³ The Council refused to accept responsibility for this case because their enquiries revealed that Li had never resided in the Settlement. Jordan was adamant that "cases not verified as Settlement cases by the Health Department shall not be described as Settlement cases, even when sent in by doctors practising and residing in the Settlement".¹¹⁴ Keenly aware that the controversy had arisen over the Council's failure to define the criteria for distinguishing between non-residents and bona-fide residents, Jordan stipulated that only leprosy sufferers who had resided in the Settlement for a minimum of six months were entitled to the Council's support.¹¹⁵ By contrast Hong Kong's four-man leprosy committee favoured a residency clause of three years.

The controversial residency statuses of the National Leprosarium's patients prompted the Public Health Department to initiate an investigation into the qualifications of those leprosy patients that had already been admitted, or were in the process of being admitted, to the National Leprosarium.¹¹⁶ "Prima facie, all of the cases have little or no claim on Settlement status (residence)," the departmental secretary explained, "but I anticipate that the very keenest enquiries will be needed in order that we furnish wholly reliable evidence in rebuttal of the [Mission's] claim".¹¹⁷ Jordan advised his staff to use "tact and discretion in all cases" and emphasised the importance of tracing the addresses and durations of residence of the seven leprosy sufferers.¹¹⁸ As a result of these investigations the Council agreed to cover the maintenance of three of the seven patients: Wang Kyng-ziang (Case No.1), Chow Dziang-ling (Case No.4) and Kao Sz Ling (Case No. 2), the young homeless beggar that the department had initially refused to recognise as a resident.¹¹⁹ Jordan convinced the Municipal Council that it had a "moral obligation" towards this patient because his department "in an emergency was more or less compelled to request admission of the case".¹²⁰ Wang was also initially classified as a non-resident because the Chinese municipal authorities had arranged his admission, but Chief Health Inspector Bogomoloff over-turned this decision on the basis of a letter from the

¹¹³ T. L. Chang (Gen. Sec., Ricksha Puller's Mutual Aid Assoc.) to Jordan, 28 Mar. 1936, SMA, U1/16/753(1), 62.

¹¹⁴ Jordan to Phillips, 2 Apr. 1936, SMA, U1/16/753(1), 56-58, 56.

¹¹⁵ Jordan to Phillips, 2 Apr. 1936, SMA, U1/16/753(1), 57.

¹¹⁶ Jordan, "Staff Instruction No.20", 6 Apr. 1936, SMA, U1/16/753(1), 65.

¹¹⁷ (Sec., P.H.D.) to Duck, SMA, U1/16/759(1), 6 May 1936, 4.

¹¹⁸ Jordan, "Staff Instruction No.20", 6 Apr. 1936, SMA, U1/16/753(1), 65.

¹¹⁹ Wu Foh Li (Case No.3), Fong Yoh Teh (Case No.5), and Kyi Zee-tsung (Case No.6) were deemed non-residents. The Council was therefore only prepared to pay \$337.36 instead of \$481.98 as requested by the Mission as maintenance for the Settlement's patients for the first half of the year. Wu to Jordan, 5 May 1936, SMA, U1/16/759(1), 2-3, 9; Phillips to Wu, 3 June 1936, SMA, U1/16/759(1), 19-20. Resident and refugee Settlement cases were subsequently assigned patient numbers, referred to throughout this dissertation with a '#'. Thus Kao Sz Ling remained Resident #2, but Chow Dziang-ling became Resident #6. Wang was the exception: he was never assigned a number as a result of a clerical error. Instead the monthly returns exceptionally referred to him by his name through to 1945. For the lists of patient numbers see "Lepers in the Leprosarium, Brenan Road", ca. 1938, SMA, U1/16/759, 96-97; "Individual Cases", ca. 1937-38, SMA, U1/16/755, 1-2; "Individual Cases (51-100)", ca. 1938-40, SMA, U1/16/756, 1-3; "Individual Cases (101-150)", ca. 1940-43, SMA, U1/16/757, 1-3; "National Leprosarium of Shanghai, Individual Cases (151-200)", ca. 1943-45, SMA, U1/16/758, 1.

¹²⁰ Jordan to Phillips, 21 May 1936, SMA, U1/16/759(1), 17.

St. Faiths Settlement which clearly indicated the boy had contracted leprosy in Shanghai.¹²¹ These three patients represented the first of at least ten 'bona-fide' residents admitted to and maintained in the National Leprosarium between November 1935 and the outbreak of the Sino-Japanese War. Chow Dziang-ling left in February 1937, but both Wang Kying-ziang and Kao Sz Ling were evacuated to a mainland leprosarium in the summer of 1937.¹²² Wang as well as another early resident patient were eventually *re-admitted* to one of the National Leprosarium's war-time incarnations in 1938: the Brenan Road Emergency Leprosarium.¹²³

The National Leprosarium: Formalising a Working Relationship, 1936-37

The evolution of the International Settlement's working relationship with the National Leprosarium provides fascinating insights into trans-municipal medical co-operation prior to and during the Sino-Japanese war. No sooner had the Council begun to formalise the admissions procedure than it was confronted with a new issue: burial charges. A "working routine in respect of burials and burial charges" had not been foreseen, let alone established, largely because of contemporary perceptions about the low morbidity of leprosy.¹²⁴ Jordan hoped that the Shanghai Public Benevolent Cemetery Organisation (S.P.B.C.O.) would take charge of the burial for Ku Lan-sen (Resident #5), and would also agree to "deal with such cases gratis".¹²⁵ Failing that he recommended that the Council bear the charges for bona-fide residents – he anticipated a low "outlay since mortality is low and in most cases the relatives prefer to arrange for burial".¹²⁶ Although the S.P.B.C.O. agreed to deal with the burial of resident patients free of charge, Jordan subsequently recommended that a special exemption be made in respect to the burial fees for Ku Lan-sen.¹²⁷ Ultimately Ku Lan-sen was the only resident patient who died in the National Leprosarium prior to the outbreak of the Sino-Japanese War.

Official concern about the concealment of leprosy cases prompted the medical authorities to call for compulsory and enforced hospitalisation. Jordan noted that a minority of cases were taking "immediate steps to 'depart for the country' or in some manner escape from our jurisdiction in order to avoid hospitalisation".¹²⁸ Incidentally the number of leprosy

¹²¹ Minute by C. N. Bogomoloff (P.H.D.), 8 May 1936, SMA, U1/16/759(1), 6; M. J. Henderson to Jordan, 10 May 1935, SMA, U1/16/759(1), 7-8.

¹²² To a leprosarium in Shantung. C.B. Chambers Chen (C.M.L.) to Jordan, 17 Apr. 1937, SMA, U1/16/759(1), 48; Sze (C.M.L.) to Jordan, 30 Sept. 1937, SMA, U1/16/759(1), 57.

¹²³ The other patient was Nyi Kiang Ziang (Resident #8). It is unclear whether Nyi was related to Wang. K. Wang (C.M.L.) to Jordan, 3 Feb. 1939, SMA, U1/16/755, 101. Ironically the Brenan Road Emergency Leprosarium was located only a stone's throw away from Wang's original home, the St. Faiths Settlement on Jessfield Road. Both Wang and Nyi remained in the Brenan Road Emergency Leprosarium through 1945.

¹²⁴ Jordan to Phillips, 12 Oct. 1936, SMA, U1/16/752, 7.

¹²⁵ Jordan to Phillips, 8 Oct. 1936, SMA, U1/16/752, 2. Ku Lan-sen (Resident #5) died less than a fortnight after admission. Wu to Jordan, 3 Oct. 1936, SMA, U1/16/754, 12.

¹²⁶ Jordan to Phillips, 8 Oct. 1936, SMA, U1/16/752, 2.

¹²⁷ S. K. Ying (Hon. Sec., S.P.B.C.O.) to Jordan, 12 Oct. 1936, SMA, U1/16/752, 4; Jordan to Phillips, 12 Oct. 1936, SMA, U1/16/752, 7.

¹²⁸ Jordan to R.T. Bryan (Municipal Advocate), 4 Aug. 1936, SMA, U1/16/754, 2.

sufferers who had previously consented to hospitalisation whether in the Settlement's hospitals, the Hangzhou Leprosy Hospital, or more recently in the National Leprosarium is striking given the absence of legal compulsion. Jordan nevertheless thought it time to legally-endorse hospitalisation. Moreover he was eager to expedite the process, arguing that the present procedure for investigating cases under the existing bye-law "necessarily entails a delay which in turn gives the patient sufficient warning to enable him to change his address and thus remain a menace to all those who come in contact".¹²⁹ Jordan hoped to prevent these cases from escaping by empowering the police to immediately detain all leprosy sufferers upon discovery, pending their removal to the Leprosarium. Jordan acknowledged that this procedure "presumably interferes with the liberty of the subject" but deemed it necessary to protect the health of the Settlement. The Settlement's judicial authorities informed Jordan that the police could transfer all leprosy sufferers to the Leprosarium *before* securing a court approval as this was the procedure for dealing with the Settlement's lunatics.¹³⁰ The Deputy Commissioner of Police, however, refused to endorse this practice, arguing that the procedure was only suitable "in extreme cases, on request, where urgency is necessary for the protection of life and property".¹³¹ Jordan was clearly frustrated by the Deputy Commissioner's response: "As to the question of urgency, I suggest that a leper as a cook in a restaurant is perhaps as great a potential danger to the Public as the homeless imbecile found wandering on the streets".¹³² In the event, the matter was dropped.

A satisfactory working relationship gradually emerged between the Settlement and the National Leprosarium. Many of the leprosy sufferers sent from the Settlement were transported to the leprosarium in the Chinese Public Sanatorium's ambulances.¹³³ Alternatively Shanghai's leprosy sufferers could travel to the National Leprosarium by public transport: the C.M.L.'s admission permit advised patients to catch a bus from the Settlement's northern border.¹³⁴ This mode of transport was probably restricted to voluntary admissions as opposed to admissions requested by the Settlement's Public Health Department or by the Shanghai Municipal Police. Inevitably disagreements continued to arise regarding the admission of both resident and non-resident leprosy sufferers sent by the Public Health Department. For instance the Public Health Department refused to accept responsibility for Ah Loh Tse even though his admission was "thrust upon" the National Leprosarium by his

¹²⁹ Jordan to Bryan, 4 Aug. 1936 SMA, U1/16/754, 2.

¹³⁰ Bryan to Jordan, 8 Aug. 1936, SMA, U1/16/754, 3-4.

¹³¹ (Deputy Com. Police) to Jordan, 14 Aug. 1936, SMA, U1/16/754, 7.

¹³² Jordan to Bryan, 18 Aug. 1936, SMA, U1/16/754, 9.

¹³³ The S.M.C. used the Sanatorium's petition for a renewal of its ambulance license fee exemption as leverage to secure the Sanatorium's consent to transport leprosy sufferers. J. R. Jones (Sec., S.M.C.) to S. T. Chen (Chinese Public Sanatorium), 17 Jan. 1936, SMA, U1/16/763, 81.

¹³⁴ Chinese Mission to Lepers, "Translation: The National Leprosarium of Shanghai – Admission Permit", ca. 1936, SMA, U1/16/754, 37-38.

Shanghai Municipal Police escort.¹³⁵ On the other hand the Mission refused to admit Chow Chang Di (Resident #3) – a female patient whom Inspector Mentor had included on the ‘Suggested Tour of Inspection’ for the Nanjing conference delegates back in 1934 – until the Public Health Department provided a guarantor for the patient.¹³⁶ The Settlement relented, maintaining Chow in the National Leprosarium from September 1936 until her voluntary departure in February 1937.¹³⁷

The increasing number of patients identified as residents brought into question the level of support provided by the other two municipalities. The National Leprosarium charged the Settlement \$236.50 for the first quarter of 1937 for the maintenance of five resident patients.¹³⁸ As far as the Settlement was concerned, this (limited) financial support was more than commensurate with its responsibilities, though it conceded that the per capita maintenance rate of \$20 per month was “somewhat low and less than the actual cost of their upkeep”.¹³⁹ Jordan challenged the lack of proportional support from the French municipality.¹⁴⁰ Jordan’s major criticism, though, was levelled at the Chinese Municipality:

I fail to see that the Council is doing less than any other local body when it subscribes approximately \$1,200 for 10 patients per year if one takes the figures claimed by the Institute as correct, and not our figures, as against \$2,000 for 50 patients per year, coming from other areas. In this proportion the City [i.e. Chinese] Government, or other responsible authorities, should subscribe approximately \$6,000 per year.¹⁴¹

The crux of Jordan’s argument lay in his belief that “in most countries the care of lepers devolves to the State” because of the inevitable gravitation of leprosy sufferers towards urban centres.¹⁴² According to Jordan the Settlement was forced to devote valuable resources and personnel to the maintenance of aliens suffering from a mainland disease. Consequently the

¹³⁵ Ah Loh Tse had been convicted of petty theft sentenced to 15 days in prison, but was refused admission to the Ward Road Gaol as a result of being diagnosed as a leprosy sufferer. Wu to Jordan, 1 July 1936, SMA, U1/16/759(1), 25; Jordan to Wu, 9 July 1936, SMA, U1/16/759(1), 29.

¹³⁶ Jordan to Wu, 28 Sept. 1936, SMA, U1/16/754, 13.

¹³⁷ The National Leprosarium’s statement for the 1st quarter of 1937 reported that she “left” rather than escaped. C. B. Chambers Chen (Gen. Sec., C.M.L.) to Jordan, 17 Apr. 1937, SMA, U1/16/759(1), 48.

¹³⁸ In addition to Wang Kyng-ziang and Kao Sz Ling, the Settlement was responsible for Nyi Kyng-ziang (Resident # 8) and Woo Kyi Chung (Resident # 10), who were admitted in December 1936 and February 1937 respectively. The four other patients had either escaped, left or died. Chambers Chen to Jordan, 17 Apr. 1937, SMA, U1/16/759(1), 48.

¹³⁹ Jordan to (Sec., S.M.C.), 28 Apr. 1937, SMA, U1/16/753(1), 89.

¹⁴⁰ Jordan to (Sec., S.M.C.), Apr. 1937, SMA, U1/16/753(1), 89. A recent enquiry from Jordan’s counter-part in the French Concession regarding the Settlement’s relationship with the National Leprosarium probably prompted his reference to the Concession. Dr. Rabaute, (Directeur de l’Hygiène publique, French Concession) to Jordan, 11 and 13 Jan. 1937, SMA, U1/16/752, 59, 62. According to the Mission, 6 of the 74 patients admitted to the Leprosarium in 1936 were residents of the French Concession as compared to 10 from the International Settlement. Daniel G. Lai, “The First Annual Report of the National Leprosarium of Shanghai for the Year 1936,” *Leper Quarterly* 11, no. 2 (1937): 87.

¹⁴¹ Jordan to (Sec., S.M.C.), 28 Apr. 1937, SMA, U1/16/753(1), 90.

¹⁴² Jordan to (Sec., S.M.C.), 28 Apr. 1937, SMA, U1/16/753(1), 89.

Council refused to reconsider the C.M.L.'s request for a grant-in-aid of \$2,000 per year.¹⁴³ Private donations from members of the Public Health Department tempered this lack of official support. The Superintendent of Hospitals, for instance, subscribed to the request for a contribution towards the National Leprosarium's poultry farm and he promised to secure further support for this occupational therapy from his colleagues.¹⁴⁴ The timing of this donation was extremely inauspicious. Less than two months later the Chinese Mission to Lepers was forced to call an emergency meeting to discuss the evacuation of the National Leprosarium.

The Evacuation of the National Leprosarium

Fearing the Japanese invasion, the Chinese Mission to Lepers looked to the International Settlement for assistance. Initially the Public Health Department was unwilling to aid the National Leprosarium. Dr. Miao, who attended the emergency meeting at the end of July 1937 in Jordan's stead, was instructed to inform the Mission that the Settlement would not be able to provide hospital accommodation in the event of an evacuation.¹⁴⁵ According to the official minutes of the meeting, the committee resolved that no immediate action was necessary though provisions were to be stockpiled and permission to leave was granted to those patients with families.¹⁴⁶ All seven 'bona-fide' resident cases left the Leprosarium during this period, four of them to neighbouring leprosaria.¹⁴⁷ The emergency meeting concluded:

That when war, if any, has reached such a stage as to endanger their lives, both staff and the able-bodied lepers may quit the place with the understanding that the latter will fight their own way for a livelihood. Those disabled lepers remain the Leprosarium [*sic*].¹⁴⁸

Miao informed his superiors that many of the ambulatory cases in the leprosarium would doubtless seek refuge within the Settlement.¹⁴⁹ By early August the evacuation looked increasingly imminent, and Dr. Charles L. Wong, the National Leprosarium's resident superintendent, enquired whether the P.H.D. objected to the housing of some of the inmates within the Settlement in an out-patient clinic that the Mission had recently opened behind the Chinese Medical Association's building on Tszepang Road. Duck, the Acting Commissioner

¹⁴³ Chambers Chen to (Sec., S.M.C.), 24 Apr. 1937, SMA, U1/4/232, 151.

¹⁴⁴ W. R. Johnston to C. L. Wong (Resident Supt., National Leprosarium), 10 June 1937, SMA, U1/16/752, 182.

¹⁴⁵ (P.H.D. Sec.), memo, 30 July 1937, SMA, U1/16/761, 3.

¹⁴⁶ Minutes of the Emergency Meeting of the Leprosarium Committee, 30 July 1937, SMA, U1/16/761, 6.

¹⁴⁷ Kao Sz-ling (Resident #2) and Wang Kying Ziang departed for the Denshien Leprosarium in Shantung on July 6 and 31 respectively. Nyi Kying Ziang (Resident #8) and Woo Kyi Chung (Resident #10) left for Nanchang Leprosarium in Kiangsi on Aug. 16. Sze (C.M.L.) to Jordan, 30 Sept. 1937, SMA, U1/16/759(1), 57.

¹⁴⁸ Minutes of the Emergency Meeting, 30 July 1937, SMA, U1/16/761, 6.

¹⁴⁹ "Notes of Meeting given verbally to Dr. Blakelock by Dr. Miao", ca. 30 July 1937, SMA, U1/16/761, 4.

of Public Health, consented to this request as “an emergency measure”.¹⁵⁰ The evacuation of the National Leprosarium threatened to undermine the Settlement’s management of the disease and heightened fears about ambulatory cases within the city. A temporary solution, however objectionable, was therefore of the utmost urgency.

The evacuation of the National Leprosarium severely strained the Mission’s relationship with the Settlement. According to the Mission’s official account, written early the following year, the evacuation seemingly took place according to plan. On the night of September 16th Dr. Wong, the resident superintendent, and the other staff safely evacuated the patients by truck to the coolies’ quarters of the Chungsan Hospital, located to the south of the International Settlement and the French Concession in the native city of Shanghai (see map 6).¹⁵¹ The following day a meeting of the Board of the National Leprosarium “placed on record its approval of the honorary general secretary’s action in ordering the timely evacuation of the leprosarium, and also its appreciation of the courageous part played by Dr. Wong and the leprosarium staff in going out to Tazang to fetch some of the moveable property”.¹⁵² No mention was made of Wong’s prior arrangement with the Settlement’s medical authorities for transferring the patients to the out-patient clinic at Tszepang Road.

But the Public Health Department’s records reveal a much more controversial departure. Dr. Robert C. Robertson, who was placed in charge of managing the refugee crisis that threatened to overwhelm the Settlement, was alarmed by the discovery of several cases of leprosy in the refugee camps in early September.¹⁵³ In a confidential report dated almost a week before the leprosarium’s ‘official’ evacuation, Robertson reported that the Mission had stonewalled his attempts to have these patients hospitalised because they “could and would not do anything” and he lamented that the Mission had “not in any way realised their moral obligations”.¹⁵⁴ Furthermore Robertson was outraged that the leprosarium’s staff *had* evacuated the premises, abandoning a number of inmates in the process. He went so far as to state that the C.M.L.’s refusal to return to the leprosarium was “tantamount to desertion”.¹⁵⁵ The Mission’s honorary general secretary subsequently admitted that between 20 to 30 patients had elected to remain in the leprosarium at Tazang; they had been left with two members of staff and “sufficient” stocks of food.¹⁵⁶ After securing the necessary vehicles and military permits, the Mission finally evacuated the remaining patients on September 16th.

¹⁵⁰ “Lepers at Da Zang Leprosarium”, *ca.* Sept. 1937, SMA, U1/16/761, 12-13.

¹⁵¹ Keiz Wang, “A Report of the National Leprosarium of Shanghai since its evacuation from Tazang in last September,” *Leper Quarterly* 12, no. 1 (1938): 32-34, 33.

¹⁵² Minutes of the National Leprosarium Board Meeting, 17 Sept. 1937, SMA, U1/16/2622, 34.

¹⁵³ For an excellent discussion of the refugee crisis see Christian Henriot, “Shanghai and the Experience of War. The Fate of Refugees,” *European Journal of East Asian Studies* 5, no. 2 (2006): 215-245.

¹⁵⁴ R. C. Robertson to Duck (Actg. C.P.H.), 11 Sept. 1937, SMA, U1/16/761, 9-10.

¹⁵⁵ Robertson to Duck, 11 Sept. 1937, SMA, U1/16/761, 9

¹⁵⁶ Sze to Duck, 15 Sept. 1937, SMA, U1/16/761, 17.

Remarkably three patients returned to the leprosarium to watch over the property.¹⁵⁷ This badly-handled operation left a poor impression of the Chinese Mission to Lepers in the eyes of the Settlement.

Fortunately the damage to the Mission's relationship with the Settlement was limited by the establishment of temporary accommodation at the Chungshan Hospital.¹⁵⁸ The Acting C.P.H. hoped to encourage the C.M.L.'s endeavours by offering to continue the practice of maintaining all resident cases, "provided of course the accommodation and medical supervision are reasonably satisfactory".¹⁵⁹ Sze Szeming, the honorary general secretary and future co-founder of the World Health Organization, stated that the new 'Leprosarium' would be staffed with three members, whilst other additional staff would visit the premises daily.¹⁶⁰ But the site's proximity to the advancing Japanese lines left it increasingly isolated. The patients were largely responsible for their own daily welfare, "carrying on work such as religious service, injection, schooling, etc.". ¹⁶¹ As of early November, the only outside medical help they could count on came from the daily visits of Dr. Lee Huizenga, an American missionary with extensive experience treating leprosy sufferers at Jukao. He reported:

Early this morning I went to the Shanghai Leprosarium [at the Chungshan Hospital] over the Japanese lines. *This institution has now been placed under my care* as no Chinese can enter the area and I have found favour in the sight of the Japanese....The distance from the French lines is about three blocks, but it is desolation. Unburied bodies lay about when the Chinese took over the lines. I found the thirty-four lepers we still have there in a state of fear, but when I assured them that I could visit them daily they calmed down.¹⁶²

His movements, unlike those of the C.M.L. staff, were not restricted by the Japanese authorities because he was a foreigner.¹⁶³ A few leprosy sufferers were admitted from the Settlement's refugee camps during this period but the Mission was forced to reject cases to prevent overcrowding.¹⁶⁴ The Mission suggested that new cases could be sent to Hangzhou or to neighbouring C.M.L. Auxiliaries providing the Council assumed their subsequent

¹⁵⁷ Minutes of the National Leprosarium Board Meeting, 17 Sept. 1937, SMA, U1/16/2622, 34-35.

¹⁵⁸ Sze to Duck, 15 Sept. 1937, SMA, U1/16/761, 17.

¹⁵⁹ Duck to Sze, 14 Sept. 1937, SMA, U1/16/761, 15.

¹⁶⁰ Sze Szeming to Duck, 15 Sept. 1937, SMA, U1/16/761, 17.

¹⁶¹ K. Wang (C.M.L.) to Duck, 13 Nov. 1937, SMA, U1/16/755, 18.

¹⁶² Italics in the original. Huizenga quoted in L. J. Lamberts, *The Life Story of Dr. Lee S. Huizenga* (Grand Rapids: Eerdmans, 1950), 170.

¹⁶³ Wang to Duck, 13 Nov. 1937, SMA, U1/16/755, 18; "Outcasts face Cold Death: Landlords Reluctant to Give Leper Space," *China Press*, Dec. 30, 1937, SMA, U1/16/752, 165; Wang, "A Report of the National Leprosarium," 32-34, 33. Huizenga's visits were later reduced to every other day.

¹⁶⁴ D. Y. Sung (P.H.D.) to J. A. Stoddart (P.H.D.), 30 Oct. 1937, SMA, U1/16/755, 30; "Chinese Lepers Find New Home: Party of 36 Being House In Nantao District," *North China Daily News*, Nov. 27, 1937, SMA, U1/16/752, 163. The three patients that Sung referred to – Pang Tien Hwa (Resident #19), Ching Lien Seng (Resident #19a) and Yeung Ah Siau (Refugee #19b) – had all been founded in the Central District Refugee Camp. (P.H.D.) to Stoddart, 26 Oct. 1937, SMA, U1/16/755, 20.

maintenance.¹⁶⁵ By now, however, it was no longer possible to transfer patients out of Shanghai to mainland leprosaria by rail.¹⁶⁶



Figure 15. *The remaining lepers in crowded quarters with shells flying over their heads in morning worship. Chungsan Hospital, Shanghai, ca. Oct.-Dec. 1937.*¹⁶⁷

The outbreak of war left the Leprosarium in dire financial straits. In early October Sze petitioned the medical authorities to consider subsidising an additional category of local leprosy sufferers:

We have gone out of our way to make special arrangements to receive lepers whom you may wish to send for hospitalisation, although our quarters are very limited. I have discussed the matter with Dr. Robertson, who agrees with me that it will be reasonable to regard such lepers as emergency residents of the settlement and that as such we are morally entitled to expect the maintenance charge from you for such patients so long as the state of emergency lasts.¹⁶⁸

Robertson's support for Sze's claims likely extended only so far as defining the refugees as emergency residents (hereafter referred to as 'refugee patients'). After all he had recently accused the Mission of failing in its 'moral obligations'. Nevertheless Sze's request found support amongst the medical authorities, principally because the temporary quarters at Chungsan offered the only solution to the Settlement's leprosy problem during a moment of crisis.¹⁶⁹ The rapidity with which the Council authorised the maintenance of "lepers discovered in the Settlement, whether normal residents or those in Refugee camps" clearly demonstrated

¹⁶⁵ Sze to Duck, 27 Nov. 1937, SMA, U1/16/761, 22.

¹⁶⁶ (P.H.D.) to Duck, 30 Nov. 1937, SMA, U1/16/761, 23.

¹⁶⁷ *Leper Quarterly* 11, nos. 3&4 (1937).

¹⁶⁸ Sze to Duck, 12 Oct. 1937, SMA, U1/16/753(2), 279.

¹⁶⁹ Duck to (Sec., S.M.C.), 15 Oct. 1937, SMA, U1/16/753(2), 280.

the urgency of the situation.¹⁷⁰ This arrangement was “subject to revision in the event of support from external sources being obtained for the maintenance of the refugee camps”.¹⁷¹ Ultimately the Council’s support was only revised in February 1942. By then the Council had admitted and maintained over 50 of these refugee patients.

The Evacuation to the Salvation Army Camp

The Japanese invasion of Shanghai finally forced the Settlement authorities to accept a situation they had struggled to avoid for decades: the segregation of leprosy sufferers *within* the Settlement. In early December 1937 the Japanese military authorities pressed for the leprosarium’s removal. With nowhere left to turn except the foreign concessions, the Mission successfully secured permission to relocate the thirty-three leprosy patients to the Salvation Army Group’s Camp on Ferry Road in the Western district (see map 6).¹⁷² The relocation from Japanese-occupied territory through the French Concession to the Salvation Army Camp proved a highly stressful operation. The Japanese military authorities halted the vans conveying the patients and all their supplies at the border with the French Concession and ordered them to make the crossing on foot.¹⁷³ The transfer was made all the more frantic by the fact that the Japanese authorities only granted the C.M.L. a two-hour window. Some of the more able-bodied patients managed to scrounge two rickshaws to carry the supplies and the bed-ridden patients. The convoy was swelled by the addition of two octogenarian beggars, neither of whom suffered from the disease but who had recently been benefiting from the patients’ generosity.¹⁷⁴ Fortunately all of the patients made it into the Concession before the expiry of the Japanese deadline; they proceeded to the International Settlement to their new home on Ferry Road without further incident. Sze reported that the transfer would have been “impossible” without the Public Health Department’s support, and he was pleased to announce that the camp was prepared to receive the Settlement’s cases, including the three refugees who had previously been turned away from the temporary leprosarium at Chungshan.¹⁷⁵

¹⁷⁰ (Sec., S.M.C.) to Duck, 21 Oct. 1937, SMA, U1/16/753(2), 281. Just over a week had passed since Sze’s original request to Duck. Sze to Duck, 12 Oct. 1937, SMA, U1/16/753(2), 279.

¹⁷¹ (Sec., S.M.C.) to Duck, 21 Oct. 1937, SMA, U1/16/753(2), 281.

¹⁷² Duck to (Sec., S.M.C.), 7 Dec. 1937, SMA, U1/16/761, 28.

¹⁷³ One local press report described the “exodus” as “pathetically dramatic”; another report compared the group’s “forced marches” to the 14th century fresco ‘The Triumph of Death’ by Andrea di Cione Orcagna. “Outcasts Face Cold Death,” *China Press*, Dec. 30, 1937, SMA, U1/16/752, 165; “Shanghai Lepers Affected by War: Compelled to Move Three Times to Escape Danger,” *North-China Daily News*, June 15, 1938, SMA, U1/4/232, 127.

¹⁷⁴ The Japanese forced the patients to take these two Chinese individuals with them. “Outcasts Face Cold Death” *China Press*, Dec. 30, 1937, SMA, U1/16/752, 165.

¹⁷⁵ Although Pang Tien Hwa (Resident #19) and Ching Lieng Seng (Resident #19a) were removed to the Salvation Army Camp, the authorities were unable to transfer Yeung Ah Sieu (Refugee #19b) because he was living in a different refugee camp. Sung to Stoddart, 13 Dec. 1937, SMA, U1/16/755, 33. However both Pang Tien Hwa and Ching Lieng Seng failed to return after being granted two days of leave on the 23rd December. K. C. Wong (C.M.L.) to Duck, 6 Jan. 1938, SMA, U1/16/755, 36.

There were high hopes that Shanghai's leprosy patients would finally be able to settle down in their new accommodation in the Salvation Army camp after so many months of uncertainty, upheaval and hardships. The camp was significantly larger and more open than the cramped servants' quarters at Chungshan.¹⁷⁶ The Public Health Department approved of the site because it was "near the Settlement border and [therefore] away from residents and likelihood for complaint".¹⁷⁷ Concerns were expressed, however, about the proximity of the leprosy patients to the rest of the camp's inmates. Consequently the leprosy patients were relocated within the camp – a move that provided an opportunity to re-build the leprosy patients' hut in such a manner as to "facilitate cleansing or disinfecting [*sic*]" .¹⁷⁸ The leprosy sufferers were also provided with "separate accommodation for washing, cooking and lavatories" and "also a separate small dispensary or dressing room", presumably to minimise the fear if not the fact of transmission.¹⁷⁹ Although the medical authorities viewed the site as a 'Temporary Leprosarium', the Mission nevertheless initiated a program of education, evangelisation and medical treatment.¹⁸⁰ The addition of wooden floor boards and paper pasted onto the walls provided a bare modicum of insulation against the freezing cold of a Shanghai winter. Some of the patients nevertheless managed a little "farming", raising poultry and pigeons.¹⁸¹ Others, however, refused to accept their confinement. Three of the nine resident and refugee cases admitted between December and April failed to return after being granted short-leave; a fourth patient left against the advice of the C.M.L. staff.¹⁸²

The case of Tsa Tsang Z (Refugee #21), a 29 year old mother from Jiangsu province exemplified how harrowing admission and confinement could be. Her admission to the temporary leprosarium in the Salvation Army Camp separated her from her healthy husband and their four year-old daughter. Moreover the child that she gave birth to the day before her admission died just a few days later.¹⁸³ Confined to the leprosarium for at least the next four years, the fact that the Public Health Department maintained her as a "refugee patient" until February 1942 would have been small consolation.¹⁸⁴ In July of that year Chow Van Sze (Resident #142), another 29 year old mother, protested so vigorously at being separated from two of her three children – her youngest daughter Chow Siao Ngoh (Resident #143) was admitted alongside her because the girl was (wrongly) suspected of suffering from leprosy – that Jordan, the Settlement's Commissioner of Public Health, requested that all four of them

¹⁷⁶ There was space for about one hundred patients. Duck to (Sec., S.M.C.), 7 Dec. 1937, SMA, U1/16/761, 28.

¹⁷⁷ (P.H.D.) to Duck, 4 Dec. 1937, SMA, U1/16/761, 26.

¹⁷⁸ *Ibid.*, 26.

¹⁷⁹ *Ibid.*, 26.

¹⁸⁰ "Outcasts Face Cold Death," *China Press*, Dec. 30, 1937, SMA, U1/16/752, 165.

¹⁸¹ K. C. Wong (C.M.L.) to Duck, 14 Jan, 1938, SMA, U1/16/755, 50; Wang, "A Report of the National Leprosarium," 33-34.

¹⁸² Wong to Duck, 6 Jan. 1938, SMA, U1/16/755, 36; (C.M.L.) to Duck, 15 Mar. 1938, SMA, U1/16/755, 56; Wong to Jordan (C.P.H.), 23 Apr. 1938, SMA, U1/16/755, 76.

¹⁸³ R. Fowler (P.H.D) to J. A. Stoddart (P.H.D.), 2 Jan. 1938, SMA, U1/16/755, 47; Wong to Duck, 14 Jan. 1938, SMA, U1/16/755, 50.

¹⁸⁴ Jordan to (Treasurer, S.M.C.), 21 Mar. 1942, SMA, U1/16/759(2), 398.

be admitted.¹⁸⁵ Whilst the Settlement's records indicate that Chow Van Sze was maintained in the National Leprosarium until the summer of 1945, the fate of her three children is unclear.¹⁸⁶

The leprosarium at Ferry Road ultimately proved temporary, though not in the way that the Council had anticipated. The Chinese Mission to Lepers was forced to relocate the patients once again – the third time in less than a year since the original evacuation from Tazang. In May 1938 a Japanese company that owned the land on which the Salvation Army camp was located gave the authorities one month's notice, ostensibly because it wanted to develop the site.¹⁸⁷ The closure of the camp – a disaster according to Jordan – entailed the relocation of 3,400 refugees, a tuberculosis hospital containing 200 refugee patients, the 150 refugees in the Home for the Aged and Infirm as well as the Mission's 62 leprosy sufferers, including 6 resident patients and 18 refugee patients.¹⁸⁸ Dr. Alfred Sao-ke Sze, the former Chinese ambassador to London and Washington and father to Sze, the C.M.L.'s honorary general secretary, offered the Chinese Mission to Lepers the use of a plot of vacant land at the intersection of Brenan and Edinburgh Roads in the Western extra-Settlement area (map6).¹⁸⁹

¹⁸⁵ A nasal specimen examined by the Shanghai Laboratory actually confirmed that Chow Siao Ngoh was not suffering from the disease. See (P.H.D) to (D.C.P.H.), 9 July 1942, SMA, U1/16/757, 194; H. Cieh (P.H.D.) to H. Lücke (P.H.D.), 9 July 1942, SMA, U1/16/757, 195; Jordan to V.T. Loh (C.M.L.), 10 July 1942, SMA, U16/757, 196.

¹⁸⁶ The Department attributed patient numbers (#143.1 and #143.2) to Chow Siao Ngoh's siblings (she was #143) but the Department did not support them. Minute by Lücke, 9 July 1942, SMA, U1/16/757, 195.

¹⁸⁷ P. S. Page (P.H.D.) to Jordan, 27 May 1938, SMA, U1/16/761, 35.

¹⁸⁸ Jordan to (Sec., S.M.C.), 18 May 1938, SMA, U1/16/761, 33.

¹⁸⁹ "The Leper World: Removal of the National Leprosarium of Shanghai for Third Time," *Leper Quarterly* 12, no. 2 (1938): 96-97.



Map 6. The National Leprosarium and the Sino-Japanese War, 1937-38.¹⁹⁰

The green arrow denotes the location of the original institution at Tazang. The three orange stars denote the three consecutive evacuations, first to the Chungsan Hospital, then to the Salvation Army Camp in the International Settlement (in blue), and finally to the Brenan Road Emergency Leprosarium in the 4 Western extra-Settlement district (in red).

The Brenan Road Emergency Leprosarium

The establishment of the Brenan Road Emergency Leprosarium profoundly impacted upon the Mission's relationship with the Public Health Department. The Settlement initially fully supported the relocation. The Acting Commissioner of Public Works informed the Council that the premises were bounded by "Chinese residences of the poorer class" and "a contractor's yard and several small industrial undertakings" whereas the nearest "good foreign residences" were located "at some distance" (map 7).¹⁹¹ Jordan also endorsed the move:

No danger is anticipated to the general public from the establishment of this Camp which, in fact, is doing excellent work in keeping the influx of lepers from outside areas from mixing with and infecting the community. I cannot guarantee that in the present inflamed condition of the public mind that no complaints will be received from residents of Brenan Road, nor that it will not be the subject of comment from the newspapers. Since these comments will be fallacious, I would recommend that this Mission be enabled to carry out its good work.¹⁹²

¹⁹⁰ Source of map: <http://nla.gov.au/nla.map-brsc47>.

¹⁹¹ C. H. Stableford, T. W. Gubb (Actg. C.P.W.) to (Actg. Sec., S.M.C.), 1 June 1938, SMA, U1/16/761, 38.

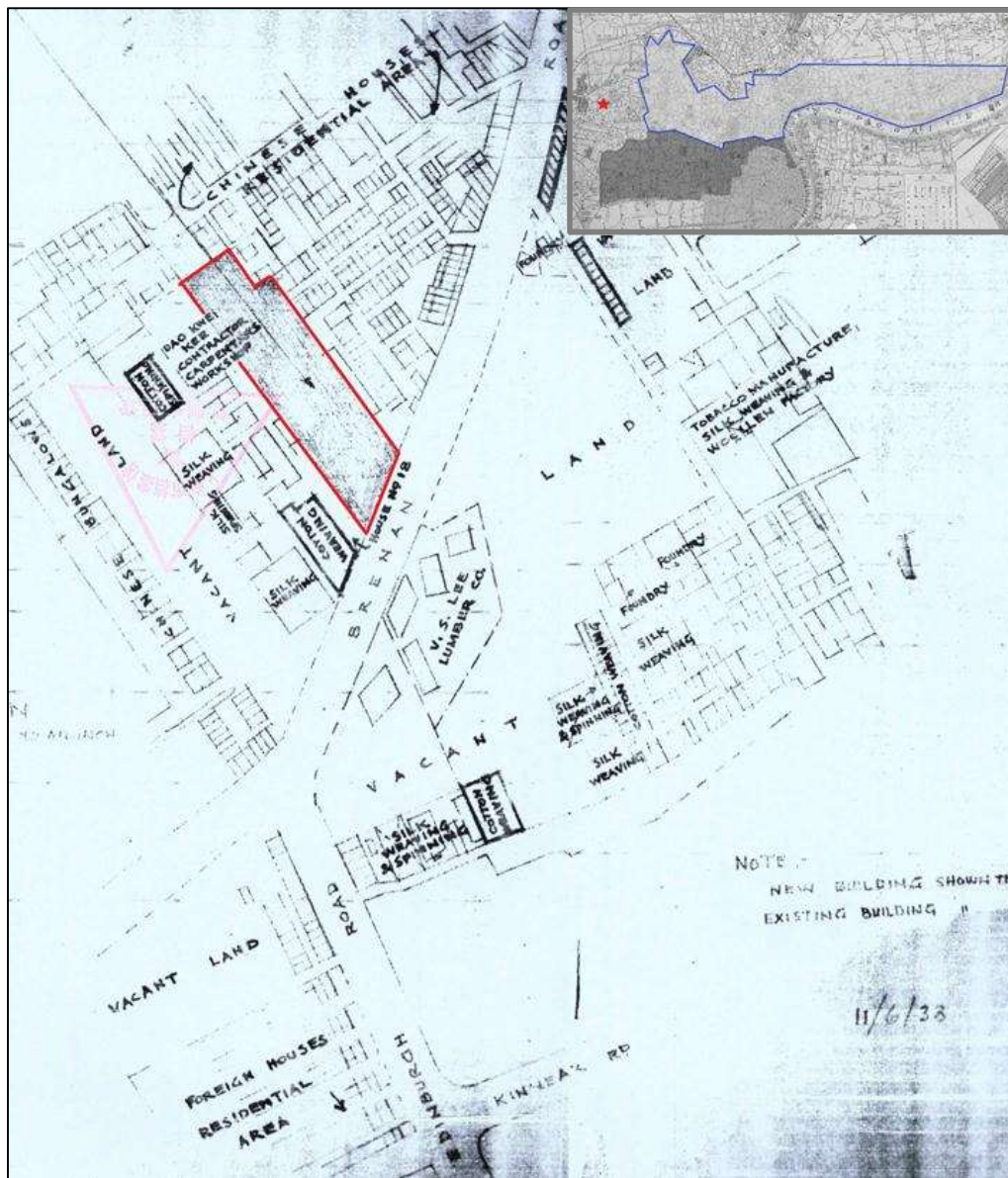
¹⁹² Jordan to Gubb, 15 June 1938, SMA, U1/4/232, 132.

He even prevailed upon the Shanghai Waterworks Company to supply the Leprosarium with fresh water from a nearby hydrant.¹⁹³ The Council approved the relocation on condition that “the leprosarium must be of a temporary character and that as soon as the military situation permits it must be removed beyond the environs of Shanghai”.¹⁹⁴ The Mission readily agreed: ever since the outbreak of the hostilities it had been keeping an eye on the abandoned buildings at Tazang in the hope that it would eventually re-occupy the facilities.¹⁹⁵

¹⁹³ Jordan persuaded the Shanghai Waterworks Company (S.W.C.) that this scheme would be mutually advantageous to both parties. Jordan to (Mgr., S.W.C.), 5 July 1938, SMA, U1/16/761, 48.

¹⁹⁴ Gubb to Wu, 18 June 1938, SMA, U1/4/232, 126.

¹⁹⁵ See for example Wang, “A Report of the National Leprosarium,” 32; “Removal of the National Leprosarium,” 96-97.



Map 7. The Brenan Road Emergency Leprosarium¹⁹⁶

From the outset the Settlement took far greater efforts to confine the patients within the Brenan Road Leprosarium than it had done at any of the Leprosarium's previous incarnations. Jordan posted two Chinese police constables at the entrance of the Ferry Road Camp in order to prevent any of the patients from escaping during the relocation to Brenan Road. At Jordan's request, a police guard was permanently posted at the entrance of the new Emergency Leprosarium.¹⁹⁷ Inmates were required to apply for permission to leave the premises, though Jordan rejected a number of the applications (even those that had received the Mission's support) because he feared "this would make a most undesirable precedent resulting in the receipt of a number of similar applications".¹⁹⁸ Inevitably many of the patients

¹⁹⁶ SMA, U1/4/232, 131.

¹⁹⁷ Jordan to K. M. Bourne (Com. Police), 28 June 1938, SMA, U1/16/752, 183.

¹⁹⁸ Jordan to C. L. Wong (C.M.L.), 4 Aug. 1938, SMA, U1/16/756, 21.

resented these harsher confinement measures. An “ugly incident” broke out as a result of the authorities’ refusal to grant leave to one patient just over a fortnight after the relocation.¹⁹⁹ Three months later a group of inmates acted violently towards Wong, the resident superintendent, accusing him of “negligence, malpractice and manslaughter”.²⁰⁰ Two of the ringleaders, one of whom was a resident patient, were promptly discharged in order to “quell the trouble which was nothing short of a riot”.²⁰¹ Unsurprisingly Wong’s official annual report completely glossed over this event.²⁰²

The Leprosarium’s inability to enforce confinement failed to live up to Jordan’s expectations. Less than three months after the Emergency Leprosarium’s establishment, an audacious series of escapes made a mockery of the police guard posted to the entrance of the Emergency Leprosarium. Initially the staff were only aware of the disappearance of Tseu Foh Dong (Resident #55) and Bang Tien Hwo, but the subsequent police investigation revealed that these two patients had taken advantage of the confusion caused by the escape of Wei Zung Yui.²⁰³ The police’s report identified a fundamental and embarrassing flaw in the existing security measures:

These [three] persons effected their escape by means of an open window into the compound where one of the them walked briskly past the Chinese Police Constable who owing to the complete absence of means of identification between the Staff and lepers assumed he was permitting one of the Staff to leave the premises. Whilst the Chinese Police Constable and the member of the Staff were searching the neighbourhood, the other two lepers walked out of the gate.²⁰⁴

Wong, the leprosarium’s superintendent, promised to bar the windows and to issue the staff “with some means of identification for the information of the Police on duty”.²⁰⁵ A further three patients, including a refugee patient, escaped in swift succession the following summer by taking advantage of a shortage of police personnel.²⁰⁶ The Commissioner of Police grudgingly agreed to post a permanent police guard at the entrance of the Leprosarium.²⁰⁷ When this practice was discontinued early the following year the Mission petitioned the medical authorities for “the vigilance [to] be resumed in order to prevent patients from

¹⁹⁹ Minutes of the C.M.L. Executive Committee, 14 July 1938, SMA, U1/16/2622, 57.

²⁰⁰ H. P. Chu (Supt., National Leprosarium) to Jordan, 5 Oct. 1938, SMA, U1/16/752, 57.

²⁰¹ Chu to Jordan, 5 Oct. 1938, SMA, U1/16/752, 57. Doo Bia Sung (Resident # 63), the resident patient identified as one of the ringleaders, had been admitted only two months before. K. Wang to Jordan, 5 Sept. 1938, SMA, U1/16/759(1), 98-99.

²⁰² The dismissal of three patients for “misconduct” was simply detailed in a table of discharges. Charles L. Wong, “Report of the National Leprosarium of Shanghai for 1937-1938,” *Leper Quarterly* 13, no. 1 (1939): 41.

²⁰³ Jordan to (Com. Police), 19 Aug. 1938, SMA, U1/16/755, 42; S. C. Young, (Actg. Com. Police) to Jordan, 25 Aug. 1938, SMA, U1/16/752, 185.

²⁰⁴ Young to Jordan, 25 Aug. 1938, SMA, U1/16/752, 185.

²⁰⁵ Young to Jordan, 25 Aug. 1938, SMA, U1/16/752, 185.

²⁰⁶ Zung Yun Ling (Refugee #50) “absconded” on May 18, Sau Shien Tsu escaped on June 1 and Chiao Hsin Chu escaped on June 2. K. Wang to Jordan, 9 June 1939, SMA, U1/16/755, 143; U1-16-756 L. C. Tseu to Jordan, 3 June 1939, SMA, U1/16/756, 57.

²⁰⁷ Jordan to K. M. Bourne (Com. Police), 7 June and 1939, SMA, U1/16/761, 93; Bourne to Jordan, 24 June 1939, SMA, U1/16/761, 99.

escaping from the hospital and disturbing the public welfare”.²⁰⁸ This time, however, Jordan argued that the Leprosarium needed to rely on its own resources.²⁰⁹

An attempt to forcibly confine two local resident leprosy sufferers proved similarly embarrassing. A local Chinese physician drew the P.H.D.’s attention to the ‘threat’ of contagion emanating from a shoe shop on his street. Dr. Siao alleged that Loh Liang, the thirty-five year old proprietor of ‘The Continental Shoe Shop’, and his employee Li Ping, were a threat to city – “especially those who come into contact with them, as many send their shoes to them for repair and handling” – because Siao suspected the two men of suffering from leprosy.²¹⁰ A departmental investigation confirmed Siao’s suspicions, and the two men were referred to Huizenga, the American medical missionary in charge of the out-patient clinic on Tzepang Road, for further confirmation and treatment. Chief Inspector Self, who conducted the investigation, reported:

No legal status exists to force isolation but the danger of allowing them to continue in their present business is obvious. It is suggested that if the two lepers were removed from the business and attended the leper clinic regularly a check could be kept upon their movements. Should they refuse to do this then it is submitted that legal opinion be obtained as to the possibility of closure of the premises.²¹¹

Unlike so many other cases of leprosy in Shanghai, Loh Liang and Li Ping were neither vagrant beggars nor helpless refugees, and Self clearly anticipated significant resistance. As Huizenga noted, “we can only use the argument of persuasion [*sic*] rather than that of force in getting respectable patients to the leprosarium”.²¹² A court order approving Loh’s and Li’s admission to the Emergency Leprosarium was nevertheless secured. Self and a member of Shanghai Municipal Police escorted the two men “under protest” in an ambulance to the Emergency Leprosarium the following day at 9.30a.m.²¹³ Both men escaped just before lunch. Significantly the poorly-worded court order had failed to empower the Emergency Leprosarium’s staff to detain these patients.²¹⁴ By the time the Legal Department had confirmed that the Court Order still empowered the police to detain and re-admit the two patients, the authorities reported that “one is said to be ‘somewhere north of the Creek’ and the other to have gone to Canton or Hongkong”.²¹⁵

²⁰⁸ L. C. Tseu to Jordan, 4 Mar. 1940, SMA, U1/16/752, 19.

²⁰⁹ Jordan explained that there were no police available. Jordan to Tseu, 6 Mar. 1940, SMA, U1/16/761, 108.

²¹⁰ T. K. M. Siao to Jordan, 3 Apr. 1940, SMA, U1/16/2618, 30.

²¹¹ L. J. Self (P.H.D.) to Jordan, 6 Apr. 1940, SMA, U1/16/2618, 33.

²¹² Huizenga stated that Loh Liang and Li Ping had allegedly agreed to isolate themselves and to find someone else to take over the shoe shop. L. S. Huizenga to C.A.E. Carr (Sec., P.H.D.), 24 Apr. 1940, SMA, U1/16/2618, 55.

²¹³ Self to Jordan, 24 Apr. 1940, SMA, U1/16/2618, 54.

²¹⁴ Self warned Jordan about the wording of the order immediately after depositing the two men at the Emergency Leprosarium. One of Self’s Inspectors later informed him that both men were back at work the following day. Self to Jordan, 24 Apr. 1940, SMA, U1/16/2618, 54; (P.H.D.) to Self, 25, Apr. 1940, SMA, U1/16/2618, 60.

²¹⁵ Police Report, 20 May 1940, SMA, U1/16/2618, 77.

Evangelisation and Occupational Therapy in the Brenan Road Emergency Leprosarium

The Mission's proposal to establish a permanent presence at Brenan Road reignited the Settlement's fears about the leprous migrant from the mainland. One of the Mission's Board members proposed purchasing the site upon which the Emergency Leprosarium stood. Wu sought advice from Jordan, in the latter's capacity as a director of the Mission, as to the land's potential post-war value and as to the Public Health Department's attitudes towards a post-war treatment facility within the Settlement.²¹⁶ The medical authorities were adamantly opposed to the establishment of a permanent leprosaria or leprosy clinic within the Settlement. Jordan informed Wu:

It is my opinion that a large city possesses sufficient attraction for lepers without further encouraging them to come by providing receiving stations.

...It is my opinion that [leprosy] Clinics should be attached to larger teaching hospitals and should refer their cases to Leprosaria outside the towns, otherwise the temptation is for people to send as many lepers as possible to the towns.²¹⁷

The trope of the leprous migrant from the mainland continued to underpin Jordan's, and the Settlement's, opposition to permanent domestic segregation facilities. Moreover Jordan concluded that as the Brenan Road site was too big for just a leprosy clinic "the tendency would be to establish a Leprosaria there, which would, in my view, be a mistake".²¹⁸ In spite of the Public Health Department's objections, the Emergency Leprosarium not only remained a permanent fixture, but outlasted the existence of the International Settlement itself.

The war-time evacuations of the National Leprosarium and the apparent permanency of the Emergency Leprosarium heightened the patients' receptiveness to evangelisation. The "social and religious life" had been an important feature in the original institution at Tazang prior to the outbreak of the war. Services were regularly held by visiting missionaries in the National Leprosarium's chapel, and Christmas was celebrated with donations from the "Christian friends in Shanghai".²¹⁹ But it was only after the relocation to the Brenan Road Emergency Leprosarium that the Chinese Mission to Lepers reported that this religious work was "blessed" with the baptism of four leprosy patients by Huizenga - Rev. Huang, "a leper preacher" in the leprosarium, doubtless played an equally important evangelical role (fig. 16).²²⁰ As Wong, the physician-in-charge explained:

Since these lepers are not all bed-ridden, patients are confined in the leprosarium not only for weeks or months, but for years. Therefore, their worries for the future are many. Spiritual instruction gives not only comfort and confidence, but adds to the

²¹⁶ Wu to Jordan, 25 Aug. 1939, SMA, U1/16/761, 83-84.

²¹⁷ Jordan to Wu, 29 Aug. 1939, SMA, U1/16/761, 89.

²¹⁸ *Ibid.*, 89.

²¹⁹ Lai, "The First Annual Report of the National Leprosarium of Shanghai," 91-92.

²²⁰ One of the converts was his Rev. Huang's son. "The Leper World: Baptisms in Shanghai Leprosarium," *Leper Quarterly* 12, no. 3 (1938): 129; Wong, "Report of the National Leprosarium of Shanghai," 34.

peacefulness of the leprosarium, and hence is urgently necessary for the patients.²²¹

The Mission's hope that these new converts, along with the small group of patients who were already "Christians of several years' duration", would form a "nucleus" that would "undoubtedly lead to the organization of a church group" was soon realised.²²² Further baptisms followed and by 1939 the Mission proudly announced the formation of the Leprosarium's own "Chinese Christian Church".²²³ This group successfully established a small "church library of books pertaining to a better understanding of the Bible, of the Church and its duties" and organised a "Christian Endeavour Society".²²⁴ Huizenga reported that the group had converted "far over three-fourths" of the Brenan Road Emergency Leprosarium's 100-some patients by late 1940.²²⁵ Shanghai's experiences thus provide fresh evidence in support of Kipp's analysis of the correlation between evangelistic opportunities as total institutions.²²⁶ The hostilities beyond the camp and the resultant war-time shortages reinforced the patients' perceptions of the Emergency Leprosarium as a 'total institution', heightening their receptiveness to fervent missionaries such as Huizenga who promised peace, hope and (spiritual) salvation. And unlike the state-run leprosarium at Kennedy Town in Hong Kong, the Emergency Leprosarium was run by a Christian Chinese Mission that facilitated the work of foreign and Chinese missionaries.

²²¹ Wong, "Report of the National Leprosarium of Shanghai," 33.

²²² "Baptisms in Shanghai Leprosarium," 129.

²²³ The group consisted of 28 members. "The Leper World: New Activities at the Shanghai Leprosarium," *Leper Quarterly* 13, no. 2 (1939): 85.

²²⁴ "New Activities at the Shanghai Leprosarium," 85; "The Leper World: The Shanghai Leprosarium has a new Library," *Leper Quarterly* 13, no. 3 (1939): 126; T. C. Wu, "Annual Report for 1939 of the Chinese Mission to Lepers," *Leper Quarterly* 14, no. 1 (1940): 45

²²⁵ "The Leper World: Christianization of the Shanghai Leprosarium," *Leper Quarterly* 14, no.4 (1940): 167.

²²⁶ Rita Smith Kipp, "The Evangelical Uses of Leprosy," *Social Science & Medicine* 39, no. 2 (1994): 167, 171.



Figure 16. The Brenan Road Emergency Leprosarium. ca. 1938-40.
Dr. Lee S. Huizenga, wearing trademark bow-tie, hat and glasses is standing at the back (far-left).²²⁷

Figure 17. A Bread-eating Contest at the Shanghai Emergency Leprosarium, ca. 1941.²²⁸



²²⁷ *Leper Quarterly* 14, no. 3 (1940). Reprinted in *The Leper Quarterly* XVI.4 (1942).

²²⁸ *Leper Quarterly* 15, no. 2 (1941). The American Red Cross Committee in China donated the cracked wheat.



Figure 18 & 19. *Ong Ih-dao, a leper artist in the National Leprosarium of Shanghai and Ong Caught on camera while at work in his open air studio on enlarging a photo of the Rev. T. C. Wu.*²²⁹

Unsurprisingly the war severely constrained the opportunities for occupational therapy. The patients had previously engaged in carpentry, farming, “house and street cleaning” and raising a few cattle at Tzang.²³⁰ By contrast they were only able to raise a small number of poultry in the Salvation Army Camp.²³¹ The patients nevertheless instituted a variety of creative pastimes once they settled into the Brenan Road Emergency Leprosarium. For instance a group of patients produced the *Melancholic Wind Ten Day News*, a ten-day newspaper with “news items and editorials reflecting upon the ethical and religious aspects of leprosarium control [sic]” which was circulated throughout the leprosarium and to a few “friends” beyond leprosarium’s walls.²³² This newspaper probably morphed into (or else was replaced by) the *Morning Light Quarterly*, a bilingual quarterly which, according to Leung, was created by three Brenan Road patients in the spring of 1940.²³³ One of Brenan Road’s Christian patients, Ong Ih-dao, dispelled “gloomy ideas” about his incarceration by painting pictures including a portrait of the Mission’s general secretary (figs. 18 and 19).²³⁴ Incredibly his paintings were put on display in the Brenan Road Emergency Leprosarium’s auditorium and

²²⁹ *Leper Quarterly* 14, no. 4 (1940); *Leper Quarterly* 15, no.3 (1941).

²³⁰ Lai, “The First Annual Report of the National Leprosarium,” 91.

²³¹ Wang, “A Report of the National Leprosarium,” 34.

²³² Some traditional Chinese medical treatises allegedly referred to leprosy by the name ‘Melancholic Wind’. “New Activities at the Shanghai Leprosarium,” 85-86.

²³³ Leung, *Leprosy in China*, 239n42.

²³⁴ As this article is in English, I strongly suspect that one of the magazine’s editors had a hand in translating (and possibly editing) Ong’s words. Ong Ih-dao, “For Sale: Paintings by Ong Ih-dao, an inmate of the Shanghai Leprosarium,” *Leper Quarterly* 14, no. 4 (1940): 170.

offered for sale to the general public! By contrast the colonial state in Hong Kong never consented to facilitating such opportunities within the Kennedy Town Leprosarium.

Anna E. Korchakova

The case of a Russian female leprosy sufferer provides an exceptionally rare insight into the racialised isolation and treatment of Shanghai's foreign leprosy sufferers. Her discovery in November 1938, less than five months after the opening of the Brenan Road Emergency Leprosarium, attracted an unprecedented level of official attention. Foreign leprosy sufferers had been identified on at least three previous occasions, but Anna E. Korchakova was the first foreign case since the Settlement had formalised its policy of transferring leprosy sufferers to a C.M.L.-run leprosarium.²³⁵ Her condition was therefore promptly reported to the Public Health Department.²³⁶ Her status as a foreign leprosy sufferer presented the authorities with a unique problem. On the one hand, the hospital was not considered suitable for the segregation of leprosy sufferers. On the other, the Chinese Mission to Lepers asserted that the Brenan Road Emergency Leprosarium was not suitable for foreign patients.²³⁷ The solution presented itself in the form of the Russian Orthodox Confraternity Hospital, which reluctantly agreed to admit her only after the Council promised to bear her maintenance.²³⁸ Whereas the Council maintained Chinese patients in the Emergency Leprosarium at a rate of \$20 per month, they agreed to support Korchakova's accommodation at a daily rate of \$4 – the maintenance rate for foreign indigent cases of lunacy (table 3.2).²³⁹

From the outset her admission to the Russian Orthodox Confraternity Hospital was meant to be temporary. Dr. Kasakoff, the hospital's superintendent, complained that her isolation had necessitated the removal of all the patients from a room in the tuberculosis ward because "her presence depresses and frightens the other patients".²⁴⁰ The other patients' awareness of her condition suggests her diagnosis was broadcast, that her condition was manifestly visible, or indeed both. Ultimately both Jordan and Kasakoff expected that Reiss

²³⁵ In 1906 the Municipal Hospital reported the admission of one foreign leprosy patient and the death of one (probably the same) foreign leprosy patient. A case of leprosy was also notified in a 30 year-old Russian woman in August 1931. The third reference was to Ksenia Pallaeva, a 35 year-old native of Siberia who was known to reside in the Eastern District in 1934. Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1906* (Shanghai: Kelly & Walsh, 1907), SMA, U1/16/4650, 23; J. H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1931* (Shanghai: Kelly & Walsh, 1932), SMA, U1/16/4655, 22, 27; H. J. Mentor (P.H.D.) to Heathcote (P.H.D.), 4 Oct. 1934, SMA, U1/16/2690, 73.

²³⁶ Jordan to (Actg. Sec., S.M.C.), 21 Nov. 1938, SMA, U1/16/834, 7.

²³⁷ *Ibid.*, 7.

²³⁸ Dr. Kasakoff of the Russian Orthodox Confraternity Hospital initially refused to accept her. Jordan to Kasakoff, 21, Nov. 1938, SMA, U1/16/834, 9.

²³⁹ Jordan to (Actg. Sec., S.M.C.), 21 Nov. 1938, SMA, U1/16/834, 7.

²⁴⁰ Kasakoff to Jordan, 22 Nov. 1938, SMA, U1/16/834, 10.

would be able to assist them in their search for some suitable accommodation for her as soon as he returned to Shanghai.²⁴¹

Not only were the authorities unable to secure alternative accommodation, but official interest in her plight soon waned. Reiss regrettably informed Jordan what the latter already knew: that there was no suitable accommodation for foreign leprosy cases in or near the Settlement. Instead Reiss recommended that she be discharged and referred to the Out-Patient Department of the Chinese Red Cross where she could receive the necessary treatment.²⁴² Johnston, the Superintendent of Hospitals, certainly favoured this solution, particularly as Kasakoff claimed that her ulcers had healed, though he was unable to certify that she was no longer infectious.²⁴³ Instead she remained in the Russian Orthodox Confraternity Hospital at the Council's expense. The unique degree of official attention devoted to her isolation evaporated, to be replaced by the mundane formalities of the department's bureaucracy. Official knowledge of her hospitalised existence was confined solely to the monthly statements of account submitted by the Hospital.²⁴⁴ These were all processed without comment, despite increases in the daily maintenance rate.²⁴⁵ The procedure became so formalised that Jordan asked, "Could we not arrange to forward the accounts without covering letters, as long as the patient is treated in the hospital?".²⁴⁶ Consequently Korchakova's monthly statement was forwarded together with the statements for the mental patients in the same hospital from March 1940 onwards.²⁴⁷

The deterioration of Korchakova's condition in late 1940 finally forced the medical authorities to confront her case once again. In November Kasakoff informed Jordan that the patient was showing "signs of mental derangement and great excitability" and stated that the hospital could no longer accommodate her.²⁴⁸ As a preliminary step Jordan called upon Huizenga – "the only authority on leprosy in this town" – to determine the infectiousness of her condition.²⁴⁹ Huizenga diagnosed her as a "Chronic Mixed Case of leprosy with mutilations and ulcers" and "throat complications", and he reported that she was still infectious.²⁵⁰ However he stated that her isolation in a "special room" ensured that she was not a danger to the other patients, providing the nursing staff took the necessary precautions.²⁵¹ Confined to her private hospital room for more than two years, and neglected by her husband and

²⁴¹ Jordan to (Actg. Sec., S.M.C.), 21 Nov. 1938, SMA, U1/16/834, 7.

²⁴² Reiss to Jordan, *ca.* Jan. 1939, SMA, U1/16/834, 14.

²⁴³ W. R. Johnston to Jordan, 19 Jan. 1939, SMA, U1/16/834, 15.

²⁴⁴ Every single month from December 1938 to March 1940 the Deputy Commissioner of Public Health's cover letter to the S.M.C.'s Treasurer for the Hospital's monthly statement of account took the same format and title. See SMA, U1/16/834, 11-12, 16-25, 27-31.

²⁴⁵ From \$4 to \$6 in August 1939, and from \$6 to \$9 in June 1940.

²⁴⁶ Minute by Jordan, 5 Apr. 1940, SMA, U1/16/834, 31.

²⁴⁷ Jordan to (Treasurer, S.M.C.), 16 Apr. 1940 and 14. Jan. 1941, SMA, U1/16/834, 32, 51.

²⁴⁸ He added that she could not be transferred to the Country Sanatorium as she was suffering from ulcers on her legs. Kasakoff to Jordan, 4 Dec. 1940, SMA, U1/4/763, 22.

²⁴⁹ Jordan to M. C. Liang (Sec. & Com. Gen., S.M.C.), 5 Dec. 1940, SMA, U1/4/763, 21.

²⁵⁰ L. S. Huizenga, "Report on Leprosy Case at Russian TB Hospital", 17 Dec. 1940, SMA, U1/16/834, 44.

²⁵¹ *Ibid.*, 44.

daughter, it is perhaps unsurprising that Huizenga reported that she had recently become violent.²⁵² Huizenga's report did not reveal anything fatal about her case. Yet she passed away the very next day.²⁵³ By a cruel twist of fate this was not the end of her story as far as the Council was concerned. News of her death only reached Jordan *after* he had forwarded the statement of account for the month of November on to the S.M.C. Treasurer.²⁵⁴ The Settlement's bureaucracy only finally caught up with her death in January 1941 with the submission of a statement of account for her maintenance for the first 18 days of December.²⁵⁵

Table 3.5 Maintenance of Foreign and Chinese Leprosy Sufferers.

Period		Number of Days/Month	Korchakova		Chinese Patient	
			Daily Rate (\$)	Monthly Total (\$)	Monthly Rate (\$)	Monthly Total (\$)
1938	21st - 30th Nov.	10	4	40	20	6.67
	Dec.	31	4	124	20	20
1939	Jan.	31	4	124	20	20
	Feb.	28	4	112	20	20
	Mar.	31	4	124	20	20
	Apr.	30	4	120	20	20
	May	31	4	124	20	20
	June	30	4	120	20	20
	July	31	4	124	20	20
	Aug.	31	6	186	20	20
	Sept.	30	6	180	20	20
	Oct.	31	6	186	20	20
	Nov.	30	6	180	20	20
	Dec.	31	6	186	20	20
1940	Jan.	31	6	186	30	30
	Feb.	29	6	174	30	30
	Mar.	31	6	186	30	30
	Apr.	30	6	180	30	30
	May	31	6	186	30	30
	June	30	9	270	30	30
	July	31	9	279	30	30
	Aug.	31	9	279	30	30
	Sept.	30	9	270	30	30
	Oct.	31	9	279	30	30
	Nov.	30	9	270	30	30
	1st - 18th Dec.	18	9	162	30	17.42
TOTAL		759		\$4,651		\$614.09

²⁵² Ibid., 44.

²⁵³ Kasakoff to Jordan, 18 Dec. 1940, SMA, U1/16/834, 40.

²⁵⁴ Jordan to (Treasurer, S.M.C.), 19 Dec. 1940, SMA, U1/16/834, 45. Jordan informed Huizenga of her death a week later. Jordan to Huizenga, 23 Dec. 1940, SMA, U1/16/834, 46.

²⁵⁵ U1-16-834 Jordan to (Treasurer, S.M.C.), 14 Jan. 1941, SMA, U1/16/834, 51.

The discovery of this case back in November 1938 had forced the medical authorities into an unanticipated, controversial and problematic situation: the necessity of accommodating a non-Chinese leprosy sufferer. Unable to admit her to either the Isolation Hospital or the Emergency Leprosarium, the medical authorities seized upon her nationality as leverage to gain admission to the Russian Orthodox Confraternity Hospital. However this temporary expedient soon became a less than satisfactory arrangement seemingly without end. It was sustained by a unique and unprecedented subsidy from the Council that totalled \$4,651 – a sum that could have maintained at least seven resident or refugee Chinese leprosy sufferers in the Emergency Leprosarium for the same period. Her deteriorating condition in late 1940 once again raised the taboo of foreign accommodation. But as Huizenga noted with finality, “her death settled the problem that arose regarding the case”.²⁵⁶

At Loggerheads: Jordan and Wu

The deteriorating relationship between Rev. T. C. Wu of the C.M.L. and Jordan profoundly impacted upon the Settlement’s management of Chinese leprosy sufferers. According to the Settlement’s medical authorities the case of Loh Liang and Li Ping illustrated a number of alarming deficiencies in the C.M.L.’s management of the disease. The Emergency Leprosarium’s inability to detain its inmates not only posed a “danger to the Settlement” but highlighted the Mission’s failure to heed Jordan’s advice about the necessity of hiring a guard.²⁵⁷ Secondly Loh’s and Li’s referral to the Tzepang Clinic for diagnosis prior to admission raised concerns about the clinic’s effectiveness.²⁵⁸ Jordan had readily accepted Huizenga’s request for assistance by tasking the Public Health Department to “check up on” the Settlement cases that had failed to return to the clinic; the patients residing in the French Concession lay beyond the Department’s jurisdiction.²⁵⁹ Only one Settlement case, however, was actually traced to the address provided by the clinic. Chief Health Self complained:

In other cases it was ascertained that the number of houses given on roads did not exist, the cases were not on the record at the Clinic, or that the Clinic admitted that the patients had left Shanghai...

These enquiries have taken considerable time and the results show that the Clinic Authorities took no trouble to verify the patients’ addresses while they were attending.²⁶⁰

²⁵⁶ Huizenga to Jordan, 26 Dec. 1940, SMA, U1/4/763, 18.

²⁵⁷ Jordan to (Sec. & Com. Gen., S.M.C.), 9 May 1940, SMA, U1/16/2618, 74. Jordan tried, albeit unsuccessfully, to persuade the S.M.C. to use its financial support for the National Leprosarium as a “lever” to pressure the institution into employing a watchman. Jordan to (Sec. & Com. Gen., S.M.C.), 8 June 1940, SMA, U1/16/2618, 81-82, 81.

²⁵⁸ Li Ping failed to present himself for inspection. Huizenga to Jordan, 8 Apr. 1940, SMA, U1/16/754, 17.

²⁵⁹ Jordan to Huizenga, 13 and 26 Apr. 1940, SMA, U1/16/2618, 39, 61.

²⁶⁰ L. J. Self (P.H.D.) to (D.C.P.H.), 7 May 1940, SMA, U1/16/2618, 72.

The fact that the Clinic had 216 cases on its books made Self's report all the more worrying.²⁶¹ In the meantime Jordan grew increasingly frustrated at the number of leprosy sufferers presenting themselves at his office in order to secure permission to be admitted to the Leprosarium. Huizenga blamed Wu, the Chinese Mission to Lepers' general secretary.²⁶² Jordan remained on friendly terms with Huizenga but these revelations severely strained his already deteriorating relationship with Wu to such an extent that Jordan elected to address all future correspondence regarding the admission of patients to the Leprosarium to Huizenga instead.²⁶³

Jordan's friendship with Huizenga doubtless contributed to a brief rapprochement between the Public Health Department and the Chinese Mission to Lepers. Jordan was especially grateful for Huizenga's assistance in the "exceptional circumstances" of Korchakova's case.²⁶⁴ As for his fee, Huizenga stated that he was more than happy to waive it as a show of his appreciation of the Council's and the Public Health Department's financial support for the Chinese Mission to Lepers.²⁶⁵ Meanwhile wartime inflation exerted a severe strain on the Mission's finances, and the Leprosarium closed its books in 1940 with a deficit of over £26,000.²⁶⁶ Although the Settlement was by now contributing 45% of the Leprosarium's budget (as opposed to only 7% from the French Concession), Jordan nevertheless supported the Mission's request for an increase in the maintenance rate from \$30 to \$45 per patient.²⁶⁷

The rapprochement proved short-lived. In May 1941 the Japanese and Chinese public health authorities gave the leprosarium one month to relocate, allegedly because the institution posed "a menace to the public health to the community".²⁶⁸ At an emergency meeting of the board of directors, Jordan firmly opposed Wu's suggestion that the Mission evacuate the patients back to the original leprosarium at Tazang, as the buildings were located in an area "marked off by the Japanese for military purposes".²⁶⁹ Jordan was principally

²⁶¹ Huizenga to C. A. E. Carr (Sec., P.H.D.), 24 Apr. 1940, SMA, U1/16/2618, 55.

²⁶² Huizenga to Jordan, 2 May 1940, SMA, U1/16/2618, 67.

²⁶³ Jordan to Wu, 16 May 1940, SMA, U1/16/752, 63. Jordan consented to sending duplicates of his correspondence with Huizenga to Wu at the latter's request in order to facilitate the production of the monthly statements of account. Jordan to Wu, 1 June 1940, SMA, U1/16/2619, 66.

²⁶⁴ (Deputy Treasurer) to Liang, 9 Dec. 1940, SMA, U1/4/763, 20.

²⁶⁵ Huizenga to Jordan, 26 Dec. 1940, SMA, U1/4/763, 18. Jordan thought Huizenga's decision admirable, "though I would not adopt it myself, but grab my fee" from the Council "which, according to an English proverb 'Has neither a soul to be saved or a body to be beaten'". Jordan to Huizenga, 28 Dec. 1940, SMA, U1/16/834, 48.

²⁶⁶ Wu to Liang, 22 Jan. 1941, SMA, U1/4/232, 80.

²⁶⁷ He noted that the maintenance rates for mental patients in the Russian Orthodox Confraternity Hospital and for patients in the Shanghai Mercy Hospital had risen by 215% and 300% respectively since 1937, whereas the National Leprosarium's rates had only risen by 50%. Jordan cautioned the Council to set a limit to its annual maintenance subsidies in view of the increasing number of resident and refugee patients. Jordan to Liang, 7 Feb. 1941, SMA, U1/4/232, 74-76.

²⁶⁸ "The Leper World: Shanghai Leprosarium facing another crisis," *Leper Quarterly* 15, no. 2 (1941): 77-78, 77. See also L. S. Huizenga, "Shanghai Leprosarium Ordered to Move for Fourth Time," *Leper Quarterly* 15, no. 2 (1941): 54.

²⁶⁹ Jordan to Phillips, (personal), 5 June 1941, SMA, U1/4/232, 61-62, 61.

concerned that the relocation to Tazang would result in a large influx of patients “appearing on the [Settlement’s] streets as beggars”.²⁷⁰ Jordan’s frustration with Wu’s handling of the situation became so acute that he threatened to resign his position as a director of the National Leprosarium:

The Secretary of this Mission [Rev. Wu] appears to be working on his own, without reference to the Board and frequently, apparently not in what I at least consider the interests of the Mission. Moreover, his views on the subject of the Shanghai Leprosarium are not, in my view, sound, and he occasionally interferes with the Superintendent [i.e. Huizenga]. I gather that he has taken a most irregular step [of corresponding with the Chinese authorities without first discussing the matter with the C.M.L.’s board of directors], contrary to the wishes of the Board, and I think it is desirable that I should be free to resign, if this proves to be the case.²⁷¹

Wu was forced to write an extremely apologetic letter to Jordan, assuring him that he would exercise greater care in handling the Mission’s affairs in the future.²⁷² Wu’s admission a fortnight later that Van Ching Tiau (Resident #136), a leprosy sufferer who had recently been admitted from the Settlement’s Gaol, had escaped from the Emergency Leprosarium did little to help Wu’s cause in Jordan’s eyes.²⁷³ Ultimately the Japanese occupation of the Settlement later that year rendered the evacuation moot, and the leprosarium was permitted to remain at Brenan Road.

Wu’s handling of this evacuation scare profoundly impacted upon Jordan’s attitude towards the Mission’s management of the leprosarium for the remainder of his tenure as Commissioner of Public Health. Jordan had always endorsed Wu’s repeated appeals for increases in the maintenance rate, but he opposed Wu’s request for an increase to \$75 per patient per month. By now the Council was supporting 41 resident patients and 37 refugee patients – more than three-quarters of the Leprosarium’s total population – at a cost of just over \$3,500 per month.²⁷⁴ This figure was almost three times higher than the *annual* sum that the Council had been prepared to pay prior to the opening of the National Leprosarium some 6 years earlier. The Settlement objected to the Mission’s reliance on the Council; its failure to secure financial support from the Chinese municipality; and its “lax” attitude in generating public support.²⁷⁵ Although the Settlement eventually agreed to an increase in the maintenance rate, it conditioned its support by unanimously voting in favour of ceasing the

²⁷⁰ Ibid., 62.

²⁷¹ Jordan to Liang, 30 Aug. 1941, SMA, U1/16/2622, 24. Jordan expressed similarly disparaging remarks about Wu’s actions in private letters to Huizenga and Tyau, the Mission’s chairman. U1-16-761 Jordan to Huizenga, 26 July 1941, SMA, U1/16/761, 65; Jordan to E. S. Tyau, 19 Sept. 1941, SMA, U1/16/2622, 28.

²⁷² Wu to Jordan, 25 Sept. 1941, SMA, U1/16/2622, 29-30.

²⁷³ Wu to Jordan, 8 Oct. 1941, SMA, U1/16/757, 166.

²⁷⁴ The Public Health Department initially put the official figure at 74 Settlement patients (residents & refugees) but subsequently revised this as a result of a clerical error. G. F. Jones (P.H.D.) to Jordan, 29 Jan. 1942, SMA, U1/4/232, 51; Wu to Jordan, 28 Jan. 1942, SMA, U1/16/755, 127; Jordan to J. W. Morcher (Treasurer, S.M.C.), 5 Mar. 1942, SMA, U1/16/759(2), 390-392.

²⁷⁵ Jordan to (Sec. & Com. Gen., S.M.C.), 30 Jan. 1942, SMA, U1/16/753(1), 165; Morcher to (Sec. & Com. Gen., S.M.C.), 11 Mar. 1942, SMA, U1/16/753(1), 173.

Council's support for refugee cases.²⁷⁶ Henceforth only 'bona-fide' residents were to be maintained. The Council had been supporting four of these refugee patients ever since the start of the hostilities, including the very first 'refugee patient', Chen Siao Wong (Refugee #16), who was admitted to the temporary leprosarium at Chungshan in October 1937 at the age of 13.²⁷⁷ The Settlement was outraged by Wu's subsequent request for a lump sum of \$100 per refugee patient to facilitate their return to their native homes:²⁷⁸

...I have to inform you that the Council is unwilling to assist your Mission in such an apparently anti-social act.

The Council cannot view with favour your proposal to send these sick refugees home without even attempting an appeal to the extra-Settlement Authorities on whom the responsibility for the care of these patients devolves. I have accordingly to reiterate the suggestion ... that your Mission should either obtain funds for the maintenance of these refugee patients from the Chinese Authorities or endeavour to raise money by a campaign for public contributions.²⁷⁹

The Settlement authorities were principally concerned with preventing a large influx of recently-dispersed refugee patients, rather than with the fate of the patients themselves. Moreover they considered that the onus of ensuring the continued confinement of these patients rested firmly with the Chinese puppet authorities, rather than with the Shanghai Municipal Council.

The Mission's attempt to heed the Council's advice by initiating a major public fund-raising campaign merely alarmed the Council further, fuelling exaggerated claims about the dangerously high prevalence of the disease within Shanghai. In its attempt to emphasise the "disastrous consequences" wrought by the outbreak of the Second World War in the Pacific, the C.M.L.'s fund-raising campaign asserted that "a number of large leprosaria have already been closed and hundreds of lepers forced to leave".²⁸⁰ According to the *Ostasiatischer Lloyd-Shanghai Nachrichten*, a local German daily newspaper, the C.M.L. subsequently declared that "at present more than 3,000 lepers are moving freely about Shanghai", many of them as beggars, and that the "leprosy problem...has become a danger for the public".²⁸¹ By inadvertently implying that the large bankrupted leprosaria were located in Shanghai, the Mission fuelled fears that large numbers of patients had been turfed out onto the city's streets. The Settlement's Assistant Superintendent of Hospitals was so alarmed by rumours that "the lepers had broken out" of the Emergency Leprosarium that he immediately tasked

²⁷⁶ J. C. Greig, (Assist. Sec., S.M.C.), 17 Mar. 1942, SMA, U1/4/232, 42.

²⁷⁷ Tsa Tsang Z (Refugee #21), Sze San Pa Tse (Refugee #30) and Wong Ah Da (Refugee #39) were admitted to the Salvation Army Camp in January, February and April 1938 respectively.

²⁷⁸ Wu to Greig, 11 Apr. 1942, SMA, U1/16/753(2), 307. Wu mistakenly informed Greig there were 38 rather than 37 refugee patients. Wu acknowledged the latter as the official figure in a letter to Jordan dated the same day. Wu to Jordan, 11 Apr. 1942, SMA, U1/16/759, 402.

²⁷⁹ K. Teraoka (Sec., S.M.C.) to Wu, 30 Apr. 1942, SMA, U1/16/753(2), 311. For Wu's request for the \$100 per patient see Wu to Greig, 11 Apr. 1942, SMA, U1/16/753(2), 307.

²⁸⁰ "A Terrible Blow," *Leper Quarterly* 16, no. 1 (1942): 1.

²⁸¹ "Translation of Article which appeared in 'Ostasiatischer Lloyd' ", 12 May 1942, SMA, U1/16/2622, 208.

a Health Inspector to conduct a full head-count.²⁸² The contents of the Mission's fund-raising article continued to be misconstrued, making the general public "extremely nervous".²⁸³ For instance a member of the S.M.C. Co-ordinating Committee reported that a member of the Public Health Department had allegedly confirmed that between 3,000 and 4,000 leprosy patients "had been thrown out on the streets" of Shanghai.²⁸⁴ The notion that a significant number of leprosy cases allegedly existed in Shanghai was an alarming revelation in itself but rumours that the closure of Shanghai's bankrupted leprosaria was responsible for a sudden deluge of several thousand leprosy sufferers triggered fears of a major public health crisis. Jordan strenuously denied the Mission's statements, questioned the effectiveness of its fund-raising "propaganda" and concluded that "the whole thing is a worked up scare".²⁸⁵ The Council exerted much stricter control over the wording of the Mission's fund-raising campaign the following month as a result of this incident.²⁸⁶

Post-1941

Remarkably the invading Japanese forces *preserved* the Settlement's management of leprosy through the early 1940s. Indeed the authorities approved an increase in the maintenance rate for resident leprosy sufferers in the latter half of 1942. In doing so, they unwittingly established a precedent that had profound ramifications for the extent of the Settlement's support for the Brennan Road Emergency Leprosarium. Duck, the Deputy Commissioner of Public Health, considered the Mission's request for an increase in the maintenance rate from \$75 to CRB\$250 to be "excessive", particularly as Wu had claimed that the per capita rate was roughly CRB\$100 only two months before.²⁸⁷ After reviewing the institution's monthly statements and receipts, the S.M.C. Treasurer agreed to an increase to \$135 per capita per mensem, in line with the increase in the cost of living index for Chinese workers.²⁸⁸ Neither Morcher nor the Commissioner of Public Health nor even the Council recognised the implications of this decision. Wu was only too happy to enlighten them:

We take for granted, therefore, that should the cost of living index under the same category further rise from the subsequent months, we shall be permitted to revise our monthly statements without sending in further application".²⁸⁹

The arguments between the Chinese Mission to Lepers and the Council in Shanghai over the adjustment of the maintenance rate continued well into the following year. On the one hand,

²⁸² R. Bereford (P.H.D.) to P. S. Page (P.H.D.), 14 May 1942, SMA, U1/16/752, 187. Bereford assured Dr. Lücke that all 64 male and 27 female patients were present and correct. Ironically a prisoner who was admitted to the Leprosarium earlier that month by the Shanghai Municipal Police escaped less than a week after Bereford's visit. Bereford to Lücke, 14 May 1942, SMA, U1/16/752, 188; Wu to Jordan, 6 June 1942, SMA, U1/16/757, 187.

²⁸³ Minutes of the Co-ordinating Committee, 14 May 1942, SMA, U1/16/2622, 211.

²⁸⁴ *Ibid.*, 211.

²⁸⁵ Jordan to T. Beesley, (Sec., Co-ordinating Committee), 20 May 1942, SMA, U1/16/2622, 212.

²⁸⁶ U1-4-232 Wu to T. K. Ho (S.M.C.), 11 June 1942, SMA, U1/4/232, 34.

²⁸⁷ E. F. Duck (D.C.P.H.) to A. B. Lang (Sec., S.M.C.), 8 Aug. 1942, SMA, U1/16/753(1), 185.

²⁸⁸ J. W. Morcher (Treasurer, S.M.C.) to (Sec., S.M.C.), 3 Sept. 1942, SMA, U1/16/753(1), 193.

²⁸⁹ Wu to (C.P.H.), 15 Sept. 1942, SMA, U1/16/753(1), 199.

Wu repeatedly pushed the Leprosarium's luck by attempting to bill the Settlement on the basis of an inflated maintenance rate. On the other, the Council attempted to stand firm by its decision to revise the rate quarterly. These squabbles continued, and continued in English, well into 1943.²⁹⁰ From the autumn of that year however, the government relented any opposition, and the maintenance rate rose dramatically as a result of massive inflation. In October 1943 the rate stood at CRB\$435.27. A year later it stood at \$5,300 per patient – the total subsidy for that month alone exceeded \$300,000!²⁹¹

The Japanese authorities and the Settlement's foreign personnel were eager to maintain an air of normality. Bickers, for instance, noted that the framework of the Shanghai Municipal Council and the Shanghai Municipal Police remained largely intact after the Japanese invasion and that much of the bureaucratic paperwork continued to be produced in English until early 1943.²⁹² By focusing on the history of leprosy, this chapter has broadened the existing historiography by demonstrating the significant medical continuities. There are several remarkable features about this financial relationship. Strikingly the Chinese Mission to Lepers' statements continued to be rendered in the same format and in English until May 1945.²⁹³ More importantly the distinction between 'resident' and 'non-resident' patients was preserved. 'Resident' patients continued to be identified, admitted to, *and maintained in*, the National Leprosarium until early 1945.²⁹⁴ Whereas the Japanese authorities allowed Hong Kong's Kennedy Town Leprosarium – established in the same year as the National Leprosarium of Shanghai – to disintegrate shortly after the colony's surrender, the International Settlement's practice of maintaining 'resident' patients in the National Leprosarium was preserved until the end of the Second World War.

Conclusion

The International Settlement shared Hong Kong's racialised conceptualisation of leprosy as an imported Chinese disease. Both territories shared a staunch aversion to domestic segregation facilities, fearing that the inherent superiority of Western medical practices would trigger an unwelcome influx of diseased mainlanders. The International

²⁹⁰ See for instance I. Nagai (D.C.P.H.) to (Treasurer, S.M.C.), 27 July 1943, SMA, U1/16/760, 25.

²⁹¹ Wu to Y. Tashiro (C.P.H., First District, Shanghai Special Municipality), 16 Nov. 1943 and 16 Nov. 1944, SMA, U1/16/760, 44, 96.

²⁹² Robert Bickers, "Settlers and Diplomats: The End of British Hegemony in the International Settlement, 1937-1945" in *In the Shadows of the Rising Sun: Shanghai under Japanese Occupation*, eds. Christian Henriot and Wen-Hsin Yeh, (Cambridge: Cambridge University Press, 2004), 247-250.

²⁹³ Wu to (C.P.H., Shanghai Special Municipality), 29 May 1945, SMA, U1/16/760, 121, 123. The statements continued to be produced in the same format until August 1945. Moreover Dr. L. C. Tseu, who was in charge of the leprosy clinic inside the Brennan Road Leprosarium, submitted monthly reports in English up until April 1945. See SMA, U1/16/762, 60-76.

²⁹⁴ The leprosy sufferers were referred to as former residents of the International Settlement, then as patients of the former First District Administration and finally as "leprosy patients of the former 1st District and 8th District". Although the term "resident" was dropped in Wu's cover letter of January 1945, the term continued to appear (in English) in his statements of account until May 1945. (C.M.L.) to (P.H.D.), 24 Aug. 1943, SMA, U1/16/760, 28; Wu to (C.P.H.), 11 Jan., 14. Mar., 16 Apr. and 29 May 1945, SMA, U1/16/760, 101, 107-8, 113, 116, 121, 123.

Settlement thus considered itself as much of an 'El Dorado to the leprous Chinaman from the mainland' as Hong Kong. Both authorities managed the disease by deporting Chinese leprosy sufferers to the mainland, removing these unwanted bodies beyond their respective spheres of obligation. The management of leprosy sufferers therefore took on a whole new significance in the British colonial possessions in East Asia: these individuals were not simply cast without the camp, but without the colonial sphere altogether. But parallel internal pressures, principally the emergence of Chinese agency, profoundly impacted upon the International Settlement's and Hong Kong's managements of leprosy. It was not so much that the practice of 'casting without' was displaced. Instead both territories were forced to distinguish between those who were being cast out: between immigrants from the mainland on the one hand, and colonial citizens or Settlement residents on the other. This distinction extended the both territories' spheres of obligation. Or more accurately, this distinction *incorporated* foreign mainland leprosaria into the settlement's and the colony's spheres of obligation. The history of leprosy thus sheds light on the trans-national management of diseases in East Asia. Moreover in the case of Shanghai the outbreak of the Sino-Japanese war altered the final destination of those cast without the camp, bringing the without within. Thus the National Leprosarium was forced to seek shelter within the extra-Settlement. This relocation profoundly impacted upon: its reliance on the Settlement's financial support; the Settlement's racialised management of the disease; the relationship between the Mission and the Public Health Department; the Settlement's emphasis attitudes towards confinement; and the extent of patient agency.

Epilogue

During the course of my research in Shanghai I came across a remarkable set of documents that provided an extraordinary glimpse into the life of a 'cured' leprosy sufferer. The discharge of 'cured' patients from either the National Leprosarium or the Kennedy Town Leprosarium was exceptionally rare. Neither the colonial nor the Settlement authorities envisioned the 'reintegration' of such individuals into society. Indeed programs to 'resettle' and employ 'cured' leprosy sufferers only emerged in Hong Kong in the early post-war period, principally as a result of the Mission to Lepers Hong Kong Auxiliary's involvement in the administration of the colony's post-war domestic leprosaria.²⁹⁵ But I stumbled across the case of patient Huang Sze Shih (Resident #112). Jordan, the Settlement's Commissioner of Public Health, had requested Huang's admission to the Brenan Road Emergency Leprosarium in the autumn of 1940 because a "tubercle" had been identified on the left side of his face.²⁹⁶ At the time, Huang was an unemployed 18 year old originally from Amoy, who had been living in Shanghai for two years. As a result of a clerical error, the Mission failed to charge Huang's maintenance to the S.M.C., as well as the maintenance of 2 other resident and one refugee

²⁹⁵ See Hong Kong Public Records Office (hereafter HKPRO), HKRS163/1/1829; HKPRO, HKRS163/1/1758; HKPRO, HKRS41/1/9600.

²⁹⁶ Jordan to Huizenga, 14 Oct. 1940, SMA, U1/16/757, 52-55, 55.

patient, until *after* the Japanese invasion of the Settlement.²⁹⁷ Jordan suggested that this error absolved the Settlement's responsibility for maintaining Huang and the three other patients – the timing of this error came at a low-point in Jordan's relationship with the Chinese Mission to Lepers – but the S.M.C. Treasurer disagreed.²⁹⁸ Just over a year later, Huang sent the following typed letter to the Settlement's Commissioner of Public Health, which bears reprinting in full:

I, patient Huang Sze Shih, have received a few years' treatment in the Shanghai Leprosarium. Both Dr. Chow Wen Ching of the Leprosarium and Dr. Pan Chee Shing of the Chinese Red Cross No.1 Hospital, who examined me recently, certify that I do not carry leprous bacteria; and the Chinese Mission to Lepers is also kind enough to give me a letter of certification to the effect that I can be discharged and do some light duty. I have now obtained a job in the Overseas Chemical Industrial Co., but owing to the fact that the letter of certification states that treatment should be continued in order to avoid a relapse, the company assumes that my disease has not yet been cured completely. For the sake of public health, the company hesitates to accept my service.

I beg to request that you will kindly enquire into the matter, asking the Leprosarium to furnish information regarding my examination or examine me by your doctor. In case you are of opinion that I don't not carry leprous bacteria and there is no danger of infecting other people, I shall be much obliged if you will kindly certify to this effect so that the public will not be suspicious and I will be enabled to earn a living.²⁹⁹

Though this letter was probably not the direct result of a Chinese leprosy patient's penmanship, its very existence is astonishing. Firstly, it provides a rare insight into the difficulties that discharged patients faced. Medical treatments may have provided a physical cure, but they did little to abate the popular stigmatisation of the disease. Even more incredible is the fact that the Commissioner of Public Health supported Huang's application.³⁰⁰ This letter was written in May 1943, i.e. well after the Japanese occupation. This is a unique and extraordinary example of a senior Japanese physician attempting to assist a discharged Chinese leprosy patient to secure wartime employment. Despite the Commissioner's support, Huang failed to secure employment with the Overseas Chemical Industrial Company. Indeed he failed to secure any form of employment at all. Instead he remained confined in the Brennan Road Emergency Leprosarium through the spring of 1945.³⁰¹ For Huang at least, the puppet government's management of Chinese bodies differed little from that of the International Settlement.

²⁹⁷ Wu to Jordan, 28 Jan. 1942, SMA, U1/16/755, 127.

²⁹⁸ Jordan to S.M.C. Treasurer, 5 Feb. 1942, SMA, U1/16/759(2), 385; Wu to Jordan, 15 Feb. 1942, SMA, U1/16/759(2), 387.

²⁹⁹ S. S. Huang to Y. Tashiro (C.P.H.), 11 May 1943, SMA, U1/16/757, 11.

³⁰⁰ Tashiro to Huang, 17 May 1943, SMA, U1/16/757, 60; Tashiro to (Director, National Leprosarium), 17 May 1943, SMA, U1/16/757, 61; Tashiro to (Mgr. Overseas Chemical Industrial), 24 May 1943, SMA, U1/16/757, 68.

³⁰¹ Wu to (C.P.H.), 29 May 1945, SMA, U1/16/760, 121.

Chapter 4: Malaria in Hong Kong

The preceding two chapters explored Hong Kong's and the International Settlement's coercive, racialised medical practices by focusing specifically on leprosy. A shared conceptualisation of diseased Chinese bodies underpinned both territories' parallels reliance on deportation and staunch opposition to domestic segregation. Chapters 4 and 5 shift this focus to explore the parallels between Hong Kong's and the Settlement's conceptualisation and management of diseased environments. The colony's historical association with malaria was even more inherent than that with leprosy. In his highly critical report which likened the hills of northern Kowloon to a 'negro streaked with leprosy', R. Montgomery Martin, the colony's first treasurer, reported that the location of the early settlement on the northern side of Hong Kong island favoured the "retention of a mortific poison at the surface, to be occasionally called into deadly activity".¹ Martin was so alarmed by the threat of the febrile diseases that plagued the early colonists that he questioned whether "the objects sought or to be obtained by the possession of Hong Kong, are worth the dreadful sacrifice of life which the maintenance of the present establishment entails".² This chapter traces the evolution of the colony's efforts to understand and abate the threat from malarial fevers by taming this hostile Chinese environment.

From Miasmas to Germ Theories

Foreign commentators in the Far East attributed the prevalence of fevers in China, including in Hong Kong and Shanghai, to the combined effects of humidity, temperature and three predisposing environmental causes: organic decomposition, the exposure of virgin soil and the disintegration of granite.³ Some alleged that local residents avoided up-turned soil near newly constructed homes.⁴ The role of disintegrating granite was particularly emphasised in Hong Kong. For instance J. Thomson, who travelled through the colony in the 1870s, observed:

When first the city was being built, vast surfaces of decomposed granite were laid bare as the workmen cut into the face of the hill; from the exposed spots noxious miasmas exhaled, and to them are attributed those maladies which prevailed so fatally at that time, and which proved themselves the worst enemies our troops had to contend against in China".⁵

¹ Hong Kong. *Copies of 'Report on Hong Kong,' 'Report on Chusan,' and Minute on the British Position and Prospects in China,' by Mr. R. Montgomery Martin, when Treasurer to The Queen at Hong Kong, and a Member of Her Majesty's Legislative Council in China* (Parl. Papers, Session 1 (148), 1857), 4.

² Ibid., 5-6, 6.

³ D. Ham, "Malarial Hygiene and Colonial Society in Hong Kong, c.1880 – c.1910," (MPhil diss., University of Cambridge, 2009), 20-22.

⁴ Charles Alexander Gordon, *China from a Medical Point of View in 1860 and 1861, to which is added a chapter on Nagasaki as a Sanatorium* (London: John Churchill, 1863), 35.

⁵ J. Thomson, *The Straits of Malacca, Indo-China and China; or Ten Years' Travel, Adventures and Residence Abroad* (London: Sampson Low, Maston, Low, & Searle, 1875), 202. See also N. B. Dennys, ed., *The Treaty Ports of China and Japan. A Complete Guide to the Open Ports of those Countries, together with Peking, Yedo, Hongkong and Macao. Forming a Guide Book & Vade Mecum for Travellers, Merchants, and Residents in General. With 29 Maps and Plans* (London: Trübner and Co.,

Even popular local guide-books warned travellers about the “deleterious gas evolved from the decomposed granite”.⁶ This discourse regrouped diseases by geographical origin rather than common physical symptoms. Hence the term ‘Hong Kong fever’ was used to describe a variety of (pathologically different) febrile illnesses.

Hong Kong’s physicians gradually began to identify specific types of ‘malarial’ fevers during the final quarter of the 19th century. According to Yip, this shift occurred from 1890 onwards.⁷ In fact the colonial medical authorities distinguished between three different malarial fevers as early as the 1880s. Dr. John Mitford Atkinson, the Superintendent of the Government Civil Hospital (1887 - 1896), compiled a separate admissions and mortality table specifically for malarial fevers.⁸ The emergence of specific disease categories did not, however, displace the miasmatic theories. The Colonial Surgeon, for instance, attributed the prevalence of fevers at one of the colony’s police stations to building works and swamps in the neighbourhood.⁹ The Government Astronomer similarly attributed the intermittent and remittent fevers from which he and his colleagues had been suffering to the “malaria” emanating from the deserted rice-paddies to north of the Observatory.¹⁰

From the mid-1880s Hong Kong’s vibrant medical community actively interrogated the diseases that threatened the colony’s health. The desire to understand and tame the local environment was compounded by a profound sense of intellectual dislocation. In 1886 the colony’s civilian and military physicians established the Hong Kong Medical Society – later renamed the Hong Kong and China Branch of the British Medical Association – in order to provide a forum for regular discussion and to stimulate pioneering research into “Eastern diseases”, about which there was an “amazing ignorance in the profession, both at home and abroad”.¹¹ In his augural address as the society’s first president, Patrick Manson explained that malaria was chief amongst those ‘Eastern diseases’:

Yet, undoubtedly, there are fevers in China which have not yet been described distinct from the recognized types – as distinct as typhus is from typhoid. I have sometimes wondered how much quinine is wasted in the world in a year on account of inability to diagnose malarial from the continued fevers... Certainly great ignorance prevails at

1867), 32; Henry Knollys, *English Life in China* (London: Smith, Elder, & Co., 1885), 29-30. Some however dissented from this view. John Wilson, *Medical Notes on China* (London: John Churchill, 1846), 148-149.

⁶ *A Guide to Hongkong, with a short account of Canton and Macao, and embracing many chapters on interest relating to the Far East* (Hong Kong: W. Brewer, 1883), 5.

⁷ Ka-che Yip, “Colonialism, Disease and Public Health: Malaria in the History of Hong Kong,” in *Disease, Colonialism, and the State, Malaria in Modern East Asian History*, ed. Ka-che Yip (Hong Kong: Hong Kong University Press, 2009), 11-12.

⁸ Atkinson arrived in Hong Kong in late 1887. He divided his table into three categories of malarial fevers (intermittent fever/ague, remittent fever and malarial cachexia) and beriberi.

⁹ P. B. C. Ayres, *Sessional Papers: Colonial Surgeon’s Report for 1884*, Mar. 30, 1885, Hong Kong Government Records Online (hereafter HKGRO), 173.

¹⁰ W. Doberck, *Sessional Papers: Report of the Director of the Observatory, for 1885*, Feb. 4, 1886, HKGRO, 143.

¹¹ Patrick Manson, “The President’s Address,” in *Transactions of the Hongkong Medical Society. Papers and Cases Read during the First Two Years of the Society’s existence*, eds. G. P. Jordan, P. Manson and J. C. Thompson, vol. 1 (Hong Kong: Kelly and Walsh, 1889), 1.

home. What about our own ignorance? Well, perhaps it is only a little less profound than that of our home brethren, and that only *inasmuch* as we have got the length of knowing that we *are* ignorant.¹²

Contrary to modern scholarly assumptions, Manson showed a limited interest in researching the disease, at least compared to his contemporaries. According to the society's minutes the only paper that he produced on the subject of the disease was delivered *in absentia* shortly after his departure in the late 1880s.¹³ Instead he presided over a number of papers prepared by his colleagues.¹⁴ The society's very first speaker, W. W. Pike of the Army Medical Service, delivered a stimulating presentation on 'The Malarial Fevers of Hong Kong' in which he reiterated the miasmatic causation of the disease.¹⁵ By contrast Staff-Surgeon T. J. Preston attempted to incorporate a number of emerging medical ideas: he rejected the notion that the colony's granite foundations were "in themselves productive of ill-health" but speculated that there were harmful bacteria or "mycelium" trapped within "the hollows of the granitic boulders of the Colony, awaiting the day when disintegration shall permit them to exercise their disastrous effect upon the local population".¹⁶ The Society's numerous discussions on malaria bore testament to extent to the community's desire to improve its limited understanding of the disease through local research.

The Fever Commission of 1888 epitomised the colony's reactive and miasmatic management of the disease during this period. A group of 43 local residents first drew the government's attention to the prevalence of febrile diseases in the western suburbs of

¹² Italics in the original. Ibid., 3.

¹³ Hong Kong Medical Society, *Minutes of Meetings, 1886-1912*, 5 Apr. 1889. Of all places that Manson's colleagues could have trumpeted the 'Hong Kong connection', doubtless the most pertinent would have been the Second Biennial Congress of the Far Eastern Association of Tropical Medicine, held in Hong Kong in 1912. Instead Atkinson, Manson's close friend and colleague, informed the delegates that Manson's experiments into the mosquito-borne transmission of Filariasis whilst stationed in Amoy, i.e. *before* his arrival in Hong Kong, had a formative impact on Manson's post-Hong Kong research into the mosquito-borne transmission of malaria. J. Mitford Atkinson, "Presidential Address: The Progress of Tropical Medicine during the past Twenty-five Years," in *Transactions of the Second Biennial Congress held at Hongkong 1912*, ed. Francis Clark, (Hong Kong: Noronha & Co., 1913), 5-17, 6-7.

¹⁴ In addition to Pike's and Preston's papers, four other presentations discussed the subject of malaria prior to Manson's departure. A further eight discussions were held between late 1889 and 1896. Hong Kong Medical Society, *Minutes of Meetings*, 2 Oct. 1886; Ibid., 6 Nov. 1886; Ibid., 4 Dec. 1886; Ibid., ca. Mar. 1887; Ibid., 4 Nov. 1887; Ibid., ca. Dec. 1887; Ibid., 5 Apr. 1889; Ibid., 7 Dec. 1889; Ibid., 12 Dec. 1891; Ibid., 9 Jan. 1892; Ibid., 27 Feb. 1892/02; Ibid., 11 Nov. 1892; Ibid., 10 Jan. 1896; Ibid., 14 Feb. 1896.

¹⁵ Drs. Manson, Hartigan, Thomson, Preston (R.N.), Scanlan (R.A.M.C.), McCarthy (R.N.) and of course Pike himself discussed the paper afterwards. W. Watson Pike, "The Malarial Fevers of Hongkong," in *Transactions of the Hongkong Medical Society. Papers and Cases Read during the First Two Years of the Society's existence*, eds. G. P. Jordan, P. Manson and J. C. Thompson, vol. 1 (Hong Kong: Kelly and Walsh, 1889), 26-38; Hong Kong Medical Society, *Minutes of Meetings*, 2 Oct. 1886.

¹⁶ T. J. Preston, "The Telluric Causation of Disease," in Ibid., 39-56, 53-54; Hong Kong Medical Society, *Minutes of Meetings*, 6 Nov. 1886.

Victoria.¹⁷ The civilian and military members of the colony's medical society were initially unable to reach a consensus as to the nature of the outbreak.¹⁸ The Governor therefore appointed several of the colony's medical officers, including Manson, Cantlie, Atkinson and Ayres, the Colonial Surgeon, to investigate the matter.¹⁹ As well as inspecting the area, the commissioners cross-examined a number of the petitioners. A Mr. Coughtrie, for instance, informed the Commission that "earth-cutting" was the main cause of the epidemic.²⁰ Many of the witnesses believed that the noxious smells emanating from the neighbouring Chinese settlement were at least partly, if not wholly, responsible. The Commissioners' report, which concluded that the outbreak was "chiefly malarial", reflected these cultural assumptions.²¹ It attributed the outbreak to the absence of sub-soil drainage, earth cuttings, the absence of cultivation and the damp location of the houses. The commission also identified a number of unhygienic factors that had exacerbated the outbreak. As well as recommending anti-miasmatic measures, including the regulation of earth cuttings and the planting of eucalyptus trees (thought to prevent the diffusion of miasmas), the commissioners also pointed to the necessity of improving the sewerage in the area.²² Thus the Commission situated the management of malarial fevers within a broader sanitary framework.

The timing of the report contributed to its poor reception. The Surveyor General criticised the report for failing to "throw a very clear light" on the causation of the disease, particularly "now that it is, I understand, admitted that the cause of malarious fevers of a malignant type is a germ".²³ Awareness, let alone acceptance, of Laveran's discovery of the causative agent of malaria in 1880 developed gradually in the colony. Atkinson informed his fellow delegates to the Eleventh International Medical Congress (Rome, 1894) that he doubted that Laveran's "hæmatozoa" was the "intimate cause" of the disease. Instead he pointed to the well-established threat of upturned soil in Hong Kong. Strikingly he predated his own awareness of Laveran's discovery. In his conference paper Atkinson alleged that he had "described certain flagellated corpuscles" as early as 1889, and "described and showed what I took to be Laveran's hæmatozoa" at a meeting of the colony's medical society in 1890.²⁴ Both of these statements were inaccurate. Firstly he made no such references in his annual

¹⁷ Hong Kong Government, *Sessional Papers: Report of the Commissioners appointed by His Excellency Sir G. William Des Voeux, to Enquire into the cause of the Fever Prevailing in the Western District together with minutes of evidence taken before the commission*, 1888, HKGRO, 1-3.

¹⁸ Hong Kong Medical Society, *Minutes of Meetings*, ca. Dec. 1887.

¹⁹ The local press regularly reported on the Commission's activities. See Ham, "Malarial Hygiene," 24-25.

²⁰ Hong Kong Government, *Report of the Commissioners*, 1888, HKGRO, 21.

²¹ *Ibid.*, vii.

²² The report noted that eucalyptus trees were being planted in many "malarial districts", including Italy. *Ibid.*, vii-xv.

²³ "The Surveyor General on the Fever Commission's Report," *China Mail*, Feb. 1, 1890, 4. The Colonial Surgeon, who had sat on the Commission, also expressed his dissatisfaction with the report. "Sanitary Board: Fever at Kowloon," *China Mail*, Nov. 21, 1889, 3.

²⁴ J. Mitford Atkinson, "The Malarial Fevers of Hong-Kong," *Lancet*, Apr. 28, 1894, 1054-1060.

report for 1889, nor in that for 1890.²⁵ Secondly he did not deliver his paper on 'The Remittent Fevers of Hongkong' to his colleagues until January 1892, by which stage he was able to draw on the description of the parasite that Laveran had presented at the Seventh International Congress of Hygiene and Demography (London, 1891):

Under the microscopes you will see specimens of what I consider to be the "hœmatozoa" Laveran describes, they were prepared in exactly the same way, as described by him, but we must not forget that these hœmatozoa may simply be concomitant of the disease, and not its cause.²⁶

The fact that Atkinson's earlier reports on the treatment of malaria made no reference to this diagnostic technique strongly suggests that he was largely ignorant or else dismissive of Laveran's research until after the London Congress in the summer of 1891. By predating his awareness of Laveran's discovery, he was able to present his work on malarial admissions in Hong Kong to the audience of international specialists in Rome in 1894 as an example of cutting-edge research. Atkinson remained decidedly sceptical about Laveran's work even after the congress in Rome.²⁷ He devoted the rest of the decade to establishing a correlation between monthly rainfall and mean temperature on the one hand, and the monthly incidence of the disease on the other – an approach that clearly reflected his staunch support for the miasmatic conceptualisation.²⁸

The Search for the *Anopheles* Mosquito

Hong Kong's cumulative amateur entomological investigations profoundly impacted upon the colony's management of the disease in the early 20th century. The colonial administration only began to seriously entertain the possibility that malaria was a mosquito-borne disease as a result of a circular from Sir Joseph Chamberlain, the Secretary of State for the Colonies, announcing the establishment of the London School of Tropical Medicine.²⁹ Chamberlain called on these territories to support the Malaria Investigation Commission's

²⁵ P. B. C. Ayres, *Sessional Papers: The Colonial Surgeon's Report for 1889*, June 27, 1890, HKGRO, 330-331, 333-335; P. B. C. Ayres, *Sessional Papers: The Colonial Surgeon's Report for 1890*, June 15, 1891, HKGRO, 352, 354-357.

²⁶ He appended this paper to his annual report for 1891. See P. B. C. Ayres, *Sessional Papers: The Colonial Surgeon's Report for 1891*, June 21, 1892, HKGRO, 425-432, 427-428; Hong Kong Medical Society, *Minutes of Meetings*, 9 Jan. 1892. Laveran delivered his paper on 'The Etiology of Malaria' at the Congress in August 1891. "Seventh International Congress of Hygiene and Demography," *Public Health* 3 (1890-1891): 449-451, 451.

²⁷ He did, however, begin to examine blood samples taken from his malarial patients. See for instance J. M. Atkinson, *Sessional Papers: The Acting Colonial Surgeon's Report for 1895*, Apr. 30, 1896, HKGRO, 301.

²⁸ Atkinson first published a graph of the monthly incidence of intermittent and remittent fever cases in the same year that he began producing a separate admissions table for these fevers. From 1892 through 1900 he plotted rainfall and temperature data on this graph. See Ayres, *Colonial Surgeon's Report for 1891*, June 21, 1892, HKGRO, 408; J. M. Atkinson, *Sessional Reports: Report of the Principal Civil Medical Officer for 1899*, Mar. 17, 1900, HKGRO, 517.

²⁹ J. Chamberlain to the Governors of Non-Responsible Government Colonies, 19 Aug., 1898, The National Archives, London (hereafter TNA), CO885/7/9, 43-44; Ham, "Malarial Hygiene," 28.

research into the possible connection between malaria and mosquitoes by having “collections made of the winged insects in the Colony which bite men or animals”.³⁰ Historians have traditionally presumed that the task of assembling these collections in Hong Kong was a straightforward process. Yip for instance simply stated that the colony’s first official investigation in 1899 was followed a year later by a more comprehensive report.³¹ In fact the government’s official investigation failed to identify any of the species that were held responsible for transmitting the disease, prompting two civilian officials to conduct their own independent investigations. This local validation of these new theories relied upon independent enthusiasts – a process that created competitive career opportunities.

The task of conducting the government’s official investigation fell to Charles Ford, the Superintendent of the Botanical and Afforestation Department. Ford was selected for the task because of his horticultural experiences rather than on the basis of any specialist knowledge about mosquitoes.³² The fact that the local press encouraged volunteers to get in touch with Ford highlighted the amateur nature of this ‘official’ investigation, which was delayed until the arrival of essential instruments from London.³³ Ford eventually transmitted several hundred specimens to the British Museum for positive identification.³⁴ Significantly these specimens were all *Culex* mosquitoes, which, as Ford reported, “so far, has not been found to be responsible for conveying malaria parasites”:

Of the genus Anopheles, which Surgeon-Major Ross is convinced from his own careful investigations is responsible for inoculating mankind with malarial germs, not a single specimen seems to have been discovered in Hongkong.

...We have here no information that any species of Anopheles has been found except in India and Africa where they have been seen in abundance and proved to be one cause of malarial fever.³⁵

The failure to identify any *Anopheles* mosquitoes suggested an alternative means of transmission. Ford’s contention reflected broader assumptions about the plurality of disease

³⁰ Chamberlain to the Governors of Non-Responsible Government Colonies, 6 Dec. 1898, TNA, CO885/7/9, 88-89, 89. This circular along with instructions from the British Museum on “How to Collect Mosquitoes” was published in the *Government Gazette. Hong Kong Government Gazette*, Jan. 28, 1899, HKGRO, 88-90.

³¹ Yip, “Colonialism, Disease and Public Health,” 12, 19.

³² His interest in entomology was principally concerned with the caterpillars that plagued his work. See for instance C. Ford, *Sessional Reports: Report of the Superintendent of the Botanical and Afforestation Department for 1894*, May 27, 1895, HKGRO, 417-31, 422-26.

³³ “The Study of Malaria and Mosquitoes,” *Hongkong Weekly Press*, Feb. 4, 1899, 98. Many of the specimens that were sent to him provided unusable. For instance 20 of the 25 specimens supplied by a Mr. Dealy were “mildewed or incomplete”. C. Ford (Supt., Botanical and Afforestation Dept.) to J. H. Stewart Lockhart (Col. Sec.), 29 Nov. 1899, TNA, CO129/294/351, 491-492, 491b. The materials cost \$73.33. *Hong Kong Hansard*, Dec. 21, 1899, HKGRO, 46.

³⁴ Ford to Stewart Lockhart, 29 Nov. 1899, TNA, CO129/294/351, 491-494, 493. See also Fred V. Theobald, *Report on the Collections of Mosquitoes (Culicidæ) received at The British Museum (Natural History) From Various Parts Of The World in connection with the Investigation Into The Causes Of Malaria* (London: British Museum, 1900), 5, 9-10; Fred V. Theobald, *A Monograph of the Culicidae of the World*, vol. 2 (London: British Museum, 1901), 154, 161, 359, 361.

³⁵ Emphasis in the original. Ford to Stewart Lockhart, 29 Nov. 1899, TNA, CO129/294/351, 492b-493.

environments: Indian and African experiences did not necessarily hold true in China. Malarial fevers continued to be understood as local variations of a worldwide phenomenon. They were still conceptualised as ‘Hong Kong fevers’ in all but name.



Map 8. The Cattle Depôts and Slaughter Houses at Kennedy Town.³⁶

Ford’s report impacted upon the nature of the colony’s localised management of the disease. Just as he was drawing his investigations to a close Atkinson, who was now the Principal Civil Medical Officer, tasked Dr. Francis W. Clark (M.O.H.), to investigate the notoriously unhealthy inspector’s quarters at the Cattle Depôts at Kennedy Town (map 8).³⁷ But when Clark suggested that mosquitoes were responsible for “the feverish reputation of the house”, Atkinson informed him:

Unfortunately for your theory these malarial carrying mosquitoes are not to be found in this Island although a thorough search has been made for them. So I am afraid we must find some other cause for the fever.³⁸

³⁶ “Map of Victoria”, ca. 1899, TNA, MFQ/1/53/1.

³⁷ J. M. Atkinson to F. W. Clark, 4 Oct. 1899, HKPRO, HKRS202/1/1/37; J. M. Atkinson, *Sessional Papers: Report on the Health and Sanitary Condition of the Colony of Hongkong for 1899*, Mar. 10, 1900, HKGRO, 388; G.A Woodcock (Actg. Sec., San. Bd.) to J.H. Stewart Lockhart, 7 Dec. 1900, HKPRO, HKRS202/1/1/36, 399-400.

³⁸ Emphasis in the original. Clark to Atkinson, 5 Oct. 1899, HKPRO, HKRS202/1/1/37; Atkinson to Clark, 5 Oct. 1899, HKPRO, HKRS202/1/1/37. Clark would later gloss over Atkinson’s rejection. Writing in 1906, at a time when the malaria-borne transmission of the disease was almost universally accepted, he alleged that “since the year 1899...the attention of the Medical and Sanitary Department has been specifically targeted toward the prevention of the formation of breeding pools for mosquitoes”.

Ford's investigation clearly underpinned Atkinson's response. Rather than investigating the possibility of implementing anti-mosquito measures, Atkinson recommended raising the building by a storey so as to reduce the danger of contracting malaria by sleeping close to the ground – a preventive measure informed by a miasmatic conceptualisation of the disease.³⁹ Viewed on a broader timescale, this incident merely represented a minor delay in terms of the colony's implementation of vector-centred measures. But Atkinson's actions directly impacted upon the lives of Inspector Watson and his family. Moreover the continuing prevalence of the disease at Kennedy Town profoundly impacted upon the subsequent validation of the new malaria-mosquito theory, dictating the site of the Sanitary Board's earliest anti-mosquito experiments. This incident highlights the importance of contextualising the evolutionary stages of the local validation of new theories.

A major step in this validation process came from an unexpected quarter early the following year. At a meeting of the colony's medical society, C. V. Ladds delivered a paper on the subject of Hong Kong's mosquitoes.⁴⁰ As the colony's veterinary surgeon, he had a vested interest in reducing the threat of malaria at the Cattle Depôts at Kennedy Town; he himself had been repeatedly "incapacitated from duty" by "attacks of tropical disease".⁴¹ Dissatisfied with Ford's report and Atkinson's recommendations, and allegedly "having always taken a great interest in the Malaria question", Ladds saw an opportunity to "take up the subject privately".⁴² He successfully identified *Anopheles* mosquitoes breeding near the Inspector's quarters, doubtless in the very same pools of stagnant water that Clark had pointed to only three months previously.⁴³ By the time of the medical society's meeting Ladds confidently asserted that *Anopheles* mosquitoes did exist in all of the colony's malarial districts.⁴⁴ He lectured on the breeding habitats of both the *Anopheles* and *Culex* mosquitoes, and discussed his experiments with different insecticides:

In conclusion, I think I may safely say that by working upon these lines, and given the services of half-a-dozen intelligent coolies, some one to look after them, and the necessary supplies of the above mentioned chemicals, in a very short time it would be possible to cause the *Anopheles* to become so scarce in Hongkong that should they prove

Francis William Clark, *The Prevention of Malaria in Hongkong (An Address)* (Hong Kong: Naronha & Co., 1906), 4-5.

³⁹ Atkinson to Clark, 9 Oct. 1899, HKPRO, HKRS202/1/1/37. The government, however, dismissed Atkinson's suggestion. Stewart Lockhart to C.W. Duggan (Sec., San. Bd.), 23 Oct. 1899, HKPRO, HKRS202/1/1/37.

⁴⁰ Hong Kong Medical Society, *Minutes of Meetings*, 28 Mar. 1900.

⁴¹ F. Clark, *Sessional Papers: Reports of the Medical Officer of Health, the Sanitary Surveyor, and the Colonial Veterinary Surgeon for the Year 1898*, Jan. 10, 1899, HKGRO, 277.

⁴² Ladds conducted his investigation in December 1899. "The Malarial Mosquito in Hongkong," *Hongkong Telegraph*, Apr. 4, 1900, 2.

⁴³ Ladds also identified *Anopheles* mosquitoes breeding at several sites on Hong Kong Island and Kowloon Peninsula. *Ibid.*, 2.

⁴⁴ Interestingly he made no reference to his work in the annual report he drafted in the weeks before the meeting. Atkinson, *Report on the Health and Sanitary Condition*, Mar. 10, 1900, HKGRO, 384-388.

to be the *only* source of infection by malaria, cases of malarial fever would soon be as rare as cholera.⁴⁵

Whilst his specimens led to the 'discovery' of *Anopheles plumiger*, a species now recognised as 'harmless', it is highly possible that Ladds may not actually have discovered *any* malaria-carrying species.⁴⁶ His research nevertheless constituted a major milestone precisely because of the nascent state of medical entomology: all *Anopheles* mosquitoes were presumed to transmit malaria, just as all *Culex* mosquitoes, including Ford's specimens, were presumed not to. Ladds's amateur research thus laid a major foundation in the local validation of the mosquito-borne transmission of malaria. Remarkably his contribution to the advancement of local and indeed global medical knowledge was due in no small measure to chance and pure coincidence. Had malaria not posed a problem to Ladds and the other foreign staff at the Cattle Depôts at Kennedy Town or had Atkinson accepted Clark's suggestion regarding the prevalence of mosquitoes in the area, the colonial veterinary surgeon might never have 'taken up the subject privately'.

The enterprising research of another colonial physician soon eclipsed Ladds's position as the colony's newfound 'expert' on malaria-carrying mosquitoes. With over a decade's worth of experience supervising several of Hong Kong's hospitals, Dr. John Christopher Thomson was well-versed in the disease's clinical manifestations.⁴⁷ He was also an active member of the colony's medical society, delivering a paper on "Typho-malarial Fever" in the early 1890s.⁴⁸ He took advantage of home leave at the turn of the century to attend a course on 'Pathological Bacteriology' at the University of Edinburgh (his alma mater) and a two-month "course of instruction in Diseases of Tropical Climates" at the new London School of Tropical Medicine.⁴⁹ Thus whilst Ladds's spent the winter of 1899-1900 searching for

⁴⁵ Italics in original. "Malarial Mosquito," *Hongkong Telegraph*, Apr. 4, 1900, 2. Ladds' paper was published in the local press and *The British Medical Journal*. The Jeyes' Sanitary Compounds Company of London took advantage of Ladds' praise for their product to forward a copy of his paper to the Secretary of State for the Colonies. The Colonial Office resolved to send the paper to Manson "(privately)" and to the Secretary to the Royal Society for the Malaria Commission "in a non-advertising form". "Mosquitos and Malaria," *British Medical Journal*, May 12, 1900, 1186-1187; J. Dawson (Jeyes' Sanitary Compounds Co.) to J. Chamberlain (Sec. of State for the Colonies), 15 Aug. 1900, 370-371, TNA, CO129/303, 370-371; Colonial Office minute, 16 Aug. 1900, TNA, CO129/303, 369.

⁴⁶ The species was named by the German entomologist Prof. W. Doenitz. "Nachrichten aus dem Berliner Entomologischen Verein," *Insekten-Börse* 18, no. 5 (1901): 36-38, 37.

⁴⁷ He served as the Superintendent of the Alice Memorial & Nethersole Hospitals, Inspecting Medical Officer of the Tung Wah Hospitals (and Medical Officer at the Victoria Gaol. J. C. Thomson (Asst. Surgeon) to J. Chamberlain, 11 May 1901, TNA, CO129/305/196, 163.

⁴⁸ Thomson attended his first meetings shortly after arriving in Hong Kong in January 1889. Within four months Drs. Manson and Cantlie nominated him to serve as the Society's secretary and treasurer. Along with Drs. Jordan and Manson he also co-edited the *Transactions of the Hongkong Medical Society*, published in 1889. In December 1891 he delivered his paper on 'Typho-malarial Fever'. Hong Kong Medical Society, *Minutes of Meetings*, 5 Jan. 1889; *Ibid.*, 5 Apr. 1889; *Ibid.*, 12 Dec. 1891; G. P. Jordan, P. Manson and J. C. Thomson, eds., *Transactions of the Hongkong Medical Society. Papers and Cases Read during the First Two Years of the Society's existence*, vol. 1 (Hong Kong: Kelly and Walsh, 1889).

⁴⁹ Thomson to Chamberlain, 11 May 1901, TNA, CO129/305/196, 163b, 165.

Anopheles mosquitoes at Kennedy Town, Thomson was schooled in the latest theories on tropical medicine at the epicentre of imperial research. What's more, he could call on Manson and Cantlie, his former colleagues and now the world's leading experts in the field, as references.⁵⁰ Armed with the latest theories Thomson set to work collecting specimens of adult mosquitoes shortly after his return to Hong Kong in May 1900. An ardent advocate of the mosquito-borne transmission of the disease, he was still a colonial 'Hong-Konger' at heart:

The general mosquito-malaria theory has been proved to the hilt, and has recently been brilliantly demonstrated to the public by Manson's double experiment; but the connection of malaria with disturbance of soil, an important point in Hongkong, is by no means clear yet. Grassi disposes of the subject by stating that it depends on the creation during digging operations of puddles of water in which *Anopheles* breed. This certainly does not hold for Hongkong.⁵¹

He confined his work largely to the city of Victoria, but acquired specimens from the New Territories and the outlying islands through the help of the police force and Dr. Ho Nai Hop, the Chinese Medical Officer in the New Territory who was responsible for providing medical treatment to the small community of leprosy sufferers at Au Tau.⁵² Significantly Thomson's report was the first to differentiate distinct *Anopheles* (and *Culex*) species, including the malaria-carrying *Anopheles sinensis*.⁵³

Anti-Malaria Measures in Transition

Modern historical studies identify Thomson's initial investigations into Hong Kong's mosquitoes as the genesis of a concerted anti-mosquito campaign. Yip, for instance, cited Thomson's first report, published in November 1900, as evidence that the authorities initiated "a broad anti-malaria campaign" in that year.⁵⁴ Thomson certainly considered himself a pioneer working on the very frontiers of Imperial research, and his report did indeed call for the "extirpation" of malaria, through the levelling or covering in all of the water-courses in the western part of the city of Victoria.⁵⁵ A decade later Thomson claimed that:

My work on the subject of Malaria in this Colony, voluntarily undertaken and not remunerated in any way, in the years immediately following the discovery of its true causation ... resulted in preventive action by the Government of this Colony before

⁵⁰ Ibid., 163b.

⁵¹ *Hong Kong Government Gazette*, Nov. 24, 1900, HKGRO, 1701.

⁵² Ibid., 1700. The report was also printed in the local press, and extracts were published in *The Lancet*, *The British Medical Journal* and *The Journal of Tropical Medicine*. Thomson also published extracts in J. C. Thomson, *Malaria Prevention in Hongkong: Reports and Minutes, 1900-1903* (Hong Kong: Victoria Gaol, 1903), 1-2.

⁵³ *Hong Kong Government Gazette*, Nov. 24, 1900, HKGRO, 1700.

⁵⁴ Yip mistakenly dated the publication of Thomson's report in the *Government Gazette* to Nov. 17 instead of Nov. 24, 1900. Yip, "Colonialism, Disease and Public Health," 19, 129n55; *Hong Kong Government Gazette*, Nov. 24, 1900, HKGRO, 1700-1703.

⁵⁵ *Hong Kong Government Gazette*, Nov. 24, 1900, HKGRO, 1701.

most of the other Colonies of the Empire had awakened to the necessity for such action.⁵⁶

The impact of his pioneering research, however, was not as immediate as either Thomson or Yip would have us believe. For one thing the Sanitary Board was largely unaware of Thomson's independent investigations during the summer of 1900 until shortly before the publication of his first report.⁵⁷ Moreover even Ladds's well-publicised discovery had little immediate impact upon the way the Board managed the disease at Kennedy Town.⁵⁸

Rather than implementing a 'broad anti-malaria campaign', both the military and civilian authorities in Hong Kong implemented experimental anti-mosquito measures in highly localised contexts. The military focused its efforts on their Sanatorium at Magazine Gap, a winding road leading up to the Peak on Hong Kong Island, which had recently been abandoned "in consequent of the ravages made by Malarial Fever".⁵⁹ Reducing the prevalence of the disease was an urgent necessity. Dr. T. M. Young, a recently-arrived civilian medical officer attached to the China Expeditionary Force, set about investigating the matter. Young was already well-versed in the latest theories, having learnt "something which came in useful in the East" from Sir Ronald Ross when the two of them had met in Sierra Leone.⁶⁰ As Ladds had already settled the matter of the *Anopheles*' existence in Hong Kong – Young arrived five months after Ladds's lecture – Young devoted "his attention more especially to the question of the breeding-grounds of the *Anopheles* mosquito in the Colony".⁶¹ Young concluded his "independent observations" at Magazine Gap by recommending the clearance of brushwood up to a distance of 300 yards, the drainage of several small bogs and the filling in of breeding pools.⁶² The Governor subsequently informed the Secretary of State for the Colonies that the military authorities tested the value of these measures:

I gave carte blanche so far as the surrounding Crown Land was concerned and 200 men of an Indian Regiment were sent to carry out the work under Dr. Young's supervision. It has been very thoroughly done, and a detachment of Indian Troops is about to be sent to re-occupy the Sanatorium. When the Malarial season arrives I shall watch the result with great interest.⁶³

⁵⁶ Thomson to Atkinson (P.C.M.O.), 30 Aug. 1909, TNA, CO129/357/265, 513.

⁵⁷ See for instance Dr. Clark's comments. "Hongkong Sanitary Board: The Malarial Infection of Europeans," *Hongkong Weekly Press*, Oct. 27, 1900, 325-326, 326.

⁵⁸ See for instance the correspondence between the Sanitary Board's officials. HKPRO, HKRS202/1/1/36. See also "Quarters of Sanitary Inspector: Units for Habitation," *China Mail*, Aug. 31, 1900, 3.

⁵⁹ H. A. Blake (Governor) to Chamberlain, 5 Feb. 1901, TNA, CO129/304/40, 165.

⁶⁰ T. M. Young to R. Ross, 4 Mar. 1901, London School of Hygiene and Tropical Medicine (hereafter LSHTM), Ross/79/01.

⁶¹ Thomson reported that Young arrived in Hong Kong in August 1900. *Hong Kong Government Gazette*, Nov. 24, 1900, HKGRO, 1700.

⁶² Blake to Chamberlain, 5 Feb. 1901, TNA, CO129/304/40, 166. See also W. J. Tutcher, *Sessional Papers: Report of the Acting Superintendent of the Botanical and Afforestation Department for 1900*, Feb. 28, 1901, HKGRO, 306; T. M. Young, "The Prevention of Malaria in Hong Kong," *British Medical Journal*, Sept. 14, 1901, 683-686.

⁶³ Blake to Chamberlain, 5 Feb. 1901, TNA, CO129/304/40, 165-166, 166.

These localised measures represented the colony's first anti-mosquito experiments.

The civilian authorities only began to implement anti-mosquito measures in the winter of 1900 in response to the military's successful experiments and at the instigation of the Governor himself. Blake instructed Young to investigate the most pressing malaria concern for the civilian authorities: the inspector's quarters at the Cattle Depôts in Kennedy Town.⁶⁴ Blake informed the Sanitary Board that Young had

found that the neighbourhood of the Inspector's Quarters and the New Police Station is infected with the Anopheles Mosquito, which would, as suggested by the M.O.H. [i.e. Clark] in October '99, account for the recurrence of Malarial symptoms.⁶⁵

Blake instructed the sanitary authorities to replicate the military's experimental measures at the sanatorium, namely brushwood clearance. When Young reported that the work was being neglected, the Governor insisted that his subordinates "must understand that I consider this one of the most important questions affecting the Colony at present".⁶⁶ The nature of these measures reflected the Board's reliance on Young's advice and its *ignorance* of Thomson's independent but parallel investigations. Rather than focusing on training the hillside streams, known as nullahs, in the vicinity of the inspector's quarters, as per Thomson's first report, the Board pursued the cheaper expedient of filling in and liming the offending breeding pools.⁶⁷ Unfortunately Young was unable to observe the results of his efforts at Magazine Gap and Kennedy Town first-hand because he returned to England early in January 1901.⁶⁸

The Police in the New Territories

The combination of local research into the malaria-mosquito theory and the circulation of controversial new ideas from the metropolis prompted the Sanitary Board to extend its management of malaria from the highly localised context of Kennedy Town on the north-western tip of Hong Kong Island to the New Territories, specifically out of concern for the police force. Malaria was renowned as an occupational hazard. In the early 1890s for instance Atkinson had confirmed his suspicions that the "Malarial poison" was "most rife" at night by documenting the hours of duty of the policemen admitted with intermittent and remittent fevers.⁶⁹ But the deployment of policemen at sites throughout the newly-acquired New Territories resulted in an alarming increase in the incidence of this occupational hazard

⁶⁴ Blake to Stewart Lockhart, 6 Oct. 1900, HKPRO, HKRS202/1/1/26.

⁶⁵ Blake to Stewart Lockhart, 28 Oct. 1900-10-28, HKPRO, HKRS202/1/1/36; "Hongkong Sanitary Board: The Inspector's Quarters at Kennedytown," *Hongkong Weekly Press*, Nov. 10, 1900, 370.

⁶⁶ Blake to Stewart Lockhart, 5 Jan. 1901, HKPRO, HKRS202/1/1/26. The D.P.W. promptly resumed the work. R. D. Ormsby (D.P.W.) to Stewart Lockhart, 8 Jan. 1901, HKPRO, HKRS202/1/1/36.

⁶⁷ See the correspondence between the Sanitary Board's officials. HKRS202-1-1-36. See also "Hongkong Sanitary Board: The Causes of Malaria in the New Territory," *Hongkong Daily Press*, Nov. 23, 1900, 2. See also the comments made by R.D. Ormsby, Director of Public Works in "Another Anopheles Discussion: Dr. Hartigan Again Attacks the Circumlocution Offices," *China Mail*, Jan. 19, 1901, 2.

⁶⁸ Young left Hong Kong on Sunday Jan. 6. "The Mosquito-Malaria Theory," Local and General, *China Mail*, Jan. 4, 1901, 2.

⁶⁹ Ayres, *Colonial Surgeons' Report for 1891*, June 21, 1892, HKGRO, 404, 407, 409, 423.

– one that threatened the colony’s nascent and fragile grip in its vast rural backyard (fig. 20).⁷⁰ Housed in temporary structures and working in rural conditions, the police were exposed to malaria-carrying mosquitoes as well as a variety of other endemic diseases.⁷¹ Protecting this widely-dispersed colonial presence was therefore considered a matter of utmost importance.

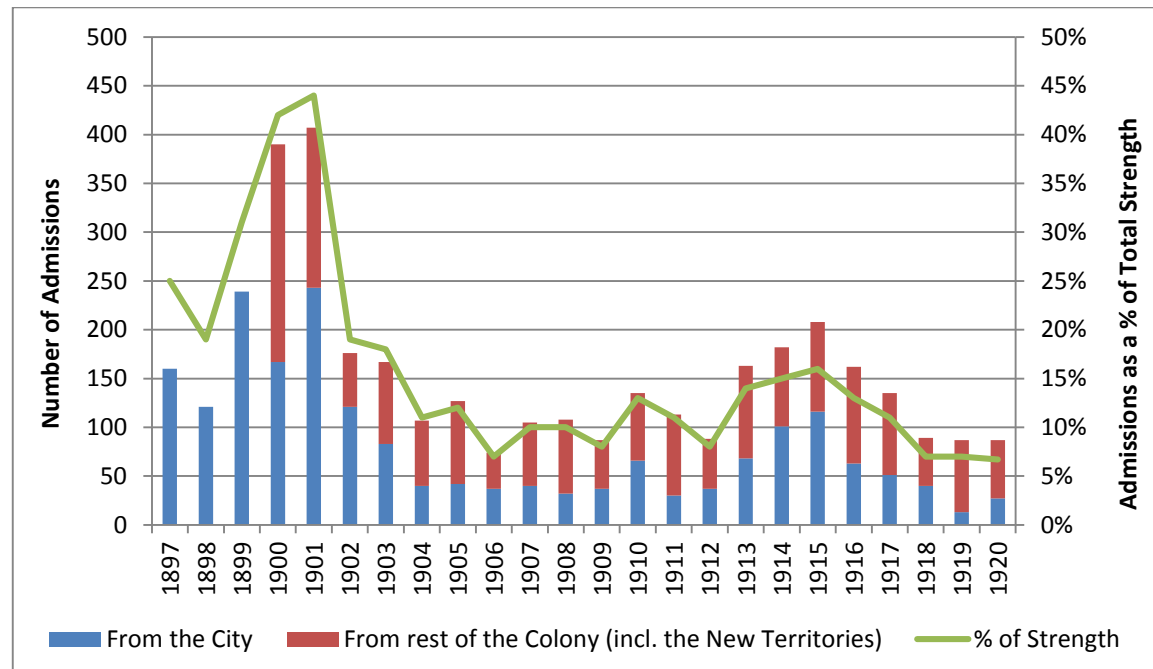


Figure 20. ‘An Occupational Hazard’: Malaria and the Police Force, 1897-1920.⁷²

Attempts to apply the latest Imperial preventive recommendations to the police in the New Territories appeared, however, to fly in the face of conventional local wisdom. In the autumn of 1900 Clark informed his Sanitary Board colleagues of the Malaria Investigation Committee’s latest reports from West Africa, which identified native populations as the principal source of malaria infection.⁷³ He subsequently applied these theories directly to local circumstances in Hong Kong by identifying “Asiatics” as the principal hosts of the colony’s malarial parasites and by emphasising the necessity of adhering to the Committee’s recommendation in favour of racial segregation.⁷⁴ Francis H. May, Captain Superintendent of Police, challenged the universality of the Committee’s reports:

The deductions set out in the M.O.H.’s interesting report have not been made from experience gained in China but in other countries. I am prepared to prove that they

⁷⁰ Atkinson, *Report of the Principal Civil Medical Officer for 1899*, Mar. 17, 1900, HKGRO, 525.

⁷¹ For the development of Hong Kong’s police force in the New Territories see Colin N. Criswell and Mike Watson, *The Royal Hong Kong Police Force (1841-1945)* (Hong Kong: Macmillan, 1982), 94-97.

⁷² Data from table A2.4.

⁷³ “Hongkong Sanitary Board: The Malarial Infections,” *Hongkong Weekly Press*, Oct. 27, 1900, 325-326.

⁷⁴ “Hongkong Sanitary Board: The Malarial Mosquito,” *Hongkong Weekly Press*, Nov. 10, 1900, 370-371. Clark would later confuse the timing of this incident with his suggestion in October of the year before that mosquitoes were responsible for the prevalence of malaria at the inspector’s quarters at Kennedy Town. Clark, *The Prevention of Malaria*, 3-5.

do not hold good in this part of the world, and I therefore advise that they be not yet accepted and acted upon. Over a year's experience in the New Territories has proved that the Police Stations which are situated in the Chinese villages are much more free from malaria than the stations which on medical advice were placed outside and at a distance from native villages.⁷⁵

Moreover he raised doubts about the vectoral role of *Anopheles* mosquitoes by stating, "Theories deduced from investigations in other countries should not be accepted till justified by observation and experience here".⁷⁶ Clark insisted that the malaria-mosquito theory "had been proved far more conclusively than any of them ever anticipated, and he thought that a theory which had held good in almost every part of the world would be found to hold good in China".⁷⁷ Was Hong Kong's environment, and therefore its diseases, unique or did it conform to universal aetiological theories? The government pre-empted the Board's decision to investigate why malaria was more prevalent at certain police stations in the New Territories than at others by assigning a similar task to Thomson and Young.⁷⁸

The two men concentrated their investigation on the police station at Tai Po, which served as the first police headquarters in the New Territories (map 9). As well as searching for signs of breeding pools, they examined blood samples taken from ten children from the nearest village. "At first we had some difficulty in obtaining the necessary specimens," they reported, but they attracted volunteers by advertising their willingness to pay for blood samples.⁷⁹ Despite the fact that only half of the 10 volunteers tested positive for malaria, their joint report reflected the Malaria Investigation Committee's pathologisation of indigenous populations:

In the abundance of mosquitoes of the *Anopheles* genus ... with their breeding grounds almost close up to the Government buildings, and in the near proximity of an extensively infected native population, by which many of the mosquitoes are being continuously rendered infective to healthy persons who may be bitten by them, we have the factors that account sufficiently and conclusively for the fevers that have prevailed among the Government officers at Tái Pó.⁸⁰

The use of the passive tense shifted the blame from the mosquitoes to the neighbouring Chinese population. Thomson and Young principally advocated the reclamation and drainage of all the land within a 250 yard radius of the station, and advised the government to relocate the staff from their matsheds to permanent accommodation "well removed from any considerable population", namely on an island 900 yards to the east of the station.⁸¹

⁷⁵ "The Malarial Mosquito," *Hongkong Weekly Press*, Nov. 10, 1900, 371.

⁷⁶ *Ibid.*, 371.

⁷⁷ *Ibid.*, 371.

⁷⁸ *Ibid.*, 371; "Hongkong Sanitary Board: The Causes of Malaria in the New Territory," *Hongkong Weekly Press*, Nov. 24, 1900, 408-409.

⁷⁹ *Hong Kong Government Gazette*, Dec. 8, 1900, HKGRO, 1752-1754, 1753. Young and Thomson published an extract of their report in *The Journal of Tropical Medicine*. J. C. Thomson and T. M. Young, "Mosquitoes and Malarial Parasites in Hong Kong," *J. of Tropical Medicine*, Feb. 1, 1901, 38-40.

⁸⁰ *Hong Kong Government Gazette*, Dec. 8, 1900, HKGRO, 1753.

⁸¹ *Ibid.*, 1752-1753, 1753. Thomson and Young also acknowledged the benefits of mosquito curtains and brushwood clearance.

Their report also prompted the authorities to initiate plans to purchase and drain the land around other police stations in the New Territories, though many of these schemes were abandoned as both impractical and prohibitively expensive.⁸²

Unable to implement preventive measures based on the latest racialised medical discourse, the sanitary authorities resolved instead to improve the effectiveness of oral prophylactic regimes. The authorities had already drafted a set of instructions regarding the regular administration of quinine in 1899.⁸³ But the following year the authorities conducted an experiment with three different regimes at eight police stations in the New Territories; a ninth station was used as a control (table 4.1 and map 9).⁸⁴ Atkinson (P.C.M.O.) attributed the overall diminution in the percentage of malarial fever cases from 90% in 1900 to just over 50% in 1901 principally to these prophylactic experiments.⁸⁵ Both he and the government's Medical Officer in the New Territories concurred that only quinine was an effective prophylactic, arsenic being "practically ineffectual as a preventive measure".⁸⁶ The statistical effectiveness of the former remedy, however, was far from overwhelming.

Table 4.6. Experiments with Prophylactic Regimes at the Police Stations in the New Territories.⁸⁷

Police Station	Malarial Admissions	1900 Average Strength	% of Strength	Malarial Admissions	1901 Average Strength	% of Strength
Ping Shan	3	23	13.0	9	14	64.3
San Tin	2	19	10.5	3	12	25.0
* Sha Tin	14	14	100.0	2	8	25.0
Tai O	12	11	109.1	1	10	10.0
Tai Po	30	16	187.5	7	10	70.0
† Sha Tau Kok	33	19	173.7	4	13	30.8
Sheung Shui	7	25	28.0	7	11	63.6
‡ Au Tau	35	20	175.0	17	14	121.4
± Sai Kung	2	6	33.3	2	7	28.6
Total	138	153	90.2	52	99	52.5

⁸² See HKPRO, HKRS58/1/15/31; HKPRO, HKRS58/1/15/29.

⁸³ Atkinson, *Report of the Principal Civil Medical Officer for 1899*, Mar. 17, 1900, HKGRO, 525.

⁸⁴ Thomson's discussion about different prophylactic regimes during a meeting of the colony's medical society probably instigated this experiment. Hong Kong Medical Society, *Minutes of Meetings*, 6 Mar. 1901.

⁸⁵ J. M. Atkinson, *Sessional Papers: Report of the Principal Civil Medical Officer, for the Year 1901*, Apr. 15, 1902, HKGRO, 722, 755-756. This overall decline actually belied increases in the percentage of admissions at some of the stations where quinine was trialled (table 4.1)

⁸⁶ J. H. Stewart Lockhart, *Sessional Papers: Report on the New Territory, for the Year 1901*, Mar. 22, 1902, HKGRO, 568-70, 568.

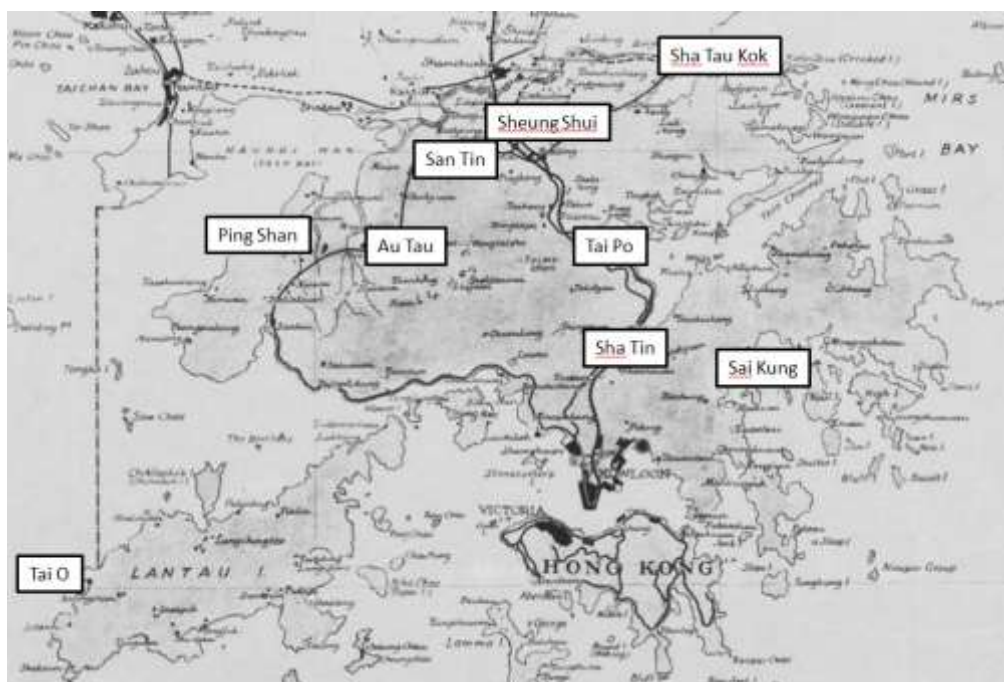
⁸⁷ Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1901*, Apr. 15, 1902, HKGRO, 722.

* "Koch's method was used, one gramme of quinine being given daily for two days followed by an interval of five days without any quinine and so on".

† 3-5 grains of quinine administered daily

‡ "Arsenious acid" administered twice daily

± No prophylactics given (control station).



Map 9. Experimental Malarial Prophylaxis at the Police Stations in the New Territories.⁸⁸

The colonial agenda dictated a different approach to malaria prevention in the New Territories in the early 20th century. Whereas the colonial authorities focused on environmental interventions on Hong Kong Island, principally in the vicinity of the city of Victoria, they *avoided* such interventions in the New Territories, focusing instead on the prophylactic protection the police force. As a result of this experiment, the authorities administered 3 grains of quinine daily to all the policemen stationed in the New Territories, “whether European, Indian or Chinese” every summer through to the outbreak of the Second World War.⁸⁹ Admittedly the authorities also implemented a number of small-scale preventive measures, but all of these measures prioritised the police force rather than the local Chinese communities. Thomson, for instance, compiled “a series of simple instructions” for the officers in charge of the police stations which explained how to conduct basic anti-mosquito measures at the request of Captain Superintendent of Police May.⁹⁰ These measures appeared to affect a marked decline in the prevalence of the disease, reducing the number of officers annually

⁸⁸ Source of map: <http://nla.gov.au/nla.map-brsc31>.

⁸⁹ J. M. Atkinson, *Sessional Papers: Report of the Principal Civil Medical Officer, for the Year 1902*, Apr. 9, 1903, HKGRO, 277.

⁹⁰ *Hong Kong Government Gazette*, Nov. 9, 1901, HKGRO, 1963, 1969. Wire gauze windows were also added to the station buildings in an effort to reduce infection rates. H. A. Blake, *Sessional Papers: Report on the New Territory for the Year 1900*, Aug. 12, 1901, HKGRO, 1. On Atkinson’s recommendation eucalyptus trees were planted to help drain the swampy land around the station, though Charles Ford, the Superintendent of the Botanical and Afforestation Department, doubted the effectiveness of this measure. Stewart Lockhart, *Report on the New Territory, for the Year 1901*, Mar. 22, 1902, HKGRO, 570; C. Ford, *Sessional Papers: Report on the Botanical and Afforestation Department for the Year 1901*, Apr. 18, 1902, HKGRO, 688.

incapacitated by malaria (fig. 20).⁹¹ As we shall see in the next chapter, Hong Kong's enclavist management of the disease stood in marked contrast to the International Settlement's all-encompassing approach during the second quarter of the 20th century. In part this reflected the Settlement's much smaller size and alluvial topography, as compared to the densely-vegetated, rugged terrain in the New Territories. But the colonial agenda also had a profound impact upon the colony's management of the disease. This chapter will demonstrate that the authorities did not implement any other anti-malaria measures in this region until 1930, except for a localised intervention to protect another hallmark of the colonial state: the Kowloon-Canton Railway.

'The Vexed Question of the Malarial Mosquito': Official and Public Debates

The co-ordination of the colony's early anti-mosquito experiments, both at Kennedy Town and in the New Territories, sparked a heated personal argument between two prominent officials, which in turn triggered a popular debate about the validity of the malaria-mosquito theory itself. Dr. William Hartigan, a member of the Sanitary Board and physician to the Hong Kong and Shanghai Banking Corporation, objected to the government's reliance on Thomson, who, as member of the medical department, was not directly accountable to Hartigan and the rest of the Sanitary Board. Secondly Hartigan objected to the government's de-centralised strategy, whereby the Public Works Department (P.W.D.) dealt with the pools identified by Thomson. During a Board meeting about the "vexed question of the malarial mosquito", Hartigan insisted that an officer of the sanitary department should be assigned the dual task of identifying *and* eliminating small mosquito breeding sites; larger sites could be left to the P.W.D.⁹² Instead the Board favoured May's counter-proposal, which effectively entrenched the government's de-centralised approach.⁹³ Hartigan vented his frustrations in an open letter to the local press, lamenting that May and the Board's president had "squashed all attempts at doing something practical, partly because *they* did not believe in the mosquito theory...but principally because it would be an unnecessary and expensive experiment and therefore not justifiable".⁹⁴ He also questioned the Board's reliance on Thomson – whom he conceded was "a most excellent and efficient officer" – rather than "Mr. Ladds, an officer of the Board and the original discoverer of the anopheles [*sic*] in Hongkong and first worker in

⁹¹ Bell blamed the slight increase in malarial admissions in 1903 to inaccurate diagnoses. J. M. Atkinson, *Sessional Papers: Report of the Principal Civil Medical Officer, for the Year 1903*, Mar. 30, 1904, HKGRO, 413.

⁹² "Extermination of Mosquito Anopheles: What is about to be done in Hongkong," *China Mail*, Dec. 7, 1900, 3.

⁹³ *Ibid.*, 3.

⁹⁴ Original emphasis. William Hartigan, letter to the editor, *Hongkong Daily Press*, Dec. 10, 1900, 3.

anopheles ports".⁹⁵ May countered with a letter of his own, in which he corrected Hartigan's allegations.⁹⁶

By airing their differences in public, Hartigan and May unwittingly triggered a passionate public debate that revealed just how entrenched miasmatic theories were in Hong Kong. 'Visitor' initiated this popular debate by arguing that miasmas were the true causes of malaria. He lamented:

All the long record of malaria from Hongkong to Panama, is now entirely forgotten and overlooked by our mosquito doctors. They have mounted their hobby, and like the beggar on horseback are riding to the devil.⁹⁷

'Visitor' cited Young's anti-malarial efforts at the sanatorium at Magazine Gap as evidence of this 'hobby', claiming that the clearance of brushwood actually promoted malaria by exposing fresh soil.⁹⁸ This letter provoked a flurry of exchanges, some in support and others in vehement opposition to Visitor's comments.⁹⁹ But even those who spoke ardently in favour of the malaria mosquito theory conceded that there was insufficient evidence to conclusively prove that mosquitoes were the *sole* means of transmission.¹⁰⁰ News of the debate quickly spread beyond the colony. For instance, word filtered back that the *Times of India* believed that the debate epitomised Hong Kong's "curiously conservative" eccentricities.¹⁰¹ Many in Hong Kong vigorously clung to the older miasmatic theories well into the 20th century. By far the most 'eccentric' opponent of the new theory was a resident named J. Grant Smith, who repeatedly sought the Colonial Office's nomination for a Nobel Prize in the early 1910s. Smith claimed to have 'discovered' how the release of "osmium oxide" from disintegrated rocks caused malaria. He petitioned the Secretary of State for the Colonies, then the Principal Secretary of State and finally the Under Secretary of State for endorsement for his nomination. The Colonial Office eventually dismissed him as a "crank".¹⁰²

The focus of the heated exchanges in the press swiftly shifted from debating the malaria-mosquito theory to a highly critical discussion of the colony's anti-malaria operations.

⁹⁵ Ibid., 3.

⁹⁶ F. H. May, letter to the editor, *Hongkong Daily Press*, Dec. 11, 1900, 3. Hartigan countered with another letter. William Hartigan, letter to the editor, *Hongkong Daily Press*, Dec. 12, 1900, 3.

⁹⁷ Ironically 'Visitor' had travelled to Hong Kong to recover from a bout of malaria. Visitor [pseud.], letter to the editor, *Hongkong Weekly Press*, Dec. 29, 522.

⁹⁸ Visitor [pseud.], letter to the editor, *Hongkong Weekly Press*, Dec. 29, 522.

⁹⁹ Ham, "Malarial Hygiene," 38-39.

¹⁰⁰ For a more detailed account of these exchanges see Ham, "Malarial Hygiene," 38-39.

¹⁰¹ H. A. Blake, *Sessional Papers: Drainage Systems – Plague Mortality*, Oct. 25, 1901, HKGRO, 7.

¹⁰² J. Grant Smith to the Earl of Crewe (Sec. of State for the Colonies), 22 Dec. 1909, TNA, CO129/359/403, 147; Smith to L. Harcourt (Principal Sec. of State), 22 Apr. 1913, TNA, CO129/408, 316; Smith to A. Emmott (Under Sec. of State), 2 May 1913, TNA, CO129/408, 324; Smith to A. Emmott (Under Sec. of State), 3 Nov. 1913, TNA, CO129/408, 370-71; Colonial Office minute, 6 Nov. 1913, TNA, CO129/408, 369.

In a letter attacking 'Visitor' and his allies, 'Resident' defended Thomson's and Young's "splendidly thorough work".¹⁰³ This prompted 'Anti-Logroller' to enter the fray:

And what is this "splendidly thorough work" these two gentlemen are doing? Dr. Young, I believe, is employed in cutting down brushwood, (work that it does not require a "scientific" man to do) ... Considering that the highest authorities say a mosquito will fly two or three miles to feed, there is not much use in that....And now for Dr. Thomson. Is the "splendidly thorough work" he is doing showing that anopheles exist in the colony? Defend us from our friends. That was proved before either he or Dr. Young studied the question in Hongkong. Discovering parasites in the blood of children living in a malarial district? Queen Anne is dead, sir. Dr. Thomson would be doing just as useful original work if he carried out experiments to prove the circulation of the blood. It is not his fault that he has to waste his time over this rubbish. He has to do as he is told.¹⁰⁴

Hartigan became so exasperated by the situation and the Sanitary Board's refusal to heed his advice that he publicly resigned his position on the Board.¹⁰⁵ 'Dolly' commemorated the occasion with a satirical poem about a Native American "wigwam" and its failure to heed the anti-malarial advice of "Hearty Gun [Harti-gan], medicine man of the tribe" (see Appendix).¹⁰⁶ As we shall see in the next chapter, the International Settlement's ready acceptance of the malaria mosquito stood in marked contrast to Hong Kong's intense official and public debates.

Specialisation

The colony's senior officials initially looked to London for a means out of this impasse. Dr. Bell (Actg. P.C.M.O.) identified the need for specialist knowledge as the key to an effective anti-malaria campaign, and he speculated that "some energetic entomologist may turn up in the Colony".¹⁰⁷ In reality the issue was not one of speculation, but rather negotiation. Early the following month Governor Blake urged the Colonial Office to appoint a trained bacteriologist to "make satisfactory investigations into the origin and cure" of "Plague,

¹⁰³ Resident [pseud.], letter to the editor, *Hongkong Weekly Press*, Dec. 31, 1900, 3.

¹⁰⁴ Anti-Logroller [pseud.], letter to the editor, *Hongkong Weekly Press*, Jan. 3, 1901, 3. These exchanges provoked several satirical contributions. 'Irritated' for instance declared, "I used to point out a mosquito to children as a rare and curious insect, now I point out my children to the mosquitoes and implore them not to take a full meal, because there are much better children next door". Irritated [pseud.], letter to the editor, *Hongkong Daily Press*, Jan. 3, 1901, 3. See also The Shade of Hamlet [pseud.], letter to the editor, *Hongkong Daily Press*, Jan. 5, 1901, 2.

¹⁰⁵ W. Hartigan to the Ratepayers, 1 Mar. 1901, TNA, CO129/304/170, 705. See also "Another Anopheles Discussion," *China Mail*, Jan. 19, 1901, 2.

¹⁰⁶ Dolly [pseud.], "Hearty Gun's Warning," *China Mail*, Mar. 22, 1901, 2. This poem was published above the article about the Sanitary Board's discussion of Thomson's report. "Anopheles Larvae at Kennedy-Town: Official Denials Disposed of," *China Mail*, Mar. 22, 1901, 2.

¹⁰⁷ J. Bell, *Sessional Papers: Report of the Acting Principal Civil Medical Officer for the Year 1900*, Jan. 23, 1901, HKGRO, 249. He voiced similar comments to his colleagues on the Sanitary Board. "Another Anopheles Discussion," *China Mail*, Jan. 19, 1901, 2.

Malaria, Leprosy, BeriBeri [*sic*] and Rinderpest”.¹⁰⁸ Blake reported that although Thomson was “accumulating valuable observations on mosquitos [*sic*]”, he had his ordinary medical obligations to attend to and “he has not gone through the necessary training in bacteriology”.¹⁰⁹ Manson “made a point of seeing” Atkinson (P.C.M.O.), who happened to be on leave in the Britain at the time, to discuss the governor’s dispatch.¹¹⁰ Although Blake’s request led to the inauguration of the colony’s Bacteriological Institute, malaria did *not* constitute a major focus of the Institute’s early work: neither the first nor the second government bacteriologists discussed the disease in their respective annual reports.¹¹¹ Indeed it was not until the early 1910s, when Government Bacteriologist Harold Macfarlane was tasked with investigating the distribution of the species responsible for transmitting Yellow Fever, and with collecting anopheline and culicine specimens, that the Institute began to research mosquito-borne diseases.¹¹² Significantly Macfarlane’s research led to the ‘discovery’ of four new species.¹¹³

Atkinson was not the only medical officer from Hong Kong meeting with the world’s most pre-eminent malariologists to discuss the colony’s urgent need for specialists. On his return to England Young arranged a meeting with Ross, whom he had known in Sierra Leone, in order to show him a collection of mosquitoes – “all the varieties of the Island & mainland” – but more importantly “to talk over what has been done there & to ask your help in ‘carrying’

¹⁰⁸ Blake actually devoted the majority of his despatch to the subject of malaria: the first two paragraphs detailed Young’s work at the military Sanatorium whilst the third summarised the anti-malarial efforts at Kennedy Town. The fourth and fifth paragraphs discussed the need for research into plague and leprosy respectively. Blake to Chamberlain, 5 Feb. 1901, TNA, CO129/304/40, 165-168, 165, 168.

¹⁰⁹ Ibid., 165-168, 165, 168. Blake seems to have been unaware that Thomson attended courses on ‘Pathological Bacteriology’ and ‘Tropical Diseases’ whilst on leave in the U.K. in the winter of 1899-1900.

¹¹⁰ P. Manson to W. H. Onslow (Under Sec. of State for the Colonies), 12 Apr. 1901, TNA, CO129/309, 503. Atkinson took advantage of his leave to attend a two-month course at the London School of Tropical Medicine “in order that I may be quite conversant with the latest discoveries in Malaria & Tropical Medicine generally”. J. M. Atkinson to C. P. Lucas, 11 Mar. 1901, TNA, CO129/309, 234-235.

¹¹¹ For more on the Institute’s establishment and early work see Faith C. S. Ho, *The Silent Protector: A Short Centennial History of Hong Kong’s Bacteriological Institute* (Hong Kong: Hong Kong Museum of Medical Sciences, 2006); Arthur Starling et al., eds., *Plague, SARS and the Story of Medicine in Hong Kong* (Hong Kong: Hong Kong Museum of Medical Sciences Society, 2006), 147-224.

¹¹² Harold Macfarlane, “Special Investigations”, 20 Aug. 1913, TNA, CO129/403/321, 317-326; Harold Macfarlane, “Report on Work (other than routine work) done in the Bacteriological Institute during the six months – July 1st to December 31st 1913”, 28 Jan. 1914, TNA, CO129/409/39, 254-55; Harold Macfarlane, “Report on work other than routine work done in the Bacteriological Institute, Hongkong, for the 1st half year, 1914”, 5 Aug. 1914, TNA, CO129/413/315, 235-37. See also “The Stegomyia Survey in Hong Kong,” *Bulletin of Entomological Research* 6, no. 1 (1915): 67-68.

¹¹³ *Aedes macfarlanei*, *Culex syn. virgatipes*, *Uranotaenia macfarlanei*, *Culex infantulus*. F. W. Edwards, “New Species of Culicidae in the British Museum, with Notes on the Genitalia of Some African Culex,” *Bulletin of Entomological Research* 5, no. 1 (1914): 63-81; F. W. Edwards, “New Culicidae from Borneo and Hong Kong,” *Bulletin of Entomological Research* 5, no. 2 (1914): 125-128, 126-127; F. W. Edwards, “A Synopsis of Adult Oriental Culicine (Including Megarhinine And Sabethine) Mosquitoes,” *Indian Journal of Medical Research* 10 (1922): 249-293, 287.

it thro!"¹¹⁴ The two men got on extremely well: Ross invited Young to join him on a research trip to Africa whilst Young tried to convince Ross of Hong Kong's suitability for the latter's experiments. Young was sorely tempted by Ross's offer, but in the end had to decline the invitation. Strikingly both Young's telegram and his letter declining Ross's offer reiterated Hong Kong's suitability for the latter's anti-malaria experiments. In his letter, for example, Young emphasised the colony's main benefits:

- (1) It is localized: in every sense of the world. You would find the pools and the lie of the land admirable suited to your work.
- (2) It is important to the Military & they are willing & have offered to send me out for their work alone. The second port in the Empire with [*illegible*] trade interests.
- (3) It is world wide experiment [*sic*] you are making and work [*illegible*] the Americans are begun in Statton Island [*sic*] this spring. I saw the Secy. of Agriculture in Washington, etc. & they are spending money & sending two men to live there & do the very work you propose. They have asked me to go over & I have contracted to keep mosquitoes away from Houses in given areas around New York. I mention this because you ought to be first in your work & you might not know what is being done the other side of the water!
- (4) The civil governor is very much in sympathy & asked me to stay in Hong Kong and he is getting out a man special trained [*sic*] for your very proposal from London. They would back you up I think in everything.
- (5) A little has been done already to prepare the way. Indeed in my estimation the place is ripe for your work.¹¹⁵

Young concluded that "as far as my judgement goes knowing both places I say unquestioned that you will have a much more brilliant success in Hong Kong".¹¹⁶ If only Young had managed to persuade Ross to conduct his experiments in Hong Kong, the colony's role in the development of modern malarial aetiology would have been world-renowned.

Ultimately enterprising local medical officers, rather than Imperial specialists despatched from London, were responsible for pioneering new research into the transmission, treatment and prevention of malaria in Hong Kong. Bell (Actg. P.C.M.O.) for instance compiled a 'Clinical Report on Malaria' with the assistance of Lt. Stewart (I.M.S.), Acting Assistant Superintendent at the Government Civil Hospital – the two of them were "not aware of any extensive attempt in this direction having yet been made in a tropical hospital

¹¹⁴ Young to Ross, 4 Mar. 1901, LSHTM, Ross/79/01. Young left Hong Kong on January 6th. "Local and General: The Mosquito-Malaria Theory," *China Mail*, Jan. 4, 1901, 2.

¹¹⁵ Emphasis in the original. Young to Ross, 5 May 1901, LSHTM, Ross/79/03, 2-4. Young telegraphed and wrote to Ross from the 'Hotel-Hydropathic' in Peebles, where he was nursing a brother suffering from malaria contracted in India. His telegram read "With very many thanks [...] definitely decided cannot go to West Africa [...] urge you Hongkong [...] I never knew a place more suitable for you experiment [*sic*] [...]". Young to Ross, telegram, 4 May, 1901, LSHTM, Ross/79/02.

¹¹⁶ Young to Ross, 5 May 1901, LSHTM, Ross/79/03, 4. He made similar comments in his paper on 'The Prevention of Malaria in Hong Kong' at the 69th Annual Meeting of the British Medical Association (Cheltenham, 1901) later that summer. T. M. Young, "The Prevention of Malaria in Hong Kong," *British Medical Journal*, Sept. 14, 1901, 683-686, 685-686

where, needless to say, there is a large amount go material available".¹¹⁷ More importantly Thomson emerged as the colony's sole expert following Young's departure. Thomson continued his investigations into the prevalence of mosquitoes, analysing the monthly collections that were submitted to him from police stations throughout the colony.¹¹⁸ Intriguingly Thomson briefly considered leaving the colony just as he was establishing his expertise. He wrote to Chamberlain requesting promotion to another colony, claiming a lack of seniority in Hong Kong.¹¹⁹ Rather than pursuing the matter further though, he continued with his work at the Tung Wah Hospital and his investigations into malaria, actively publicising his work through lectures and pamphlets.¹²⁰ His analysis of over 30,000 mosquito specimens was significant for a number of reasons. Firstly he identified three different *Anopheles* species and twelve different *Culex* species within the colony, and his specimens led to the discovery five new species previously unknown to Western entomologists.¹²¹ He also alleged that his research conclusively proved the validity of the new malaria-mosquito theory.¹²² His work was critically acclaimed back in London. Manson, for instance, informed Ross of "good news of activity from Hong Kong", whilst the Secretary of State for the Colonies expressed his appreciation for Thomson's work in an official despatch to the Acting Governor.¹²³ Years later Thomson remembered the latter mention as one of the highlights of his career.¹²⁴ Thomson's contribution to the colony's malarial discourse provides insights into the production of colonial medical knowledge, and the competitive professional framework that underpinned it.

¹¹⁷ The report was published in the *Government Gazette*, publicised in the local press as well as *The Lancet*, and circulated to Manson and Ross as well as both Schools of Tropical Medicine. Blake to Chamberlain, 23 July 1901, TNA, CO129/305/267, 755; Minute by C. P. Lucas, 3 Sept. 1901, TNA, CO129/305/267, 754.

¹¹⁸ He published his results quarterly in the *Government Gazette*. The press regularly announced the publication of his quarterly reports and his reports also caught the attention of *The British Medical Journal*. Thomson shared his results with his medical society colleagues, delivering a paper on the subject as well as joining in the discussion of a paper on the "prophylaxis of Malaria". Hong Kong Medical Society, *Minutes of Meetings*, 30 Jan. 1901; *Ibid.* 6 Mar. 1901.

¹¹⁹ The timing of his letter suggests that Thomson may have been aware of the fact that the Governor did not consider him sufficiently qualified to be appointed as the first government bacteriologist. Thomson to Chamberlain, 11 May 1901, TNA, CO129/305/196, 163b.

¹²⁰ Ham, "Malarial Hygiene," 41-43.

¹²¹ *A. maculatus*, *A. minimus*, *C. annulus*, *C. sericeus* and *C. reesii*. Theobald of the Natural History Department at the British Museum named the species, the latter after their "mutual friend" Rees, formerly the Superintendent of the London School of Tropical Medicine. *Hong Kong Government Gazette*, Nov. 9, 1901, HKGRO, 1961-1969, 1963-64; Theobald, *A Monograph of the Culicidae of the World*, vol. 2, 109, 145-149, 380.

¹²² He plotted his data on the monthly prevalence of anopheles mosquitoes alongside monthly percentages of malaria cases amongst the military troops stationed in Hong Kong. *Hong Kong Government Gazette*, Nov. 9, 1901, HKGRO, 1961-1969.

¹²³ W.F. Bynum and Caroline Overy, eds., *The Beast in the Mosquito: the Correspondence of Ronald Ross and Patrick Manson* (Amsterdam: Rodopi B. V., 1998), 447; J. M. Green to C. P. Lucas, 26 Sept. 1902, TNA, CO129/312/365, 219.

¹²⁴ Thomson to Atkinson, 30 Aug. 1909, TNA, CO129/357/265, 513.

Early Anti-Malarial Campaign

The colonial administration's dual approach to the management of malaria in the early 20th century reflected its prioritisation of the colonial state. On the one hand, as we have already seen, the authorities focused its anti-malaria efforts in the New Territories on the prophylactic protection of the colonial police force. On the other, the authorities prioritised the main urban settlement on Hong Kong Island: the city of Victoria. From 1901 the thrust of this campaign consisted of training the city's nullahs or mountain streams. As the Director of Public Works explained, nullah-training— i.e. concreting these streams to prevent the water from stagnating and forming ideal mosquito-breeding pools (figs.21 and 22) – was not an innovative measure, but rather was “originally carried out...to protect property from the serious damage caused by heavy rainstorms, which frequently produced landslips and washed down large boulders in the case of the untrained channels”.¹²⁵ The authorities initially concentrated on the nullahs in the western and central districts; only one nullah in Happy Valley and one in Kowloon were trained during this period.¹²⁶ A lack of funding limited the scale of these operations.¹²⁷ Indeed the Governor was forced to secure an advance of \$20,000 from two prominent individuals, including Fung Wa Chun, a Chinese member of the Sanitary Board, in order to train the nullahs in the vicinity of Ripon Terrace.¹²⁸ Consequently the P.W.D.'s expenditure on nullah-training increased dramatically – from just over \$2,000 for 1902 to over \$26,500 in 1903 – with the Colonial Office's approval.¹²⁹ The authorities also implemented a number of supplementary measures including the oiling of mosquito pools, brushwood clearance and minor filling-in operations.¹³⁰

The Sanitary Board's management of the disease continued to rely on localised interventions prompted by public complaints, just as it had done in the case of the Fever Commission in the previous century. For instance, Robert Ho Tung, one of the colony's most prominent Eurasians, called the Board's attention to his tenants' complaints about the prevalence of malignant malaria at Morrison Hill Gap.¹³¹ Having investigated the matter at his request, Hartigan concluded that the incidence of the disease was due to the proximity of

¹²⁵ W. Chatham, “Surface Drainage in Hongkong”, 2 Apr. 1907, TNA CO129/340/94, 116.

¹²⁶ Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1901*, Apr. 15, 1902, HKGRO, 728-729; Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1902*, Apr. 9, 1903, HKGRO, 254; Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1903*, Mar. 30, 1904, HKGRO, 410; J. M. Atkinson, *Sessional Papers: Report of the Principal Civil Medical Officer, for the Year 1904*, Feb. 28. 1905, HKGRO, 265.

¹²⁷ Blake to Chamberlain, 13 Jan. 1903, TNA, CO129/316/21, 50-51.

¹²⁸ Blake to Chamberlain, 5 Mar. 1903, TNA, CO129/316/108, 244-246.

¹²⁹ Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1904*, Feb. 28, 1905, HKGRO, 265. This figure increased to over \$36,700 the following year.

¹³⁰ Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1901*, Apr. 15, 1902, HKGRO, 728-729. This was the P.C.M.O.'s first report to include a section dedicated to 'Anti-Malarial Measures'. I have since revised my original claim that the authorities initiated this campaign in 1900. Ham, “Malarial Hygiene,” 44-45.

¹³¹ Ho Tung to G. A. Woodcock (Sec., San. Bd.), HKPRO, HKRS202/1/6/67.

mosquito-breeding grounds.¹³² The Colonial Secretary informed the Governor that the “mosquito gang” was attending to the matter.¹³³ As this is the only document in which the term ‘mosquito gang’ appeared, it probably referred to a group of coolie labourers under the supervision of a foreign (i.e. non-Chinese) overseer from the Public Works Department. Unlike the International Settlement’s Public Health Department, the colonial authorities’ management of the disease did not rely on the systematic deployment of dedicated mosquito squads.



Figure 21 & 22. An Untrained (left) and a Trained Nullah (right).
Sent by Dr. F. W. Clark (M.O.H.) to R. Ross.¹³⁴

The authorities were so impressed with the early nullah-training program that they promptly publicised its effectiveness. Atkinson’s annual report, for instance, attributed the marked decline in malarial admissions in the colony’s hospitals to the increase in the colony’s expenditure on nullah-training: “I know of no sanitary works hitherto undertaken which have given such a satisfactory return not only in the diminution of sickness but also in the saving of life”.¹³⁵ Governor Blake similarly highlighted the effectiveness of this scheme in his farewell

¹³² Clark (M.O.H.) corroborated Hartigan’s recommendations, which included nullah-training, brushwood clearance, and drainage operations. F. W. Clark to Woodcock (Sec., San. Bd.), 6 Feb. 1903, HKPRO, HKRS202/1/6/67.

¹³³ Woodcock (Sec., San. Bd.) to Ho Tung, 4 Mar. 1903, HKPRO, HKRS202/1/6/67.

¹³⁴ “Natural Nullah or Mountain Stream, Hong Kong, Showing Formation of Mosquito Breeding Pools”, ca. Sept. 1911, LSHTM, Ross/138/05/03; “Trained Nullah – Hong Kong”, ca. Sept. 1911, LSHTM, Ross/138/05/04.

¹³⁵ Atkinson, *Report of the Principal Civil Medical Officer, for the Year 1904*, Feb. 28, 1905, HKGRO, 266.

address.¹³⁶ His successor, Sir Matthew Nathan, was eager to share Hong Kong's experiences with the Colonial Office and his former colleagues in Sierra Leone.¹³⁷ Two years after assuming the Governorship of Hong Kong, Nathan informed the Earl of Elgin:

Of the work carried out by the Public Works Department [in Hong Kong] in improving the sanitary condition of this town undoubtedly that which has had most definite and direct effect has been the systematic training of the nullahs which formerly provided breeding grounds for the anopheles mosquito....I trust your Lordship will not consider that I am travelling outside my proper sphere by suggesting that the measures which you have proved efficacious here might advantageously be followed as closely as possible in Freetown in Sierra Leone where similar conditions exist of streams flowing into and through the town over rough beds formed of granite rocks and boulders.¹³⁸

Nathan was well-versed in Sierra Leone's efforts to tackle malaria: he served as the colony's Governor at precisely the time when Ross was working in Sierra Leone to demonstrate the vectoral transmission of malaria.¹³⁹ Nathan and the Governor of Sierra Leone subsequently exchanged information and photographs via the Colonial Office.¹⁴⁰ Clark similarly shared photographs and details of the colony's nullah-training program with Ross as well as with the delegates of the Second Biennial Congress of the Far Eastern Association of Tropical Medicine (Hong Kong, 1912) (figs. 21 and 22).¹⁴¹

Malaria, Race and Colonial Space

A number of historians have alluded to, but failed to explain, how the management of malaria contributed to the establishment of an exclusively European residential reservation in northern Kowloon during this period.¹⁴² Most historians have typically interrogated the establishment of this reservation within the broader context of residential segregation in Hong

¹³⁶ *Hong Kong Hansard*, Nov. 19, 1903, HKGRO, 54. See also the Government Bacteriologist's comments. William Hunter, "The Incidence of Disease in Hongkong," *Hongkong Telegraph*, June 5, 1905, 5.

¹³⁷ M. Nathan (Governor) to A. Lyttelton (Sec. of State for the Colonies), 8 May 1905, TNA, CO129/329/123, 467-470, 469; Nathan to the Earl of Elgin (Sec. of State for the Colonies), 25 May 1906, TNA, CO129/334/128, 172-178, 175-176.

¹³⁸ Nathan to the Earl of Elgin, 25 May 1906, TNA, CO129/334/128, 175-176.

¹³⁹ Anthony P. Haydon, *Sir Matthew Nathan: British Colonial Governor and Civil Servant* (St. Lucia, Queensland, 1976), 49.

¹⁴⁰ The Earl of Elgin to Nathan, draft, 11 Oct. 1906, TNA, CO129/334/128, 181; Nathan to Earl of Elgin, 18 Apr. 1907, TNA, CO129/340/94, 116-120.

¹⁴¹ Francis Clark, "Malaria in Hong Kong", ca. Sept. 1911, LSHTM, Ross/138/05/02; Francis Clark, "Public Health Literature," in *Transactions of the Second Biennial Congress held at Hongkong 1912*, ed. Francis Clark (Hong Kong, Noronha & Co., 1913), 388-392.

¹⁴² Roger Bristow, *Land-use Planning in Hong Kong: History, Policies and Procedures* (Hong Kong: Oxford University Press, 1984), 39; G. B. Endacott, *A History of Hong Kong* (Hong Kong: Oxford University Press, 1973), 284; Henry Lethbridge, *Hong Kong: Stability and Change* (Hong Kong: Oxford University Press, 1978), 173-174; Frank Welsh, *History of Hong Kong* (London: Harper Collins), 378; Yip, "Colonialism, Disease and Public Health," 20; Peter Wesley-Smith, "Anti-Chinese Legislation in Hong Kong," in *Precarious Balance: Hong Kong Between China and Britain 1842-1992*, ed. Ming K. Chan (New York: Armonk, 1994), 98-99.

Kong, exemplified most notoriously by the 'European Reservation Ordinance (1888)' and the 'Hill District Reservation Ordinance (1904)'. The former prohibited the construction of Chinese dwellings in a district in the city of Victoria, the latter excluded Chinese from living on the Peak. Indeed historians often use the Kowloon reservation as a brief introductory backdrop against which the Peak reservation takes centre-stage. This marginalisation has prompted an uncritical interpretation of the reservation's establishment. Scholars have traditionally accepted the economic and 'malarial' justifications advanced by the Acting Governor in the colony's official application for metropolitan endorsement. Reliance on this single despatch has led to simplistic explanations about the role of malaria prevention. Welsh, for instance, simply stated that the Kowloon reservation was established "on specious grounds of health (the Chinese could not be trusted to keep down mosquitoes)".¹⁴³ In the most recent study on the subject Carroll suggested that the living conditions of the Chinese lower classes "were said to be more favourable for the transmission of malaria by mosquitoes".¹⁴⁴ I want to challenge these simplistic explanations by demonstrating that the malarial discourse pathologised Chinese *bodies* rather than simply Chinese cultural and residential practices. Furthermore I want to demonstrate how this malarial discourse was central to the approval of this proposal at the colonial level but was insufficient on its own as a justification at the Imperial level. A close analysis of the original proposal sheds light on how the colony's sanitary officials appropriated this discourse to convince the colonial government to sanction a controversial, twice-rejected proposal, and how this discourse was relegated to a subsidiary role in the colonial government's efforts to secure metropolitan sanction.

The acquisition of New Territories in 1898 sparked intense land speculation in southern Kowloon. Developers quickly recognised that this geo-political expansion not only cemented the colony's future but introduced an extensive rural buffer zone that greatly reduced the risks of investing in the Peninsula opposite Hong Kong Island. Anxious to exclude Chinese competition for this prime real estate, the government considered a proposal from a group of European residents to extend the provisions of the 'European Reservation Ordinance (1888)' – which prohibited the construction of Chinese dwellings in part of the city of Victoria – to a portion of southern Kowloon (map 10).¹⁴⁵ News that a group of (European) developers

¹⁴³ Welsh, *History of Hong Kong*, 378. Wesley-Smith correctly challenged Lethbridge's ambiguously-worded suggestion that malaria prevention informed the Hill District Ordinance (1904). Lethbridge, *Hong Kong*, 174; Wesley-Smith, "Anti-Chinese Legislation in Hong Kong," 104n.68.

¹⁴⁴ John M. Carroll, "The Peak: residential segregation in colonial Hong Kong," in *Twentieth-century Colonialism in China: Localities, the everyday, and the world*, eds. Bryna Goodman and David S. Goodman (Abingdon: Routledge, 2012), 85. Yip's argument paralleled Carroll's but also mirrored Welsh's claim, namely that "the Chinese had failed to take precautions to prevent infection". Yip, "Colonialism, Disease and Public Health," 20.

¹⁴⁵ *Sessional Papers 1900-1903: Executive Council No.2*, Jan. 22, 1900, TNA, CO131/31, 7; Bruce Shepherd (Deputy Land Officer) to Stewart Lockhart (Col. Sec.), 21 May 1900, HKPRO, HKRS58/1/14/78. Shepherd appears to have suggested reserving this part of Kowloon *as well as* any future reclamations along the site's littoral, but I have been unable to trace his original minute (C.S.O.1956/99). See for instance F. H. May (Actg. Col. Sec.) to Blake, 22 Sept. 1900, HKPRO, HKRS58/1/14/78; *Sessional Papers 1900-1903: Executive Council No.25*, Oct. 10, 1900, TNA, CO131/31, 81.

intended to demolish a European house in the area and erect 28 Chinese tenements in its stead heightened fears about Chinese encroachment.¹⁴⁶ Clark, the colony's Medical Officer of Health, was so alarmed by this proposal that he persuaded the Sanitary Board (by a slim majority) to petition the government to reserve "that portion of British Kowloon to the South of Austin Road", an area of some 200 acres, on the grounds that

it was wise of the Government to reserve some district where Europeans might live together and where they would not be exposed to such diseases as smallpox and plague by the contiguity of Chinese tenement houses.¹⁴⁷

No reference was made to malaria at this stage. The colonial authorities dismissed the possibility of establishing a reservation anywhere in Kowloon as financially unsound and as an impediment to the peninsula's commercial development.¹⁴⁸ Undeterred, Clark convinced the Board to petition the government again, but this time he advised against delineating the site of the reservation: the reservation was essential, but its actual location, at least as far as Clark was concerned, was largely "immaterial".¹⁴⁹ The Executive Council's dismissal of this second proposal left Hartigan lamenting that "Government pigeon-holes are proverbially capacious".¹⁵⁰

The Sanitary Board's appropriation of the latest racialised malarial discourse provided the key to unlocking the stalemate. As previously noted, Clark was responsible for controversially applying the metropolitan theories regarding the malarial threat of indigenous populations in Africa to the colony's 'Asiatic' population.¹⁵¹ Fresh circulars from London reiterated the malarial threat that native populations posed to nearby European residences.¹⁵² These circulars did not advocate racial segregation *per se*, but recommended that all new buildings should be constructed away from native quarters and any potential breeding

¹⁴⁶ See *Sessional Papers 1900-1903: Executive Council No.11*, Apr. 30, 1900, CO131/31, 33.

¹⁴⁷ Clark was aware that the government was investigating the matter at the time, though it is unclear whether he delineated his proposed reservation in exactly the same way. His motion passed by 4 votes to 3, with 3 abstentions. "Proposed European Reservation in Kowloon: Discussion by Sanitary Board," *China Mail*, June 22, 1900, 3. See also Woodcock to May, 22 June 1900, HKPRO, HKRS202/1/1/6.

¹⁴⁸ The Executive Council advised against reserving any future reclamations in Tsim Sha Tsui and Hung Hom Bays as these would "seriously hamper the commercial development of the whole Colony". Yet they argued that without a reservation along "some part of the littoral", the proposed reservation would "not be worth" the costs of compensation. *Sessional Papers 1900-1903: Executive Council No.18*, July 23, 1900, TNA, CO131/31, 57.

¹⁴⁹ Given Clark's staunch support for the malaria-mosquito theory, his recommendation suggests that he prioritised the protection the European population over economic incentives. "The Proposed European Kowloon European Reservation," *China Mail*, Aug. 3, 1900, 5.

¹⁵⁰ "Proposed European Reservation at Kowloon," *China Mail*, Aug. 16, 1900, 2; Minutes of the Sanitary Board, Aug. 9, 1900, HKPRO, HKRS202/1/1/20, 166.

¹⁵¹ "Sanitary Board: The Malarial Mosquito," *Hongkong Weekly Press*, Nov. 10, 1900, 370-371.

¹⁵² Sir M. Foster's 'Measures to be taken for the Prevention of Malaria' (1900) stipulated the need to sleep and live away from native huts as the most important anti-malarial measure. *Hong Kong Government Gazette*, Jan. 12, 1901, HKGRO, 20-21. For the Sanitary Board's discussion of Foster's memo see "The Prevention of Malaria," *Hongkong Telegraph*, Jan. 19, 1901, 3.

grounds.¹⁵³ Bell (Actg. P.C.M.O.) explained that this was “of course impossible in Hongkong itself except as far as the Peak is concerned, this place being practically a European Reservation” and “out of the question” as far as Kowloon was concerned.¹⁵⁴ Clark, however, was adamant that a European reservation in Kowloon was an absolute necessity:

In a recent report to the Royal Society, Drs. Stephens and Christophers, who are working at this subject in Lagos, say that “to stamp out native malaria is at present chimerical, and every effort should rather be turned to the protection of Europeans,” and I certainly think that the same principle holds good in this Colony. The Colony has recently acquired a very extensive addition to its territory and every effort should be made to secure and maintain an **extensive European reservation** in this territory, before the land becomes too valuable for the Government to be able to resume from the native holders...There is no objection to a small number of personal servants residing within the reservation area, but in no case should any native families be allowed, as it is the native children, and especially those under the age of ten years, who are the principal source of infection.¹⁵⁵

Additionally, he recommended surrounding the reservation with a “zone of neutral ground”, a cordon-sanitaire that would allegedly inhibit the movement of mosquitoes between the European residences within the reservation and the ‘infected’ Chinese populations without.¹⁵⁶ As part of a three-man sub-committee appointed by the Board to consider sanitary improvements, Clark recommended establishing a 2,047 acre reservation in the foothills of northern Kowloon (map 10).¹⁵⁷ This location was originally mooted by Osborne, the Sanitary Board member who had staunchly opposed Clark’s original proposal as economically unsound, and then taken up by Chater of the Executive Council just two-months after the Council had ‘pigeon-holed’ the Board’s second application for a reservation.¹⁵⁸ Whereas their proposal had

¹⁵³ J. Chamberlain to Governors of All Colonies, 20 Apr. 1901, TNA, CO885/7/29, 5-6, 6.

¹⁵⁴ By contrast Bell suggested that new government buildings in the New Territories would be erected at a remove from local Chinese communities. J. Bell (Actg. P.C.M.O.) to J.H. Stewart Lockhart (Col. Sec.), 13 June 1901, TNA, CO129/306/358, 439; Blake to Chamberlain, 11 Sept. 1901, TNA, CO129/306/358, 438-441.

¹⁵⁵ Emphasis (including the larger font size) in the original. F. W. Clark, *Sessional Reports: Reports of the Medical Officer of Health, the Sanitary Surveyor, and the Colonial Veterinary Surgeon, for the Year 1900*, Mar. 19, 1901, HKGRO, 403.

¹⁵⁶ Clark, *Reports of the Medical Officer of Health*, Mar. 19, 1901, 403. The local press reprinted this extract, including Clark’s original emphasis on an ‘extensive European reservation’. Scrutator [pseud.], “The Need of Municipal Freedom in Hongkong,” *Hongkong Daily Press*, May 31, 1901, 2-3.

¹⁵⁷ Maj.-Gen. W. J. Gascoigne (Officer Administering the Government) to Chamberlain, 18 July 1902, TNA, CO129/312/320, 53. A number of historians mistakenly stated that the final reservation was actually 20,000 acres. One of the two references in my MPhil thesis inadvertently identified the size of the reservation as 20,000 acres instead of 2,047 acres. Endacott, *A History of Hong Kong*, 284; Bristow, *Land-use Planning*, 39; Yip, “Colonialism, Disease and Public Health,” 20; Ham, “Malarial Hygiene,” 60, 64.

¹⁵⁸ For Osborne see F. H. May (Actg. Col. Sec.) to Blake, 4 July 1900, HKPRO, HKRS58/1/14/78; “Proposed European Reservation,” *China Mail*, June 22, 1900, 3. For Chater see R. F. Johnston. (Acting Clerk of Council), 10 Oct. 1900, HKPRO, HKRS58/1/14/78; *Sessional Papers 1900-1903: Executive Council No.25*, Oct. 10, 1900, TNA, CO131/31, 80-81, 81; R. D. Ormsby (D.P.W.) to Stewart Lockhart, 13 Dec. 1900, HKPRO, HKRS58/1/14/78.

run into difficulties, Clark's proposal was finally approved.¹⁵⁹ The latest Imperial racialised discourse on malaria prevention thus provided the sole justification that persuaded the colony's Executive Council to approve a proposal for a reservation – one that was ten times larger than the Board's original proposal.



Map 10. The Kowloon Reservation: the Approximate Location of the Original Proposal (Blue) and the Approved Location of the Anti-Malarial Reservation (Purple), 1900-2¹⁶⁰

Securing the British Government's approval for the proposal, however, required more than just anti-malarial justifications. The colonial authorities required metropolitan approval for the scheme because they hoped to set aside the 1,928 acres of crown land immediately; the reservation could not be enacted by ordinance unless the government resumed the 119 acres of private property.¹⁶¹ The Acting Governor's despatch explained that an exclusively-

¹⁵⁹ *Sessional Papers 1900-1903: Executive Council No.26*, Oct. 9, 1901, TNA, CO131/31, 237.

¹⁶⁰ "Kowloon", ca. 1902, TNA, MR1/788/1. Maj.-Gen. Gascoigne transmitted this map to the Colonial Office. Gascoigne to Chamberlain, 18 July 1902, TNA, CO/129/312/320, 52-56, 56.

¹⁶¹ Gascoigne informed Chamberlain that the colonial government presently lacked the estimated \$19,384 necessary to resume this land. It is unclear whether the government ever managed to resume this land, particularly given that many Chinese property owners vigorously opposed the

European reservation was not only necessary as a means of “safeguarding” the European population from malaria “by keeping at a distance the native population in accordance with the new accepted theory of the transmission of the Malarial germ by Mosquitoes”, but was also necessary in order to “exclude from such reservation the rich Chinese who, if they invaded the area, would by competition in rents gradually oust the poorer white population”.¹⁶² Whilst the malarial justification was sufficient to persuade the colonial government to establish a reservation, it was insufficient by itself as a justification to the metropolitan authorities for the exclusion of the Chinese upper classes. The Secretary of State for the Colonies approved of the scheme but ardently opposed the exclusion of these upper classes, much to the resentment of the Hong Kong’s European population:

The essence of the present proposal is to provide an area where Europeans are to have safety and low rents while well to do (and in many cases better-educated) Chinese are excluded....

Such a distinction appears to me to be not in accordance with our method of administration and moreover calculated to defeat the proper object of the reservation viz the protection of the more intelligent section of the community from malaria; and I think that, in approving the scheme generally, it should be laid down that educated Chinese, who may usually be supposed to have sanitary habits, should always be granted permission to reside in the selected area.¹⁶³

European assumptions about the relationship between class and hygiene exonerated the Chinese of better standing from the latest medical discourse on malaria – the discourse that had crucially convinced the colonial authorities to sanction the proposal for a reservation in the first place. These assumptions restricted the ‘usefulness’ of this Imperially-sanctioned racialised medical rhetoric. This discourse was markedly absent from the petition that resulted in the reservation of the Peak for European residences only two years later precisely because the ‘Hill District Reservation Ordinance (1904)’ specifically targeted the Chinese upper classes.¹⁶⁴ Ultimately the Kowloon reservation was never formally inaugurated by ordinance. Instead the authorities added a clause to the leases “forbidding transfers or outleases to any but persons approved by the Govr.” in order to prevent “respectable Chinese or European” landlords from dividing their properties into tenements and letting these to “non respectable Chinese”.¹⁶⁵ As we shall see from the next chapter the appropriation of the latest malarial

government’s proposal. Gascoigne to Chamberlain, 18 July 1902, TNA, CO129/312/320, 54; (Actg. Deputy Land Officer) to Stewart Lockhart, 5 Oct. 1901, HKPRO, HKRS58/1/14/78.

¹⁶² Gascoigne to Chamberlain, 18 July 1902, TNA, CO/129/312/320, 53-54.

¹⁶³ Emphasis in the original. Colonial Office minute, 29 Aug. 1902, TNA, CO129/312/320, 51b. For examples of popular resentment to Chamberlain’s decision, see *Hong Kong Hansard*, Nov. 6, 1902, HKGRO, 68; “European Reservation,” *Hongkong Telegraph*, Nov. 6, 1902, 4.

¹⁶⁴ The petitioners argued that the Peak was the only place “fitted to be a healthy residential quarter for people accustomed to a temperate climate”, and that the ordinance was therefore a form of “Climatic Legislation” rather than racially- or socially-discriminatory. In fact the opposite was true: the Hill District Ordinance sought to preserve the racial and social status-quo. Carroll, “The Peak,” 85-87; Ham, “Malarial Hygiene,” 67-69.

¹⁶⁵ Colonial Office minute, 5 Feb. 1902, TNA, CO129/313/557, 586b. I have since revised my earlier assessment in which I suggested that the reservation may never have been established. Ham, “Malarial Hygiene,” 65-66.

discourse to cement existing traditions of racial segregation nevertheless marked Hong Kong apart from the International Settlement's management of the disease.

Public Health Education

The medical authorities in Hong Kong recognised the importance of domestic prophylaxis. From the outset Thomson had encouraged private householders to complement official anti-mosquito measures by destroying *Culex* mosquitoes breeding in artificial collections of water; an addendum to his first report on the prevalence of mosquitoes noted that *Anopheles* mosquitoes could also breed in such collections.¹⁶⁶ Thomson and Clark, for instance, published their lectures on malaria prevention.¹⁶⁷ The colonial authorities recognised the importance of public health propaganda at a much earlier stage than their treaty-port counterparts. A "set of Sanitary Instructions for the use of mercantile houses in the Tropics" conveyed by the Liverpool School of Tropical Medicine prompted the Sanitary Board to compile its own short pamphlet on disease prevention in Hong Kong.¹⁶⁸ The Board printed 400 copies of *Precautions against Plague, Malaria and Cholera* (1904) in English and 1,000 copies in Chinese, but it was forced to abandon its original intention of selling the pamphlet in the face of a significant lack of popular interest.¹⁶⁹ Fortunately the distribution of *Advice concerning Mosquitoes and Malaria* (1910), a short illustrated pamphlet produced by Clark on the Sanitary Board's behalf, proved far more successful: within the first year 2,000 copies were distributed to "Europeans and English-speaking Chinese" and 10,000 out of a proposed 50,000 Chinese copies were distributed to the "native population".¹⁷⁰ Clark and Atkinson highlighted the free distribution of this pamphlet in their joint annual medical reports for a number of years.¹⁷¹ Clark also presented this pamphlet as part of his paper on 'Public Health Literature' at the Far Eastern Association of Tropical Medicine's Second Biennial Congress (Hong Kong, 1912).¹⁷²

News of a successful West African scheme for teaching tropical sanitation in schools prompted the colony to target this nascent public health propaganda at a new audience: the colony's children. The Colonial Office circulated a report from Governor William MacGregor

¹⁶⁶ *Hong Kong Government Gazette*, Nov. 24, 1900, HKGRO, 1703.

¹⁶⁷ Ham, "Malarial Hygiene," 42, 75-76; Francis William Clark, *The Prevention of Malaria in Hongkong (An Address)* (Hong Kong: Noronha & Co., 1906).

¹⁶⁸ A. H. Milne (Liverpool School of Tropical Medicine) to Blake, 19 Jan. 1903, HKPRO, HKRS203/1/24/28.

¹⁶⁹ Ham, "Malarial Hygiene," 75-76.

¹⁷⁰ Hong Kong Government, *Administrative Reports: Medical and Sanitary Reports*, Feb. 8, 1911, HKGRO, 13; Hong Kong Sanitary Board, *Advice concerning Mosquitoes and Malaria* (Hong Kong: Victoria Gaol, 1910). The pamphlet was reprinted without the illustration in the local press. "Mosquitoes and Malaria: Pamphlet by Dr. F. W. Clark," *Hongkong Telegraph*, Aug. 26, 1910, 5.

¹⁷¹ See for example Hong Kong Government: *Administrative Reports: Medical and Sanitary Reports for the Year 1914*, Mar. 9, 1915, HKGRO, 21.

¹⁷² Clark, "Public Health Literature," 386-96, 388-92. Clark discussed the colony's smallpox, malaria, beriberi and plague pamphlets.

of Lagos summarising his colony's public health education programs.¹⁷³ He emphatically urged "that Hygiene should be taught by every teacher in every school, without reference to colour, race, or religion".¹⁷⁴ Prior to the circulation of this report E. A. Irving, Hong Kong's Inspector of Schools, had only considered two unofficial proposals to promote tropical hygiene. Firstly he had suggested that a Chinese doctor could deliver a course of ambulance lectures to the upper classes of Anglo-Chinese schools, to be supplemented the following year by "another course of 12 lectures on tropical diseases, especially plague & malaria".¹⁷⁵ Secondly he had recommended that a certain Mrs. James, who had "attended courses on hygiene" and was apparently "qualified to lecture", could instruct an amalgamation of the upper classes of several schools.¹⁷⁶ As a result of MacGregor's report, however, the Officer Administering the Government tasked Atkinson (P.C.M.O.), Pearse (M.O.H.), Irving and Dr. Bateson-Wright, the headmaster of Queen's College, to draw up a "definite scheme of work".¹⁷⁷ The scheme initially struggled to gain momentum but Sir Matthew Nathan revived the project within months of assuming the governorship of the colony, and the project's fruition owed much to his personal involvement.¹⁷⁸

Malaria prevention featured prominently in this new curriculum. For instance the first girls' advanced course examination paper tested their knowledge of "the importance of training Nullahs and natural watercourses near inhabited houses in a tropical country".¹⁷⁹ Irving nevertheless lamented that an important opportunity had been missed:

I cannot help regretting the absence of a question on the sources of malaria. Thanks to the action of the Government, that disease is disappearing from Hongkong: but its prophylaxis will not cease to be of vital importance to Chinese boys, as long as they continue to return for their holidays to fever-ridden homes.¹⁸⁰

Accordingly the elementary examination for the following year included a question on the transmission and prevention of the disease.¹⁸¹ Receptive young Chinese minds provided an opportunity of eliciting popular support for the colony's management of the disease in precisely those areas in which the colonial administration did not want to intervene directly. Inevitably problems arose. Three years later Irving, now Director of Education, complained that the subject of hygiene "had been forced untimely into the curriculum of schools because

¹⁷³ Chamberlain to F.H. May (Officer Administering the Government), 7 Oct. 1903, HKPRO, HKRS203/1/25/88.

¹⁷⁴ W. MacGregor to Chamberlain, 9 July 1903, HKPRO, HKRS203/1/25/88. MacGregor drew attention to the effectiveness of lantern-slide illustrations and practical demonstrations in teaching the mosquito-borne transmission of malaria.

¹⁷⁵ E. A. Irving (Inspector of Schools) to A. M. Thomson (Actg. Col. Sec.), 25 Dec. 1903, HKPRO, HKRS203/1/25/88.

¹⁷⁶ Irving to Thomson, 25 Dec. 1903, HKRS203/1/25/88.

¹⁷⁷ May to Thomson, 30 Dec. 1903, HKPRO, HKRS203/1/25/88.

¹⁷⁸ Pearse's draft syllabus, which was delayed owing to the pressures of his work, was deemed overly-complicated for scholastic purposes. Ham, "Malarial Hygiene," 77-78.

¹⁷⁹ *Hong Kong Government Gazette*, Feb. 23, 1906, HKGRO, 215.

¹⁸⁰ *Ibid.*, 213.

¹⁸¹ E. A. Irving, *Sessional Papers: Report on the Study of Hygiene in Hongkong Schools*, 1907, HKGRO, 158. See also the report by the examiners of Queen's College. *Hong Kong Government Gazette*, Oct. 25, HKGRO, 1907, 552.

it was considered politically desirable”, with the result that it did not “harmonise” with the other courses.¹⁸² The joint annual reports of the Principal Civil Medical Officer and the Medical Officer of Health nevertheless continued to emphasise how integral this program was to the colony’s anti-malaria campaign.¹⁸³ Teaching tropical sanitation and malarial hygiene in the colony’s Anglo-Chinese schools was thus central to the promotion of public co-operation in the prevention of disease.

The Kowloon-Canton Railway and the Military at Shau Kei Wan

Two unexpected outbreaks briefly challenged the colony’s geographically-restricted management of the disease. On the one hand, the government was forced to intervene in the New Territories as a result of an epidemic amongst the coolie workforce constructing the Kowloon-Canton Railway. The authorities responded by adopting the same preventive measures that were used to protect the other colonial ‘presence’ in the region, namely the police. The outbreak did not, however, prompt the government to extend malaria prevention to the Chinese communities in the region. On the other hand, the Sanitary Board responded to an unprecedented request for assistance from the military authorities as a result of the alarming prevalence of malaria on the eastern end of Hong Kong Island. Once again this epidemic did not precipitate a permanent extension of the government’s management of the disease on the island. Instead the government’s anti-malaria operations retreated to the city of Victoria once the epidemic abated.

The colonial authorities were forced to implement a variety of anti-malaria measures along the Kowloon-Canton railway as a result of a major outbreak of the disease. The initial outbreak amongst the coolie workforce caught the medical authorities totally off-guard. Intense scrutiny from within the colony and from London to keep expenditure to a minimum, compounded by a lack of forethought, ensured that little attention was devoted to the living conditions of the large coolie workforce when construction began.¹⁸⁴ The local press considered Malcolm Watson’s warning that engineers had yet to incorporate the “the new ideas on malaria” particularly poignant.¹⁸⁵ Thomson and his successor, Dr. Hartley, faced a daunting challenge given the size and scattered distribution of the workforce and the rural conditions in which they were working.¹⁸⁶ Initially the authorities attempted to replicate the

¹⁸² He also complained that the lantern slides procured from England at the Secretary of State’s request were impractical. He did, however, note that the slides showing *Culex* and *Anopheles* mosquitoes were effective. E. A. Irving, “Hygiene”, ca. 1910, TNA CO129/365/67, 381, 384-387. See also Ham, “Malarial Hygiene,” 79-80.

¹⁸³ See for example J. M. Atkinson and F. Clark, *Sessional Papers: General Report of the Principal Civil Medical Officer and the Medical Officer of Health, for the Year 1907*, Feb. 1, 1908, HKGRO, 407.

¹⁸⁴ See “The Kowloon Railway,” *Hongkong Weekly Press*, Sept. 4, 1909, 199-200; Clark, “Malaria in Hong Kong”, ca. Sept. 1911, LSHTM, Ross/138/05/02, 6. Thomson, for instance, was not tasked to oversee the workforce until the autumn of that year, i.e. after the seasonal peak in the disease’s incidence. Atkinson and Clark, *General Report*, Feb. 1, 1908, HKGRO, 457.

¹⁸⁵ “Malaria Among Kowloon Railway Workmen,” *Hongkong Telegraph*, Dec. 12, 1908, 4.

¹⁸⁶ Atkinson and Clark, *General Report*, Feb. 1, 1908, HKGRO, 457; Hong Kong Government, *Administrative Reports: Medical and Sanitary Reports*, Apr. 19, 1909, HKGRO, 50.

program of nullah-training that had proved so effective on Hong Kong Island, but this was soon abandoned as inefficient and prohibitively expensive.¹⁸⁷ Instead the authorities resorted to the daily administration of quinine.¹⁸⁸ Hartley noted that the distribution of quinine was hampered by native ignorance of and resistance to this ‘Western’ prophylactic:

Quinine has been dealt out freely, though perhaps not so freely as formerly as I found that a considerable amount was wasted by being thrown away into the nullahs or bartered at the small stores for food, etc., the natives, especially when new to the territory, not taking kindly to the drug, and it has often to be given under compulsion. As soon as the practice was discovered steps were taken to stop it.¹⁸⁹

In addition to these prophylactic measures, a group of coolies and a European sanitary inspector conducted anti-larval measures in the main coolie camps.¹⁹⁰ Hartley attributed the marked decline in the incidence of malaria between 1907 and 1910, when the railway line was completed, principally to these preventive measures (table 4.2).¹⁹¹ Governor Frederick Lugard praised this impressive decline on Hartley’s “indefatigable exertions”.¹⁹²

Table 4.2. Principal Causes of Sickness on the Kowloon-Canton Railway, 1907-10¹⁹³

	Malaria	Dysentery	Beriberi	Injuries
1907	1168	124	81	371
1908	556	63	58	354
1909	450	29	52	608
1910	242	23	40	123

The management of malaria on the Kowloon-Canton Railway was reduced to the administration of quinine to the railway staff following the completion of the line. Dr. Smalley, who succeeded Hartley as Medical Officer to Kowloon and the New Territories, shifted to a more rigorous prophylactic regime to prevent the railway’s Chinese, and to a lesser extent Indian, staff from allegedly selling the quinine tablets on at a profit. Smalley later reported:

I completely gave up giving pills to the Chinese staff, employing injections and Quinine mixture and on many occasions enforcing daily visits to the Dispensary to ensure the dose of the latter being taken.¹⁹⁴

¹⁸⁷ Atkinson and Clark, *General Report*, Feb. 1, 1908, HKGRO, 457; *Hong Kong Hansard*, Feb. 6, 1908, HKGRO, 11.

¹⁸⁸ Hong Kong Government, *Medical and Sanitary Reports*, Apr. 19, 1909, HKGRO, 50-51.

¹⁸⁹ *Ibid.*, 51.

¹⁹⁰ Atkinson and Clark, *General Report*, Feb. 1, 1908, HKGRO, 457.

¹⁹¹ Though he also conceded that the reduction of the workforce had contributed to the decline in malaria cases. Hong Kong Government, *Administrative Reports: Medical and Sanitary Reports*, Feb. 18, 1911, HKGRO, 49.

¹⁹² *Hong Kong Hansard*, Mar. 10, 1910, HKGRO, 8-10, 10.

¹⁹³ Hong Kong Government, *Medical and Sanitary Reports*, Feb. 18, 1911, HKGRO, 49.

¹⁹⁴ Hong Kong Government, *Medical and Sanitary Reports for the Year 1914*, Mar. 9, 1915, HKGRO, 62.

Smalley attributed the decline in the incidence of the disease to his “unceasing efforts” in teaching “the Chinese staff the value of quinine in malaria”.¹⁹⁵ These efforts paralleled the prophylactic regimes administered to the police for in the New Territories. The colonial authorities prioritised these two elements of the state in favour of extending the anti-mosquito campaign beyond the confines of the city of Victoria.

The Sanitary Board briefly extended its anti-malaria campaign on Hong Kong Island itself as a result of an exceptional request from the military authorities. The colony’s civilian and medical spheres were largely separate, at least in terms of disease prevention. But in the summer of 1909 the newly-arrived Colonel Bedford, Principal Medical Officer of the South China Command, requested the Sanitary Board’s assistance to investigate an outbreak of malaria amongst the troops at Lei Yue Mun, on the north-eastern end of the island, which he attributed to the insanitary conditions in the neighbouring village of Shau Kei Wan.¹⁹⁶ The Board recommended a variety of anti-mosquito measures, including nullah-training in the vicinity of the Chinese village of Shau Kei Wan.¹⁹⁷ The colonial government also approved the free distribution of quinine from the local Chinese Dispensary – the Registrar General explained that this method was more effective than police coercion.¹⁹⁸ Whilst Bedford and his Sanitary Board colleagues were pleased with this development, they were frustrated by the government’s failure to train all of the nullahs in the vicinity of the barracks.¹⁹⁹ The Board’s President and head of the Sanitary Department reported:

There was a great deal being done in the Colony in the way of nullah training, and it was simply a question of what district should be dealt with first. If it had not been for the troops, Shaukiwan [Shau Kei Wan] would not have got some much attention as it was receiving now. It must take its turn with other portions of the city.²⁰⁰

Budget constraints heightened the sanitary department’s prioritisation of the European areas of urban settlement, namely the Western and Central districts of the City of Victoria, over the Chinese village of Shau Kei Wan and indeed the rest of the island.²⁰¹ The extension of the colony’s civilian anti-mosquito operations to the eastern edge of Hong Kong Island was purely a matter of protecting the colonial presence: the medical authorities monitored the prevalence of malaria amongst the colony’s European troops until 1914. Once satisfied that the Chinese village of Shau Kei Wan no longer posed a threat to the Imperial troops stationed in the vicinity, the Sanitary Department’s confined its operations once again on the city of Victoria.

¹⁹⁵ Hong Kong Government, *Administrative Reports: Medical and Sanitary Reports for the Year 1916*, Apr. 20, 1917, HKGRO, 53.

¹⁹⁶ “Malaria at Lyemun: Prevalence of Fever Amongst the Troops,” *Hong Kong Telegraph*, May 11, 1909, 4.

¹⁹⁷ Colonel Bedford was part of the Board’s three-man sub-committee. (Sec., San. Bd.) to (Col. Sec.), 4 June 1909, HKPRO, HKRS58/1/47/52.

¹⁹⁸ “Sanitary Board: The Afternoon’s Meeting,” *Hongkong Telegraph*, Dec. 6, 1910, 5.

¹⁹⁹ See “The Malaria Pest: At Shaukiwan,” *Hongkong Telegraph*, Feb. 2, 1911, 5.

²⁰⁰ “Sanitary Board: Meeting To-Day,” *Hongkong Telegraph*, Mar. 28, 1911, 5.

²⁰¹ The expenditure on nullah-training had dropped from over \$23,600 in 1907 to just over \$7,700 in 1909. Data from the annual medical and sanitary administrative reports.

“Why not extend it to all China and make a job of it!”

Historians have traditionally attributed the establishment of the colony’s Malaria Bureau in 1930, and the resultant extension of Hong Kong’s management of the disease throughout the colony, to the critical reports of a naval health officer from Singapore who surveyed the malaria situation in Hong Kong in the late 1920s. Initially tasked solely with advising the naval authorities in Hong Kong, Surgeon Commander Given subsequently conducted a more extensive investigation into the prevalence of the disease with the support of the colony’s senior medical officials.²⁰² Given identified a lack of critical research and he recommended establishing a dedicated anti-malaria unit along the lines of Malaya’s Malaria Advisory Board. Modern historians have exaggerated the impact of Given’s reports by neglecting the emergence of increasingly vocal domestic critics prior to Given’s arrival.

One Sanitary Board member in particular became increasingly critical of the limited scope of the government’s anti-malaria campaign during the early 1920s. Dr. W. V. M. Koch, the medical officer who had briefly managed a leprosarium in Trinidad and Tobago in the 1890s, emphasised the need for “more extensive and elaborate” anti-malaria measures because the authorities “had been slumbering under the happy delusion that malaria had been practically wiped out of the Colony”.²⁰³ Koch fundamentally disagreed with those who insisted that mosquito prevention was only possible in urban areas, and the resultant prioritisation of the city of Victoria. Official statistics certainly appeared to suggest that an increasing number of people were contracting the disease in Kowloon and the New Territories (fig. 23).

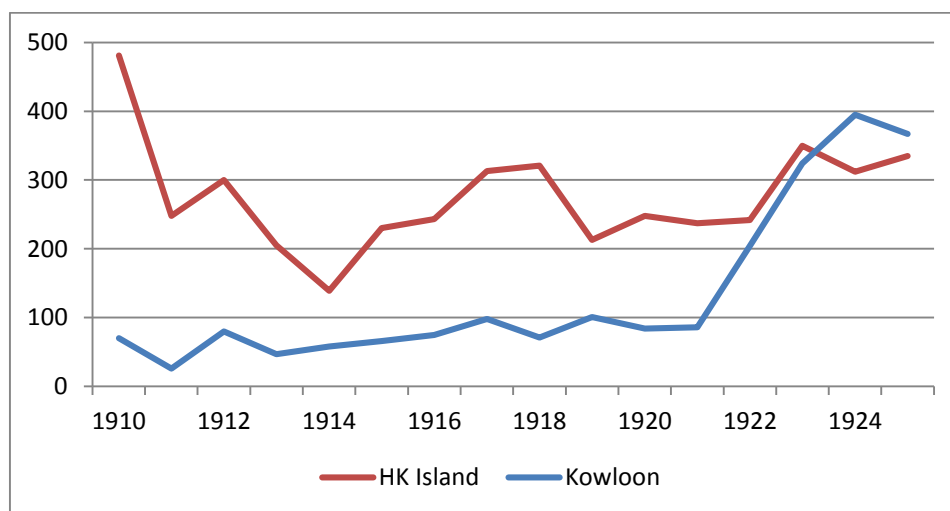


Figure 23. Chinese Deaths from Malaria Registered at Kowloon and on Hong Kong Island, 1910-25.²⁰⁴

²⁰² D. H. C. Given, *Report No.1 on “Malaria in Hong Kong”* (Hong Kong: South China Morning Post, 1928), 9.

²⁰³ “The Mosquito Pest: Sanitary Board’s Activity,” *Hongkong Telegraph*, Apr. 13, 1921, 2.

²⁰⁴ Hong Kong Government, *Medical and Sanitary Reports for the Year 1916*, Apr. 20, 1917, HKGRO, 17; Hong Kong Government, *Administrative Reports: Medical Report for the Year 1920*, Jan., 1921, HKGRO, 17; Hong Kong Government *Administrative Reports: Sanitary Report for the Year 1925*, Mar.

On his return from a year's leave, Koch suggested that the colony might emulate the anti-malarial successes of the Federated Malay States by implementing anti-mosquito measures throughout the New Territories.²⁰⁵ The head of the Sanitary Department and President of the Sanitary Board (and therefore Koch's superior) dismissed Koch's motion as unnecessary because there were "so very, very few [residents in the New Territories], excluding natives of course".²⁰⁶ The Director of the Public Works Department similarly challenged Koch's strategy:

Dr. Koch: I quite acknowledge the difficulties that exist; the point is whether we should not make an attempt other than in the town [of Victoria]. It seems valueless unless you make an attempt in the surrounding country.

Mr. Perkins [Director of Public Works]: If you carry that out logically the question is how far you should go. Why stop at the New Territories? Why not extend it to all China and make a job of it.²⁰⁷

The Hongkong Telegraph endorsed Koch's criticisms and noted that Hong Kong's lower incidence of malaria gave the authorities an advantage compared to their colleagues in the Malay Peninsula.²⁰⁸ As we shall see from the next chapter the colonial administration's staunch opposition to any extension of its management of the disease to the New Territories was the polar opposite of the International Settlement's approach.

A racialised conceptualisation of the disease underpinned both sides of the argument in Hong Kong. Both Koch's opponents and his supporters (and indeed Koch himself) continued to pathologise the lower strata of the Chinese population as reservoirs of the disease. The press article that endorsed Koch's criticisms, for instance, explained that the necessity of extending the colony's anti-malaria campaign to the rural New Territories was not simply governed by "the mere dictates of humanity" but also by "the very important matter of eliminating 'carriers,' who could prove a menace to the sections of the population who, in the eyes of officialdom, merit special attention".²⁰⁹ Pearse (M.O.H.) faced the awkward task of explaining this racially-loaded concept to Chow Shou-son, a Chinese member of the Sanitary Board:

In the Far East, India, Malay, Burmah, South China, and so on, – in places where malaria is indigenous – the native races must always be suspected of being infected – in veterinary practice the term "salted" is used....If we have large numbers of artisans, coolies, hotel or domestic servants about us, and a few anopheles mosquitoes occur, we are bound to get the disease transferred from the Chinese reservoir to the

31, 1926, HKGRO, 51-53. These reports detailed the number of Chinese deaths registered at Kowloon and at four sites on Hong Kong Island (Victoria, Shauiwan, Aberdeen and Stanley).

²⁰⁵ Koch was on leave from October 1921 to October 1922.

²⁰⁶ "Mosquitoes & Malaria: Dr. Koch's Sound Advice [*sic*]," *Hongkong Telegraph*, Nov. 22, 1922, 2.

²⁰⁷ "Mosquitoes & Malaria," *Hongkong Telegraph*, Nov. 22, 1922, 2.

²⁰⁸ "The Menace of Malaria," *Hongkong Telegraph*, Nov. 24, 1922, 6.

²⁰⁹ "Menace of Malaria," *Hongkong Telegraph*, Nov. 24, 1922, 6.

uninfected men, by the mosquito biting the “salted” man and then biting the uninfected man.²¹⁰

The fin de siècle pathologisation of the lower strata of the Chinese community was thus still very much in evidence, though calls for an anti-malarial racial segregation had long since been abandoned. The threat of infection was understood both in terms of the regular influx of migrants from malaria-infested regions of mainland China but also in terms of the colony’s own urban expansion.²¹¹ This expansion allegedly exposed urban inhabitants with low immunities to infected communities from rural environments where malaria-carrying mosquitoes abounded.

Koch’s calls for a more extensive anti-malaria campaign fed into a broader debate about the geographical limits of the sanitary authorities’ jurisdiction. The unofficial members of the Legislative Council called for an extension of this jurisdiction beyond northern Kowloon. As one of them explained, the Sanitary Department was originally established to destroy plague-bearing rats, and consequently its work had been confined to the congested urban areas of Hong Kong Island and Kowloon Peninsula:

In that campaign the Department has been entirely successful, but there are other campaigns which are necessary for the Department to undertake and which require a wider area of operations. We have it on authority of the Principal Medical Officer to the Garrison that malaria is increasing amongst the troops. We hear constant complaints, from the Residents’ Associations of the Colony, and recently very particularly from Peak residents, that mosquitoes are getting worse.²¹²

Another member pointed to the success of American anti-malaria efforts in Honolulu and the Philippines. Both the Colonial Secretary and the Governor, however, opposed the motion. They argued that the government’s existing anti-malaria campaign was perfectly satisfactory. Moreover the Governor dismissed the publicised successes of foreign campaigns “because, with some experience of malarial districts, I have noticed that these wonderful successes are not infrequently followed after an interval by relapses of which we see nothing in the newspapers”.²¹³

These calls for reform only resulted in limited concessions. The government agreed to set aside \$3,000 for brushwood clearance and \$20,000 to train 22 nullahs as a result of Koch’s original motion.²¹⁴ The Botanical and Forestry Department cleared 8.25 million square feet of undergrowth in 1922, an increase of more than 50% on the year before, but the Public Works Department was only able to complete half of the programme of nullah-training.²¹⁵ The Legislative Council also passed a bye-law regulating the use of bamboo scaffolding so as to prevent receptacles of standing water from forming (and therefore becoming potential

²¹⁰ “Prevalence of Malaria: Chinese As Carriers of Infection,” *Hongkong Daily Press*, Nov. 8, 1922, 3.

²¹¹ Hong Kong Government, *Administrative Reports: Sanitary Report for the Year 1922, 1923*, HKGRO, 69.

²¹² *Hong Kong Hansard*, Aug. 28, 1924, HKGRO, 60-64, 61.

²¹³ *Ibid.*, 60-64, 63.

²¹⁴ “The Mosquito Pest: The Recent Survey,” *China Mail*, June 8, 1921, 4; Hong Kong Government: *Administrative Reports: Sanitary Report for the year 1921, 1922*, HKGRO, 7.

²¹⁵ Hong Kong Government, *Sanitary Report for the Year 1922, 1923*, HKGRO, 8.

mosquito-breeding sites), in response to Koch's demand that developers be held responsible for the health of their workforces.²¹⁶ For its part the Sanitary Board appointed a small committee to investigate the prevalence of malaria in Kowloon.²¹⁷ On the whole, though, the sanitary authorities did not implement any radically new measures. Instead these measures continued to prioritise the city of Victoria and the colonial presence in the New Territories. For instance, the Legislative Council approved the expenditure of \$7,000 on mosquito-proofing four police stations in the New Territories with wire gauze windows and doors rather than draining the surrounding land.²¹⁸ Whereas the colony's early anti-malaria campaigns had achieved international acclaim, its management of the disease increasingly lagged behind international standards. The local press for instance contrasted the colony's reliance on small "gangs" of coolies to oil breeding sites in Victoria, the Peak and Kowloon with Louisiana's experiments with aerial insecticide spraying.²¹⁹

Further criticism was heaped upon the colony's management of the disease prior to Given's arrival. Dr. A. G. Millott Severn, who briefly served as both Acting Medical Officer of Health and Medical Officer of Health in the mid-1920s, reported that little had been done in the way of mosquito surveys since Thomson's and Macfarlane's investigations.²²⁰ John Anderson, Professor of Medicine at Hong Kong University, similarly informed the Hong Kong Chinese Medical Association that, "There has never been a systematic malarial survey of this Colony and we have no statistics of any value for estimating the prevalence of the disease in our midst".²²¹ The local press emphasised the urgent need for a more pro-active anti-malaria campaign by drawing the public's attention to Severn's and Anderson's statements.²²² By ignoring the extent of this internal criticism, historians have tended to portray Given's subsequent criticisms as a fresh re-evaluation of the colony's efforts. Instead his work, as a foreign naval medical officer from British Malaya, should be understood as the coup de grace that finally overturned the government's reluctance to heed the demands of the reformists within its own ranks. Following Given's investigation, the Colonial Secretary declared:

In view of the great progress which is being made in other parts of the world in combatting the ravages of malaria, it is a standing reproach to this Colony that so little improvement has been made here. In spite of the need for economy we can no longer

²¹⁶ "Prevalence of Malaria," *Hongkong Daily Press* Nov. 8, 1922, 3; *Hong Kong Hansard*, Mar. 13, 1924, HKGRO, 24; *Hong Kong Hansard*, May 22, 1924, HKGRO, 31-32; *Hong Kong Government Gazette*, May 24, 1924, HKGRO, 205.

²¹⁷ "Sanitary Board: Long Discussions on Dr. Koch's Questions," *China Mail*, Aug. 13, 1924, 5.

²¹⁸ *Hong Kong Hansard*, May 28, 1925, HKGRO, 32-33; P. P. J. Wodehouse, *Administrative Reports: Report of the Captain Superintendent of Police for the Year 1924, 1925*, HKGRO, 14-15.

²¹⁹ "The Good Old Cure: Castor Oil For Mosquitoes!," *China Mail*, May 23, 1925, 1.

²²⁰ A. G. Millott Severn, "The Mosquitoes of Hongkong," *Caduceus* 5, no. 1 (1926): 5-9; A. G. Millott Severn, "Malaria, and Malaria Prophylaxis in Formosa," *Caduceus* 5, no. 3 (1926): 219-226, 226.

²²¹ "A Malaria Campaign: Government Urged to Undertake Comprehensive Scheme," *Hongkong Telegraph*, Nov. 18, 1925, 2.

²²² "Fighting Malaria," *China Mail*, Aug. 24, 1927, 6.

afford to neglect this all-important problem and the first step necessary is to obtain expert advice on the best way of attaining our end.²²³

The Establishment of the Malaria Bureau

The establishment of Hong Kong's Malaria Bureau has generally been regarded as a straightforward affair. Historians typically condense this narrative to the transfer of two medical officers from the Federated Malay States, in December 1928 and April 1930 respectively.²²⁴ Dr. Wellington was appointed to the newly-inaugurated position of Director of Medical and Sanitary Services with the dual mandate of reorganising the colony's medical and sanitary services and overhauling the colony's management of malaria, whilst Dr. Jackson was transferred to establish the Malaria Bureau and manage it as the colony's first Government Malariologist.²²⁵ In fact this process was far from straightforward. The colony initially struggled to attract any applicants for the position of malariologist.²²⁶ Moreover Koch questioned the government's decision to hire a malaria expert from abroad rather than relying on one of the colony's own well-trained junior doctors.²²⁷ Now aged sixty-five, Koch was one of the few medical officers who had observed the colony's anti-malaria campaign first-hand since the early 20th century.²²⁸ He therefore continued to interrogate the Sanitary Board about the scope of its anti-malarial activities.²²⁹ For its part the Sanitary Board implemented a variety of public health awareness initiatives prior to Wellington's arrival.²³⁰ Koch nevertheless remained highly critical: "The work should be undertaken with greater zeal, with more pertinacity and not in this dilly-dallying slipshod way".²³¹

²²³ *Hong Kong Hansard*, Sept. 1, 1927, HKGRO, 73-74, 73.

²²⁴ Yip, "Colonialism, Disease and Public Health," 21-22; Ho, *The Silent Protector*, 65-67; Starling et al., eds., *The Story of Medicine in Hong Kong*, 185-187.

²²⁵ Wellington officially served as the Medical Officer of Health for the last two weeks of December 1929 before taking up the post of Director of Medical and Sanitary Services on January 1st 1930. Yip, "Colonialism, Disease and Public Health," 21; Ho, *The Silent Protector*, 65; Starling et al., eds., *The Story of Medicine in Hong Kong*, 185-186.

²²⁶ *Hong Kong Hansard*, Sept. 20, 1928, HKGRO, 70; *Hong Kong Hansard*, Oct. 4, 1928, HKGRO, 84-85.

²²⁷ "Malaria Expert: To Investigate Local Prevalence," *Hongkong Telegraph*, May 30, 1928, 2.

²²⁸ Born in October 1863, Koch transferred to Hong Kong in 1903. He was therefore a contemporary of Drs. Atkinson, Thomson and Clark. Koch actually applied to retire at the age of 55 in 1917 but he remained in the colony and went on to serve on the Sanitary Board from 1921 until 1931 (by which time he was 68). See F. H. May (Governor) to W. Long (Sec. of State for the Colonies), 30 Aug. 1917, TNA, CO129/367/280, 367.

²²⁹ His questions for the Board made front-page news. "Colony's Health: Dr. Koch's Questions on Malaria," *China Mail*, Mar. 19, 1928, 1.

²³⁰ The Board engaged Chinese lecturers attached to the Y.M.C.A. unit of the St. John's Ambulance Association to deliver lectures and demonstrations on malaria and infectious diseases. Dr. T. W. Ware, Medical Officer of the Infectious Diseases Hospital, also gave a series of lectures on mosquitoes and malaria at the Chinese Y.M.C.A. which were then translated into Chinese. "Campaign Against Malaria: Replies to Dr. Koch's Questions," *Hongkong Telegraph*, Apr. 4, 1928, 10; "Chinese Y.M.C.A.: Coping with Mosquitoes, Malaria & Small-Pox," *China Mail*, Dec. 5, 1928, 7; "Malaria and Its History: Dr. T. W. Ware's Instructive Lecture," *Hongkong Telegraph*, May 3, 1928, 2.

²³¹ "Campaign Against Disease," *Hongkong Telegraph*, May 16, 1928, 9-10, 9.

Wellington played a pivotal role in securing the services of expert malariologists from British Malaya. As the former Chief Health Officer in the Federated Malay States, Wellington had extensive experience in combating malaria-carrying mosquitoes.²³² He advised the colonial government in Hong Kong to hire a medical officer and a sanitary inspector with “long experience in Mosquitology and anti-malarial works together”.²³³ When efforts to secure these individuals through the Colonial Office proved unsuccessful, Wellington successfully negotiated the transfer of Jackson and his assistant Mr. Deb.²³⁴ The Colonial Secretary informed the Legislative Council:

It is intended that these officers shall form the nucleus of an anti-malarial branch of the Medical Department. They will train local recruits and they and their staff will make the detailed anopheline surveys which are a necessary preliminary to any economic and efficient anti-malarial campaign which has for its basis the destruction of the breeding grounds of those species of anophelines which are active agents in the spread of malaria.²³⁵

The authorities proffered salaries of \$8,494 (an increase of \$7,614 on the original offer) and \$3,200 for the malariologist and assistant malariologist respectively in order to secure the necessary individuals.²³⁶ *The Hongkong Sunday Herald* gratefully reported that the Colonial Secretary’s statement was “something above the stereotyped semi-evasive type of answer that has characterised so many of the Government’s utterances”, and expressed a hope that “at long last the Government has got – or is getting – out of the lethargic groove in which it has been content”.²³⁷

Wellington took a keen personal interest in Hong Kong’s malaria problem prior to Jackson’s and Deb’s arrival. He attributed the colony’s unsophisticated management of the disease to a lack of knowledge about the breeding habits of the colony’s mosquitoes. Drawing on his own knowledge of mosquito breeding in south-east Asia, he instigated preliminary anopheline surveys on Hong Kong Island.²³⁸ Wellington emphasised the importance of specialist knowledge, notably in a lecture on the ‘The Life History of Mosquitoes’ at the Helen

²³² The local press and Hong Kong University’s Medical Society publicised an earlier lecture by Wellington. “Menace of Malaria: Lecture by Dr. A.R. Wellington,” *Hongkong Telegraph*, June 12, 1929, 1; A. R. Wellington, “Malaria in its relation to Man and Mosquito,” *Caduceus* 8, no. 3 (1929): 117-129.

²³³ *Hong Kong Hansard*, July 18, 1929, HKGRO, 95.

²³⁴ C. Clementi (Governor) to Lord Passfield (Sec. of State for the Colonies), 19 July 1929, TNA, CO 129/518/3, 7-9; *Hong Kong Hansard*, Sept. 23, 1929, HKGRO, 215.

²³⁵ *Hong Kong Hansard*, July 18, 1929, HKGRO, 95.

²³⁶ Hong Kong Government, *Sessional Papers: Abstract Showing the Differences Between the Approved Estimates of Expenditure for 1928 and the Estimates of Expenditure for 1929*, Sept. 20, 1928, HKGRO, 131-132; *Hong Kong Hansard*, Sept. 5, 1929, HKGRO, 131-132; *Hong Kong Hansard*, Sept. 5, 1929, HKGRO, 164.

²³⁷ “Anti-Malarial Campaign,” *Hongkong Sunday Herald*, July 21, 1929, 8.

²³⁸ Hong Kong Government, *Administrative Reports: Report of Medical Department, for the Year 1928*, 1929, HKGRO, 16, 24-25; Hong Kong Government, *Administrative Reports: Medical & Sanitary Report for the Year 1929, 1930*, HKGRO, 18, 31-32.

May Institute.²³⁹ The Officer Administering the Government noted that Wellington's lecture "had pointed out how money could be wasted in such campaigns through incomplete knowledge, and a great deal of money had been so wasted already in Hong Kong".²⁴⁰ Wellington employed modern military rhetoric to explain the importance of a dedicated, specially-trained anti-malaria unit:

War against mosquitoes like war against man is a scientific problem. Individual efforts may effect local successes but for an anti-mosquito campaign of any magnitude to be a success it must be planned by one who has studied the enemy's habits and who is acquainted with his life history. Every effort must be made to bring untoward influences to bear upon the enemy's front line, the adult mosquitoes, and upon his reserve the larvæ. Not only must the general know his work but each individual down to and including the private must be so trained that he will do his duty without a hitch....If this be not done the enemy will concentrate on the borders and by aeroplane night raids continue to do damage, the raiders returning to their reserves and recruiting grounds (breeding places) before morning.²⁴¹

This was not simply a nod to his Napoleonic namesake: Wellington had honed this militaristic approach whilst working on malaria in the F.M.S. As we shall see in the next chapter, Wellington's strategic rhetoric contrasted with the tactical rhetoric of J. H. Jordan, the Settlement's Commissioner of Public Health.

The Malaria Bureau, 1930-1941

Whilst historians have noted that the Malaria Bureau's primary objectives consisted of collecting data on the prevalence of malaria and mosquitoes and assisting the sanitary authorities' anti-malaria operations, little attention has been paid to the Bureau's evolution and achievements. Initially the Bureau consisted simply of Jackson, his assistant Deb, a clerk and two coolies. Four Chinese probationer Inspectors joined the Bureau later that year.²⁴² Given the staff's small size and limited expertise, the Bureau initially concentrated on analysing larval specimens from different parts of the colony.²⁴³ It also responded to complaints about mosquito nuisances and conducted spleen censuses for the first time in the

²³⁹ The Board persuaded the government to print the lecture in Chinese. A. R. Wellington, "The Life History of Mosquitoes," *Caduceus* 9, no. 1 (1930): 1-16; "Malaria Lecture: Sanitary Board Decision to Reproduce," *China Mail*, Apr. 2, 1930, 8.

²⁴⁰ "Fight Against Malaria: Dr. Wellington's Lecture on a Preventive Campaign," *China Mail*, Feb. 19, 1930, 3.

²⁴¹ A. R. Wellington, "The Life History of Mosquitoes," *Caduceus* 9, no. 1 (1930): 15.

²⁴² The Malaria Bureau's reports for 1930 through 1939 were always published as part of the annual medical report. A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1930*, 1931, HKGRO, 89. The local press advertised the position in August. Candidates were required to be between 20 and 25 years old, in possession of a "good general English education" and to have passed the "Junior Local Examination". "Chinese Inspectors Wanted: Government and Anti-Malaria Work," *Hongkong Telegraph*, Aug. 30, 1930, 12.

²⁴³ Between August and December 1930 the Bureau examined 4,548 specimens of *Anopheles maculatus*, 1,216 specimens of *A. minimus*, 458 of *A. sinensis*, 138 of *A. jeyporiensis*, 95 of *A. karwari* and 4 of *A. aitkeni*. Wellington, *Medical & Sanitary Report for the Year 1930*, 1931, HKGRO, 93.

colony's history.²⁴⁴ The Malaria Bureau was responsible for extending the colony's management of malaria throughout Hong Kong Island and the New Territories. Wellington, as Ka-che Yip has noted, reported that the rural communities in the New Territories were receptive to the Bureau's activities:

The reception given to the members of the staff demonstrates that there is no opposition to scientific investigations, provided the people understand the objects aimed at and are treated with ordinary tact and civility. Almost invariably they showed themselves interested in the proceedings and offered their cooperation.²⁴⁵

From the outset Jackson promoted the need for specialist knowledge. His first annual report listed "the teaching of mosquitology" as one of the Bureau's seven primary objectives.²⁴⁶ Jackson faced a challenging task, given that the colony's sanitary inspectors had only been taught to distinguish between anophelines and culicines; "progress beyond this elementary stage [had] not yet been attempted".²⁴⁷ Jackson's first four Chinese probationer inspectors were taught to identify, prepare, preserve and dissect larval specimens, to examine blood films and to conduct larval surveys.²⁴⁸ All four were successfully promoted and a further three probationer inspectors were recruited and trained in the following years.²⁴⁹ The Bureau's training program benefited from materials sent by a medical officer in Java and by the Director of the Philippine Health Service.²⁵⁰ Jackson's emphasis on improving his staff's expertise was vindicated: in addition to identifying a number of known species for the first time in Hong Kong, the Bureau also discovered three new species, all of which were named after the colony's malariologist.²⁵¹ Given that only thirteen new mosquito species have ever been discovered in Hong Kong, the Bureau's discoveries were a notable achievement.

²⁴⁴ Wellington, *Medical & Sanitary Report for the Year 1930, 1931*, HKGRO, 91-92.

²⁴⁵ A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1931, 1932*, HKGRO, 90; Yip, "Colonialism, Disease and Public Health," 21-22. Jackson's report for the year, however, only specifically noted the popular interest evinced in the Bureau's efforts to catch adult mosquitoes in houses at Tai Koo (Hong Kong Island) and Wong Chuk Hang (northern Kowloon). Wellington, *Medical & Sanitary Report for the Year 1931, 1932*, HKGRO, 107-108.

²⁴⁶ Wellington, *Medical & Sanitary Report for the Year 1930, 1931*, HKGRO, 89.

²⁴⁷ *Ibid.*, 34.

²⁴⁸ Wellington, *Medical & Sanitary Report for the Year 1931, 1932*, HKGRO, 108; A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1932, 1933*, HKGRO, 139-140; A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 159-160.

²⁴⁹ Wellington, *Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 137. Members of the Royal Army Medical Corps were similarly instructed in 'mosquitology'. Wellington, *Medical & Sanitary Report for the Year 1931, 1932*, HKGRO, 108; Wellington, *Medical & Sanitary Report for the Year 1932, 1933*, HKGRO, 139-140; Wellington, *Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 159-160.

²⁵⁰ Wellington, *Medical & Sanitary Report for the Year 1932, 1933*, 139.

²⁵¹ *Culex jacksoni*, *Uranotaenia jacksoni*, *Ficalbia jacksoni*. F. W. Edwards, "Mosquito Notes – XII," *Bulletin of Entomological Research* 26, no. 2 (1935): 127-136, 130-31; P. F. Mattingly, "*Ficalbia (Ficalbia) Jacksoni* SP. N., A New Species of Mosquito (Diptera, Culicidae) from Hong-Kong," *Proceedings of the Royal Entomological Society of London Series B. Taxonomy* 19, nos. 1-2 (1949): 9-11. For the known species that the Malaria Bureau identified for the first time see the Malaria Bureau's annual reports.

The colony's Malaria Bureau increasingly exchanged specimens, images and ideas with malariologists and medical entomologists throughout East and South-east Asia as well as India and Great Britain.²⁵² For instance the Bureau exchanged specimens with Dr. Hu in Nanjing, Dr. L. C. Feng of the Peiping Union Medical College, Dr. Li of the Bureau of Entomology in Hangzhou and Dr. Dunscombe of the International Settlement's Public Health Department – all of whom will be discussed in greater detail in the next chapter. Jackson also shared his investigations with his foreign and Chinese colleagues in East Asia through *The Chinese Medical Journal* and at conferences such as the ninth congress of the Far Eastern Association of Tropical Medicine (Nanjing, 1934).²⁵³

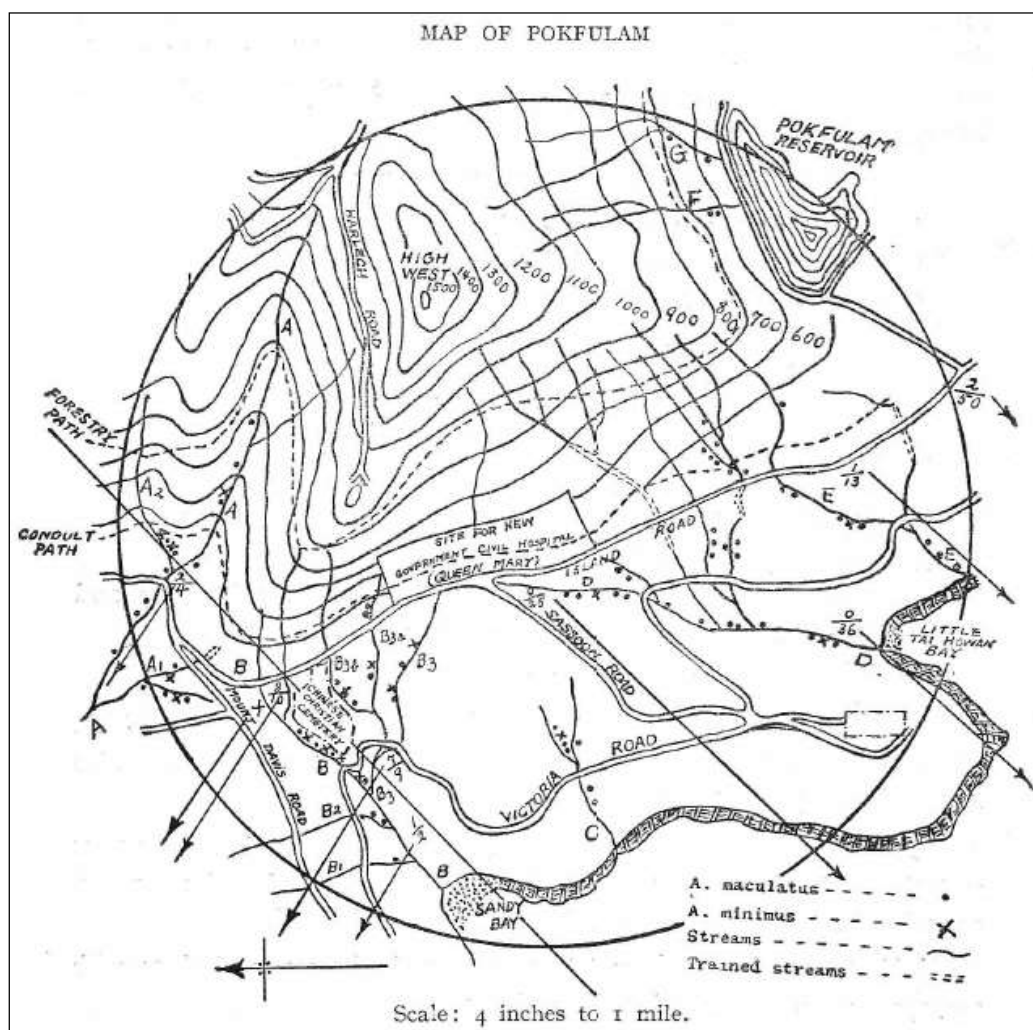
Jackson's and Deb's Malayan experiences profoundly impacted upon the colony's management of malaria in the final decade before the outbreak of war in the Pacific. The Bureau's early investigations, for instance, repudiated a widespread belief that had prevailed in the colony since the 19th century by demonstrating that "as in Malaya and the Philippines paddy fields and large wet areas on the flat are more or less harmless".²⁵⁴ The two men introduced a concept pioneered by Watson in Malaya and Swellengrebel in the Netherlands East Indies in the late 1910s: species sanitation. This approach focused on breaking the cycle of transmission by targeting the breeding sites of the specific mosquito population that was responsible for infecting human populations in a particular area. The key to identifying these sites consisted in collecting and dissecting mosquito specimens for malaria parasites and plotting this data alongside data from the spleen censuses and blood surveys.²⁵⁵ For example this approach enabled the Bureau to demonstrate that the abundance of *A. maculatus*, a malaria-carrying species, in the vicinity of the Queen Mary Hospital construction site *did not* pose a threat to the coolie workforce precisely because this particular mosquito population was not infected with the malaria parasite (map 11). Until now, no historian has acknowledged the introduction of this fundamentally different approach to malaria prevention.

²⁵² The Bureau exchanged specimens and images with officials in Shanghai, Nanjing, Hangzhou, Beijing, Canton, Manila, Singapore, Penang, Batavia, Saigon, Kasauli (India) and the Liverpool School of Tropical Medicine. Wellington, *Medical & Sanitary Report for the Year 1932*, 1933, 129; Wellington, *Medical & Sanitary Report for the Year 1933*, 1934, HKGRO, 142; Hong Kong Government, *Administrative Reports: Annual Medical Report for the Year ending 31st December, 1934*, 1935, HKGRO, 118-19; A. R. Wellington, *Administrative Reports: Medical & Sanitary Report for the Year 1935*, 1936, HKGRO, 127; Wellington, *Medical & Sanitary Report for the Year 1936*, 1937, HKGRO, 131.

²⁵³ R. B. Jackson, "The Anophelines of the Colony of Hongkong. Some Observations on their Species, their Habits, and on the Results obtained from Dissections of Catches made on the Island and Mainland", in *Transactions of the Ninth Congress, held in Nanking, China, October 2-8, 1934*, eds. Wu Lien-teh and Chang Yao vol. 2 (Nanjing: The National Health Administration, 1935), 27-36. Jackson also contributed articles in local journals, such as *The Caduceus* and *The Hong Kong Naturalist*, and published his own illustrated pamphlets. See Bibliography.

²⁵⁴ Wellington, *Medical & Sanitary Report for the Year 1931*, 1932, HKGRO, 27.

²⁵⁵ See Alfons Labisch, "Species sanitation of malaria in the Netherlands East Indies (1913 – 1942) – an example of applied medical history," *Michael Quarterly*, no. 7 (2010): 296-306; Iqbal R. F. Elyazar, Simon Hay and J. Kevin Baird, "Malaria Distribution, Prevalence, Drug Resistance and Control in Indonesia," in *Advances in Parasitology*, eds. D. Rollinson and S.I. Hay, vol.74 (London: Elsevier, 2011), 79-80.



Map 11. The Site of the Queen Mary Hospital at Pokfulam, ca. 1935.

The circle was divided into two segments. The lower left-hand segment

"A line has been drawn on the map from Sandy Bay to the Conduit and Forestry Paths, dividing the circle into a small and a large segment. In the small segment (the lower left-hand corner), 26 children were examined, of these 19 had enlarged spleens, 73 per cent. In the large segment, 124 children were examined, 3 of whom had enlarged spleens, 2.3 per cent."²⁵⁶

The Bureau's campaign to control malaria during the construction of the Shing Mun Dam in the New Territories was another prime example of this Malayan approach. The Bureau was called in to assess the prospective location of the coolie camp in November 1932 following an outbreak of malaria amongst the coolies working on the access road.²⁵⁷ A preliminary survey identified numerous potential and existing breeding grounds for malaria-carrying species such as *A. minimus*, *A. jeyporiensis* and *A. maculatus*, whilst a spleen census and blood examinations revealed that malaria was prevalent in the neighbouring village of Wo Yi Hop.

²⁵⁶ R. B. Jackson, "Investigations into the Habits and Pathogenicity of the Anophelines met with in Two Localities in Hong Kong during 1931-35," *Chinese Medical Journal* 50 (1936): 1098-1113, 1100-1101.

²⁵⁷ Wellington, *Medical & Sanitary Report for the Year 1932, 1933*, HKGRO, 134, 136; Wellington, *Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 150, 153.

Wellington and the Malaria Bureau devised a sophisticated anti-malaria campaign centred on the coolie accommodation lines by drawing on their knowledge of malaria control in south-east Asia:

As little was known of the power of flight of the local anophelines it was deemed wise to commence anti-larval measures at the centre or lines site spreading out concentrically until such a distance had been reached as would be sufficient to prevent access to the lines from the breeding places under normal flight conditions. Experience in Malaya had shown the margin of safety for that country to be half a mile and it was hoped that in Hong Kong this distance or less would prove sufficient.²⁵⁸

From the outset Wellington made the Medical Department and the Bureau responsible for the “medical and entomological side of the problem”, and he delegated the responsibility for overseeing the permanent sanitary and drainage works to “an engineer who had had many years experience [*sic*] in Malaya”.²⁵⁹ The Bureau’s comprehensive anti-malaria operations at Shing Mun included the regular analysis of adult and larval mosquitoes specimens and the oiling of breeding pools by a small gang of coolies under the supervision of the Assistant Malariologist “who had had a good deal of experience of this work as Health Inspector of Malaya”.²⁶⁰ The Bureau decided against drug prophylaxis “owing to opposition on the part of the labourers and the difficulty of checking individuals under the contract system”.²⁶¹ This strategy, which was the polar opposite of that employed during the construction of the Kowloon-Canton railway, exemplified the colony’s new environmental approach to the management of the disease. The authorities gradually extended the radius of these operations through 1935 (map 12).²⁶² By May 1936 *The Hongkong Telegraph* triumphantly reported: ‘Malaria Conquered at Dam Site’.²⁶³

²⁵⁸ Wellington, *Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 118.

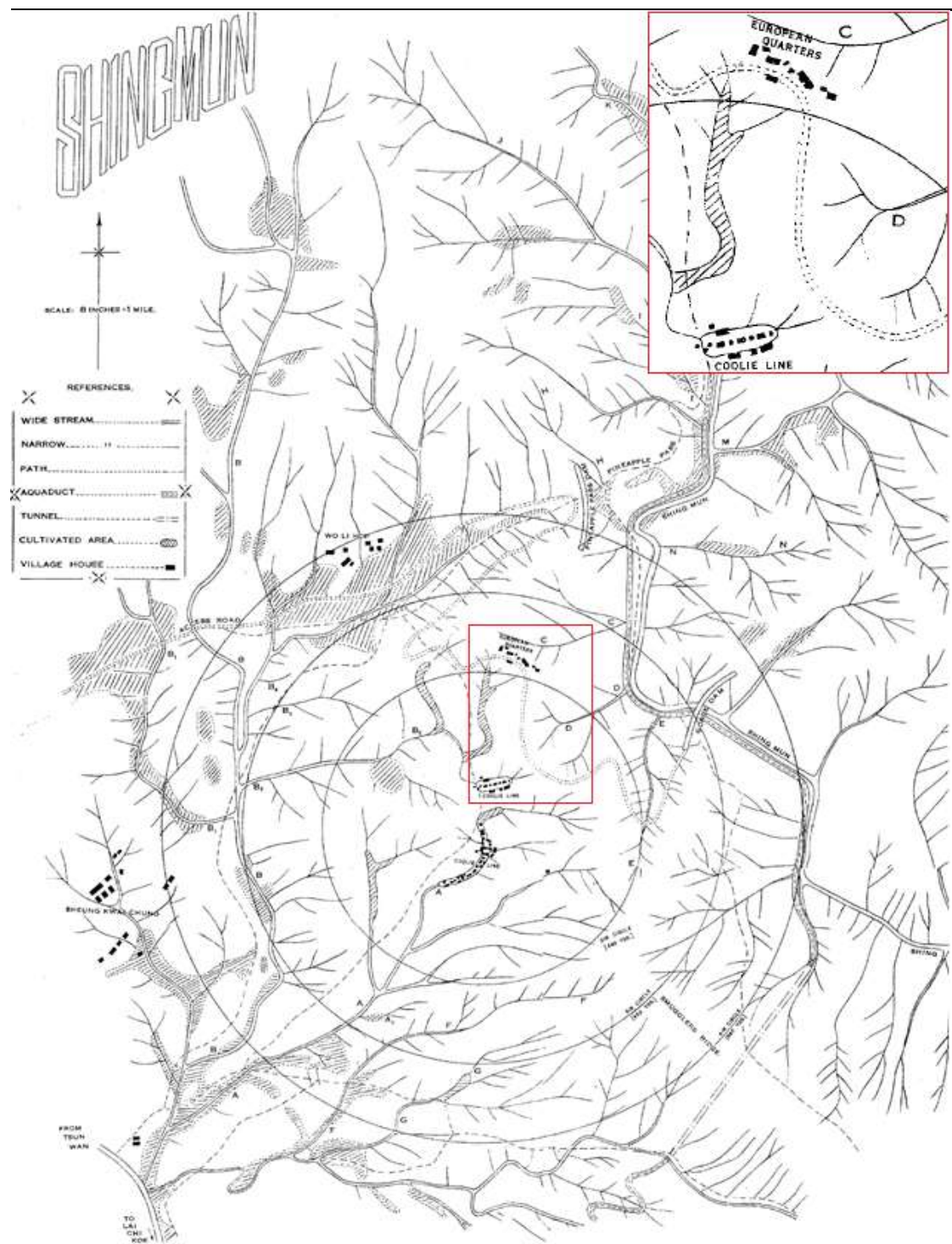
²⁵⁹ Wellington, *Medical & Sanitary Report for the Year 1932, 1933*, HKGRO, 109; Wellington, *Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 115.

²⁶⁰ Wellington, *Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 152-157, 153. The initial gang of 6 coolies was later expanded to 10.

²⁶¹ *Hong Kong Hansard*, Oct. 12, 1933, HKGRO, 129.

²⁶² Wellington, *Medical & Sanitary Report for the Year 1933, 1934*, HKGRO, 119-120, 147-57; Hong Kong Government, *Annual Medical Report for the Year ending 31st December, 1934, 1935* 123-129; Wellington, *Medical & Sanitary Report for the Year 1935, 1936*, HKGRO, 142-150; Wellington, *Medical & Sanitary Report for the Year 1936, 1937*, HKGRO, 138-143.

²⁶³ “Shing Mun Reservoir: Malaria Conquered at Dam Site,” *Hongkong Telegraph*, May 19, 1936, 7.



Map 12. The Malaria Bureau's Operations during the Construction of the Shing Mun Reservoir, *ca.* 1933.²⁶⁴

Whereas the colonial authorities had previously opposed expensive anti-malaria campaigns, they now wholeheartedly endorsed the provision of \$150,000 towards the

²⁶⁴ Wellington, *Medical & Sanitary Report for the Year 1933*, 1934, HKGRO, 186.

Bureau's efforts in general, and the campaign at Shing Mun in particular.²⁶⁵ Malaria was seen as a major impediment to, rather than an unfortunate and unavoidable consequence of, the colony's urban expansion. A member of the Urban Council, for instance, was concerned that the provision of \$60,000 for anti-malaria works for 1935 was insufficient:

Rate-payers will be interested to have the expert opinion of the Director of Medical and Sanitary Services whether the allocation for anti-malarial works properly so-called is not an amount just sufficient to tinker with the malaria problem in the Colony....Development of the popular Castle Peak district [in the New Territories] for residential purposes, which has started in real earnest, is actually retarded through indifference in the adoption of measures for combatting the malaria scourge in this beautiful district of the New Territories.²⁶⁶

The following year he complained that the prevalence of mosquitoes in a residential district in Kowloon endangered the district's families. The Colonial Secretary reassured him that the area would not be neglected.²⁶⁷

Post-1941

The Malaria Bureau's wartime activities never fully recovered from the initial disruption caused by the Japanese invasion of Hong Kong. After the war Dr. Selwyn-Clarke, who succeeded Wellington as the Director of Medical Services in 1938, reported that six weeks elapsed before the Japanese occupying forces could be "persuaded" to allow the Bureau to resume its duties.²⁶⁸ Moreover the Bureau's reduced staff was "seriously handicapped owing to the fact that the Japanese made it very difficult for anti-malarial aid or the necessary tools to be secured".²⁶⁹ The Bureau nevertheless did its best to focus on the "areas likely to affect the various internment camps and hospitals".²⁷⁰ Dr. J. B. Mackie, who succeeded Jackson as the Government Malariologist in the late 1930s, was not immediately interned along with the rest of the colony's Allied personnel in February 1942. Instead he and a handful of the Chinese Inspectors remained at their posts, though "they were able to achieve very little because of the failure of the Japanese to supply oil, etc.". ²⁷¹ The fact that Mackie was not immediately interned highlights the fact that the Japanese authorities preserved some of the colony's existing medical policies, specifically those that related to the management of diseases that were deemed a threat to the Japanese occupying forces.

Mackie actually continued his work as best he could even when he was confined within the Stanley PoW Camp. As Selwyn-Clarke's deputy later noted, "the old cemetery inside Stanley Camp was a grim reminder of the results of uncontrolled malaria" during the earliest

²⁶⁵ *Hong Kong Hansard*, Oct. 1, 1931, HKGRO, 124-125.

²⁶⁶ *Hong Kong Hansard*, Sept. 27, 1934, HKGRO, 168.

²⁶⁷ *Hong Kong Hansard*, Oct. 3, 1935, HKGRO, 195-196, 202-203.

²⁶⁸ P. S. Selwyn-Clarke, *Report on Medical and Health Conditions in Hong Kong. For the period 1st January, 1942 – 31st August, 1945* (London: His Majesty's Stationary Office, 1946), 11.

²⁶⁹ *Ibid.*, 11.

²⁷⁰ *Ibid.*, 11.

²⁷¹ *Ibid.*, 11.

decades of settlement.²⁷² An “anti-malarial gang” was organised and intermittently permitted to tackle the dangerous breeding grounds that lay just beyond the camp’s boundary.²⁷³ Friction between the camp authorities and the “Gendarmerie post” just outside the camp and the camp’s progressive reduction in size – a measure of collective punishment imposed by the Japanese authorities – seriously hampered the gang’s activities.²⁷⁴ Consequently the reported incidence of the disease amongst the camps inmates was high, peaking at 331 cases in 1943. Selwyn-Clarke’s deputy concluded:

While we must consider ourselves fortunate in being granted such facilities as were allowed for anti-malarial work around the camp, and in the results obtained, a large amount of sickness, discomfort and anxiety could have been prevented if the Japanese authorities had been more responsive to our insistent requests for freedom to carry on regular control measures over the entire area affecting the camp.²⁷⁵

Mackie was amongst those who survived the ordeal of imprisonment, and he promptly returned to his anti-malarial duties on his release.²⁷⁶

Conclusion

This chapter explored the colonial management of malaria during the late 19th and early 20th centuries. Whereas the colony’s management of leprosy focused principally upon Chinese bodies, the management of malaria focused primarily on improving the inhabited environment. The colony confined its efforts principally to the protection of the main urban settlement on Hong Kong Island, and the prophylactic preservation of the sinews of the state in the New Territories. Only the transfer of expert malariologists from Malaya in the 1930s prompted the extension of Hong Kong’s malaria prevention program throughout the colony. As we shall see in the next chapter, the International Settlement’s anti-malaria campaigns lagged behind Hong Kong’s in scope and sophistication well into the 20th century. But we shall also see how the Settlement overtook Hong Kong in terms of local technical innovation and trans-national co-operation in the decades immediately before the war.

²⁷² Selwyn-Clarke, *Report on Medical and Health Conditions*, 11, 32. Emerson reprinted much of Stanley’s report. Geoffrey Charles Emerson, *Hong Kong Internment, 1942-1945: Life in the Japanese Civilian Camp at Stanley* (Hong Kong: Hong Kong University Press, 2008), 107-9.

²⁷³ Selwyn-Clarke, *Report on Medical and Health Conditions*, 32.

²⁷⁴ *Ibid.*, 24, 32.

²⁷⁵ *Ibid.*, 32.

²⁷⁶ *Ibid.*, 11. See for instance Mackie to Col. F. R. Fehily, A.D.M.S, 16 Oct. 1945, HKPRO, HKRS146/1/1.

Chapter 5: Malaria in the International Settlement of Shanghai

The Settlement's efforts to tackle malaria complicate modern interpretations of Imperial disease prevention in East Asia. The disease's scarcity at the turn of the century greatly facilitated the Settlement's receptiveness to new aetiological theories, especially compared to the last chapter's analysis of the diffusion of these ideas to Hong Kong. The Settlement's management of the disease lagged far behind Hong Kong, and much of the British Empire, during this period. Only a desire not to be outdone by the French Concession finally prompted the initiation of a systematic seasonal anti-mosquito campaign in 1909. But whereas the colonial authorities in Hong Kong actively opposed any extension of its anti-malaria work to the colony's rural hinterland through the 1920s, the Settlement's Public Health Department actively responded to the emergence of malaria as a public health issue by targeting breeding sites beyond its borders. The Settlement's strategy was thus the polar opposite to Hong Kong's enclavist management of the disease. The lands to the north-east and more especially to the west of the Settlement became sites of intense negotiation and contestation that profoundly impacted upon the Shanghai Municipal Council's perception of the Chinese municipal authorities and on the Public Health Department's willingness to support those medical institutions, such as the Henry Lester Institute, that straddled both municipalities. The outbreak of the Sino-Japanese war reframed and intensified the context in which these negotiations took place. The Settlement's management of malaria thus provides insights into the complex interaction between colonialism and medical practices in East Asia.

The Malaria Mosquito Theory

Like Hong Kong, early Shanghai was renowned for the prevalence of locally-distinctive febrile diseases. But whereas 'Hong Kong fever' referred primarily to malaria, the term 'Shanghai fever' embraced enteric and typhoid fevers.¹ Malaria was nevertheless a concern. Dr. Alexander Jamieson, the medical officer of the Chinese Maritime Customs Service who responded to Cantlie's questionnaire on leprosy, reported in the 1870s that:

The Shanghai district is ... to be qualified as 'malarious', the convenient term 'malaria' being used to designate the mass of describable and indescribable conditions which prevail in the neighbourhood of marshy lands, especially when these are subjected to powerful heat.²

Local commentators embraced the same miasmatic theories as their colonial brethren to the south.³ James Henderson of the London Missionary Society, for instance, advised Shanghai's foreign residents against exposing themselves to "malarious influences at night or early in the

¹¹ Kerrie L. A. MacPherson, *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893* (Hong Kong: Oxford University Press, 1987), 26; C. A. Gordon, (ed.), *An Epitome of the Reports of the Medical Officers to the Chinese Imperial Maritime Customs Service, from 1871 to 1882* (London: Ballière, Tindall, and Cox, 1884), 36-37.

² Alexander Jamieson, "Dr. Alexander Jamieson's Report on the Health of Shanghai for the half year ended 30th September, 1871," *Customs Gazette, Medical Reports* 11, no. 6 (Sept. 1871): 33.

³ See for example James Henderson, *Shanghai Hygiene; or, Hints for the Preservation of Health in China*. Shanghai: Presbyterian Mission Press, 1863), 81-83.

morning”.⁴ Edward Henderson, the International Settlement’s Health Officer from the late 1860s until the late 1890s, reported that he and his colleagues believed that the inhalation of poisonous miasmas, released from the soil under the combined effects of temperature and moisture, was responsible for the outbreak of malarial symptoms.⁵ The limited prevalence of the disease, however, informed the local specificity of these theories. None of the theories espoused in Shanghai highlighted a particular local geological or topographical feature as a predisposing cause in the way that commentators in Hong Kong emphasised the miasmatic dangers of disintegrating granite.

The Settlement’s medical men became increasingly aware of new ideas regarding the cause and transmission of the disease during the late 19th century through a variety of overlapping regional and imperial scientific networks. As corresponding members of Hong Kong’s Medical Society, Shanghai’s foreign physicians would have been privy to its discussions about malaria.⁶ Locally-available journals also occasionally reviewed the society’s meetings. For instance *The China Medical Missionary Journal*, which was published in Shanghai, summarised the reception of Hartigan’s paper on an epidemic in Hong Kong in the late 1890s.⁷ The Chinese Maritime Customs Service also provided a network for the dissemination of medical knowledge. Jamieson, for instance, avidly followed the research of his colleague Manson in Amoy:

There can be little doubt that we are already within sight of a new and scientific general pathology whose foundations will have been laid in those investigations into the history of blood parasites and of aerial soil and germs which are ardently being pursued all over the world, and in China notably by Manson of Amoy.⁸

The new theories regarding the mosquito-borne transmission of the disease were disseminated to Shanghai’s foreign medical and lay communities through a variety of mediums. International periodicals and newspapers provided an important avenue for the circulation of scientific theories and medical research. In a letter to a local newspaper one resident, for instance, cited articles about Manson’s and Ross’s work that had appeared in the *Journal of the Royal Colonial Institute*, *The Nineteenth century and after: a monthly review* and *The Times*.⁹ The International Settlement’s medical men also encountered these new theories

⁴ Henderson, *Shanghai Hygiene*, 83.

⁵ “A Discussion on Malaria and its Prevention,” *British Medical Journal*, Sept. 14, 1901, 690. Dr. E. Henderson was not related to James Henderson.

⁶ In 1889 three of the society’s seventeen corresponding members hailed from Shanghai, including Jamieson. G. P. Jordan, P. Manson and J. C. Thomson, eds., *Transactions of the Hongkong Medical Society. Papers and Cases Read during the First Two Years of the Society’s existence*, vol. 1 (Hong Kong: Kelly and Walsh, 1889). v.

⁷ “Hongkong and China Branch of the British Medical Association,” *China Medical Missionary Journal* 10, nos. 1-2 (1896): 52-53.

⁸ Alexander Jamieson, “Dr. Alexander Jamieson’s Report on the Health of Shanghai for the Half-year ended 30th September 1880,” *Imperial Maritime Customs, Medical Reports* 2, no.20 (1881): 33-34.

⁹ Layman [pseud.], letter to the editor, *North-China Daily News*, May 26, 1900, 3. This letter was reprinted in Layman [pseud.], letter to the editor, *North-China Herald and Supreme Court & Consular Gazette*, May 30, 1900, 983-984. See also “Mosquitoes and Malaria,” *North-China Daily News*, May 10, 1900, 3.

at international medical conferences. The British Medical Association's annual meetings, for example, would certainly have provided Henderson, the Settlement's Health Officer, with an opportunity to discuss the vectoral transmission of the disease.¹⁰

Dr. Arthur Stanley, Henderson's successor, only appears to have given credence to the mosquito-borne transmission of the disease in early 1900. Whereas his report for 1898 did not even discuss the incidence of the disease, let alone mention such a ground-breaking idea, his report for 1899 (which was written early the following year) briefly suggested that *Anopheles* mosquitoes were "the probable means of conveying Malaria to man".¹¹ The following year he declared, "Considerable improvement in Public Health can be effected by taking advantage of the recent discoveries concerning the nature of the mosquito to the disease, now a ground fact of Nature".¹² Interestingly the text on malaria prevention from this report was appended by hand to the original three-line printed entry in the *Annual Report* for 1899, i.e. the report that tentatively suggested that mosquitoes were the "probable" means of transmission.¹³ None of Stanley's other *Annual Reports* were updated in this manner. What prompted this unique addendum? The shift in the strength of Stanley's support for the new theory is suggestive: the rapid growth of international support for the new theory may compelled Stanley to revise the earlier report shortly after it went to press.

The contrast between Shanghai's relatively swift acceptance of the mosquito-borne transmission of malaria and the intense debates that the new theories sparked in Hong Kong is striking. I conducted a detailed analysis of *The North-China Daily News* (N.C.D.N.), a local daily newspaper, and *The North-China Herald* (N.C.H.), a local weekly, but was unable to find any indication that the general public in the International Settlement vigorously opposed the new theories. On the contrary. For instance a correspondent using the pseudonym 'Layman' was pleased to read a leading article on 'Mosquitoes and Malaria' in *The North-China Daily News* and considered that "all who live in malarial climes must be most grateful to [Drs. Ross

¹⁰ Henderson discussed his experiences of sprue and psoriasis at the 67th annual meeting (Portsmouth, 1899). He subsequently attended the 68th (Ipswich, 1900), 69th (Cheltenham, 1901) and 70th (Manchester, 1902) annual meetings. "A Discussion on Psoriasis or Sprue: Its Relation (Etiological and Pathological) to other forms of Tropical Diarrhoea and its Treatment," *British Medical Journal*, Sept. 9, 1899, 637-642, 638. "A Discussion on the Treatment of Malaria by Quinine," *British Medical Journal*, Sept. 1, 1900, 529-533, 533; "A Discussion on Malaria and its Prevention," *British Medical Journal*, Sept. 14, 1901, 680-690, 689; Edward Henderson, "Heat Apoplexy," *British Medical Journal*, Sept. 2, 1902, 854.

¹¹ Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1898*, (Shanghai: Kelly & Walsh, 1899), Shanghai Municipal Archives (hereafter SMA), U1/16/4650, 18; Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1899* (Shanghai: Kelly & Walsh, 1900), SMA, U1/16/4650, 23. Stanley wrote the latter report early in 1900. Born in Suffolk in 1868, Stanley became an MD and was awarded his diploma in public health in 1897. Macpherson, *Wilderness of Marshes*, 293n47.

¹² Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1900* (Shanghai: Kelly & Walsh, 1901), SMA, U1/16/4650, 23.

¹³ The only part of the handwritten text that was not reprinted was a reference to the use of mosquito curtains as "an excellent protection against miasmatic exhalations" in Henry Morton Stanley's *In darkest Africa* (1890): "a very interesting example of practice ahead of theory". Stanley, *Annual Report 1899*, SMA, U1-16-4650, 23.

and Manson] for their experiments and discoveries".¹⁴ The only debates that the local press reported on were precisely those that were taking place in Hong Kong.¹⁵ Both the *N.C.D.N.* and the *N.C.H.* even reprinted Dolly's satirical poem, "Hearty Gun's Warning".¹⁶ This is not to say that everyone in the International Settlement readily accepted the mosquito-borne transmission of the disease. But the contrast with Hong Kong's intense, prolonged and vocal debates is extremely striking. Arguably malaria was less prevalent in Shanghai than in Hong Kong during the century, and was therefore less of a concern to the medical community and for the population at large. As such, the new theory may have seemed less controversial than it did in Hong Kong where it confronted many strongly-held beliefs and personal experiences.

Vector-centred measures

During the early 20th century the Public Health Department's management of malaria, like its management of leprosy, remained extremely limited, especially compared to Hong Kong. The department focused primarily on the collection of mosquito specimens from all over the Settlement. The Settlement's Sanitary Inspectors systematically collected specimens on a weekly basis from all of the Settlement's health districts from 1901 onwards.¹⁷ Stanley took an especially keen interest in examining them.¹⁸ So too did other foreign physicians in Shanghai. In an article on the *Anopheles* species in Shanghai and Java, Dr. Thin noted that a Dr. Marshall of Shanghai kindly provided him with over 150 mosquito specimens.¹⁹ Some of the early specimens were sent to the British Museum for positive identification.²⁰ These collections revealed that malaria-carrying *Anopheles* species were rare in the Settlement: only 34 of the 13,000 mosquitoes collected between 1903 and 1906 were *Anopheles sinensis*.²¹

¹⁴ Layman [pseud.], letter to the editor, *North-China Daily News*, May 26, 1900, 3; "Mosquitoes and Malaria," *North-China Daily News*, May 10, 1900, 3. Both the article and the letter were reprinted in *The North-China Herald*.

¹⁵ See for instance "Notes from the South," *North-China Herald*, Nov. 7, 1900, 983-984; "Notes from the South," *North-China Herald*, Dec. 19, 1900, 1297-1298; "Notes from the South," *North-China Herald*, Apr. 17, 1901, 740-741.

¹⁶ "Hearty Gun's Warning," *North-China Daily News*, Apr. 18, 1901, 3; "Hearty Gun's Warning," *North-China Herald*, Apr. 24, 1901, 802.

¹⁷ Stanley, *Annual Report 1900*, SMA, U1-16-4650, 25-26; Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1901* (Shanghai: Kelly & Walsh, 1902), SMA, U1-16-465031-32.

¹⁸ See for instance Stanley, *Annual Report 1899*, SMA, U1-16-4650, 22-23; Stanley, *Annual Report 1900*, SMA, U1-16-4650, 25-26.

¹⁹ The timing of Dr. Thin's article suggests that Marshall probably collected the specimens in 1899, just as the local interest in the new theory was emerging. George Thin, "A Note on Species of *Anopheles* Found amongst Mosquitos sent from Shanghai and Java," *British Medical Journal*, Feb. 10, 1900, 307-308.

²⁰ Stanley, *Annual Report 1901*, SMA, U1/16/4650, 32.

²¹ Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1903* (Shanghai: Kelly & Walsh, 1904), SMA, U1-16-4650, 27; Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1904*, (Shanghai: Kelly & Walsh, 1905), SMA, U1/16/4650, 30; Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1905* (Shanghai: Kelly & Walsh, 1906), SMA, U1-16-4650, 32; Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1906* (Shanghai: Kelly & Walsh, 1907), SMA, U1-16-4650, 33.

Instead a number of other species were identified including *Stegomyia scutellaris*, the carrier of Yellow fever (though the disease itself was not prevalent in the region).²² Every annual *Health Report* from 1900 through 1921 included a brief summary detailing the different species that were identified.²³ Unlike Hong Kong, no 'new' species were 'discovered'. Nevertheless these mosquito collections represented an important contribution towards the development of local and global (medical) entomology.

The limited prevalence of both the disease and its vector informed the Health Department's management of malaria. The department initially limited itself to abolishing breeding sites, either through small-scale drainage operations or by filling-in ponds and ditches.²⁴ The Settlement placed a much greater emphasis on the importance of domestic prophylactic measures:

It may be subject for congratulation that while in Hongkong the *Anopheles Costalis* and *Minimus* occur as well as the *Sinensis* and the dangerous *Anopheles form* 3% of the mosquitoes, in Shanghai 1% only occur. Their presence however demonstrates the possibility of infection within the Settlement by means of mosquitoes infected with Malaria, and every effort should be made by households to do away with all receptacles of stagnant water, where mosquitoes breed, such as ponds, water-plants, aquaria [*sic*], drains out of repair, abandoned tubs, pots, tins and what not.²⁵

The annual reports advised householders to eliminate receptacles that might serve as breeding grounds; to assiduously use mosquito nets "especially in up-country houseboat trips"; and to isolate those suffering with malaria under mosquito nets.²⁶ Indeed it was not until 1909 that Stanley conceded that, "in the matter of mosquito extermination there seems to be a general desire for something more than the plodding work of the last ten years".²⁷ In the meantime the colonial authorities in Hong Kong had trained many of Victoria's nullahs, devised a prophylactic regime for the police and railway staff in the New Territories, distributed public health propaganda, introduced tropical hygiene into the local curricula and established a 2,000 acre European reservation in northern Kowloon.

The French Concession's experimental anti-larval campaign was largely responsible for prompting Stanley's comments and his overhaul of the Settlement's anti-malaria initiatives. The French Municipal Council inaugurated an anti-mosquito campaign focusing on the cleaning and draining of creeks and ponds, and the treatment of standing water with

²² See for example Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1907* (Shanghai: Kelly & Walsh, 1908), SMA, U1-16-4651, 18.

²³ Apart from the first two reports, these entries were brief and largely formulaic. Only the reports for the years from 1901 through 1906 included any indication about the number of specimens examined.

²⁴ Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1909*, (Shanghai: Kelly & Walsh, 1910), SMA, U1-16-4651, 32.

²⁵ Stanley, *Annual Report 1901*, SMA, U1-16-4650, 32.

²⁶ Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1902* (Shanghai: Kelly & Walsh, 1903), SMA, U1/16/4650, 34. This advice was reprinted in every annual report through 1921.

²⁷ Arthur Stanley, "Health Officer's Report for February," *Municipal Gazette*, Mar 20, 1909, 72.

kerosene in 1909. Word of the campaign soon spread to Hong Kong.²⁸ Many of Shanghai's residents hoped that the Settlement would emulate its French neighbour, particularly in light of the success of anti-malarial efforts abroad, principally in Port Ismailia, but also in Port Said, Panama, and Havana.²⁹ One local newspaper commented that "experience in Port Said, therefore, clearly shows that even small localities in a populated area may be practically freed from the mosquito pest by energetic measures".³⁰ Another wondered whether the Public Health Department might not benefit from the expertise of one of the Port's trained sanitary inspectors.³¹ Stanley recommended adopting Ross's approach by deploying "mosquito brigades" in each of the Settlement's four districts.³² Each brigade –consisting of two foreign policemen and five coolies – would be responsible for carrying out weekly inspections and treating accumulations of stagnant water with basic oiling apparatus under the supervision of a foreign sanitary inspector.³³ The immediate implementation of Stanley's proposal was considered a matter of pride as well as sound policy:

If the experiment [i.e. Stanley's trial 'mosquito brigades'] be postponed for a year or two, it will be hard to re-awaken the present interest and enthusiasm. Moreover campaigns have just been inaugurated in the French Concession and in Hankow. The Model Settlement is not usually backward in adopting modern methods for improving the health and comfort of its residents. Is it possible that it is going to lag behind in the matter of mosquito-extermination?³⁴

The 'brigades' eventually began operating in the April of that year, although Stanley was only able to secure the services of two foreign policemen to begin with.³⁵ The trial was brought to an end with the onset of winter. Despite the adverse effects of some unseasonably wet weather during the summer, the experiment was considered a success: Stanley optimistically

²⁸ "A Campaign Against Mosquitoes," *North-China Herald*, Feb. 20, 1909, 425-426; "Meeting: Anti-Mosquito Work in the French Concession," *North-China Herald*, May 15, 1909, 371-372. As the Chairman of the meeting noted, "If you have not been able to see how the work has been carried out, you must at any rate have been able to trace the smell, for we have heard it said on all sides that for the past few weeks the Concession has simply reeked with petroleum." "Meeting: Anti-Mosquito Work in the French Concession," *North-China Herald*, May 15, 1909, 372. For Hong Kong see "War Against the Mosquito," *Hongkong Telegraph*, May 29, 1909, 4. This article was largely the same as the *North-China Herald's* piece.

²⁹ "Mosquitoes in Shanghai," *North-China Herald*, Feb. 13, 1909, 387-388; "A Campaign Against Mosquitoes," *North-China Herald*, Feb. 20, 1909, 425-426; Edward S. Little, letter to the editor, *North-China Herald*, Feb. 20, 1909, 449; "Anti-Mosquito Campaigns," *North-China Herald*, Feb. 27, 1909, 528.

³⁰ "Mosquitoes in Shanghai," *North-China Herald*, Feb. 13, 1909, 388.

³¹ Maskee-To [i.e. 'Mosquito'] [pseud.], letter to the editor, *North-China Herald*, Feb. 27, 1909, 517.

³² Stanley, "Health Officer's Report for February," 73.

³³ The coolies were equipped with an oil can, a pail for holding oil, a garden syringe for spraying large pools, a broom and a spade. Stanley, *Annual Report 1909*, SMA, U1/16/4651, 32; "The Mosquito Campaign," *North-China Herald*, Nov. 13, 1909, 372.

³⁴ Stanley, "Health Officer's Report for February," 73.

³⁵ Minutes of the Health Committee Meeting, Apr. 20, 1909, SMA, U1/16/9, 19.

claimed the trial had reduced the number of mosquitoes by “25% to 75%” – an incredibly broad estimate.³⁶

Stanley nevertheless identified a number of shortcomings in the trial. For instance the policemen, who had been drafted in owing to the heavy plague-prevention workload of the department’s staff, were, for the most part, considered insufficiently thorough or enthusiastic. He hoped to replace them with two specially-trained assistant sanitary inspectors. Stanley was particularly scathing of the Chinese coolies, whom he had reluctantly allowed to work in pairs. He complained that “coolies working alone do not like to appear a source of annoyance to householders by too diligently searching their houses for larvae”.³⁷ He recommended that a “good class of coolie” be secured for the following year, and that their daily operations should be clearly defined. He advised his staff to provide the coolies with detailed instructions about the locations of all stagnant bodies of water, especially “those places which are likely to be beyond a coolie’s intelligence to think of or beyond his courage to enter”.³⁸ Stanley was similarly disparaging of the attitude of the Chinese population in general, noting that they looked upon the trial as “fool pidgin”.³⁹ He hoped to erode this apathy by tasking the Sanitary Inspectors to deliver roadside lectures and practical demonstrations in Chinese.⁴⁰ His department also drafted specific instructions for domestic prophylaxis in the form of a ‘Mosquito Notice’, which was modelled on a notice used by the health department in Stamford, Connecticut.⁴¹ Many within the Settlement echoed the Health Officer’s opinions about Chinese apathy towards the campaign. But they did not share Stanley’s optimism, arguing that only a municipal bye-law would force the Chinese population to participate actively.⁴² Nevertheless they were eager for the campaign to be repeated the following year.⁴³

The trial of 1909 marked a turning point in the Settlement’s efforts to eradicate the disease. Stanley’s modifications established the format for the Settlement’s annual summer anti-malarial campaigns through to the early 1920s. Aside from reducing the extent of anti-larval oiling measures in favour of drainage or filling-in operations, very few changes were made during the following decade. Indeed the entry on the Settlement’s summer campaign in the *Annual Report* for the year 1910 was reprinted every year through 1921 with only slight

³⁶ Stanley, *Annual Report 1909*, SMA, U1/16/4651, 32; “The Mosquito Campaign,” *North-China Herald*, Nov. 13, 1909, 372. He repeated this claim in the *Annual Reports* for 1910, 1911 and 1912.

³⁷ *Ibid.*, 32.

³⁸ *Ibid.*, 32.

³⁹ *Ibid.*, 32.

⁴⁰ *Ibid.*, 32.

⁴¹ The Stamford notice had recently been publicised in the local English-language press. Stanley reprinted this notice in his annual report every year through 1921. *Ibid.*, 33; Mosquito Bitten [pseud.], letter to the editor, *North-China Herald*, Aug. 15, 1908, 414; “Mosquitoes!,” *North-China Herald*, Aug. 22, 1908, 485; Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1921* (Shanghai: Kelly & Walsh, 1922), SMA, U1/16/4653, 41.

⁴² “The Mosquito Campaign,” *North-China Herald*, Nov. 13, 1909, 372.

⁴³ Anti-Mosquito [pseud.], letter to the editor, *North-China Herald*, Mar. 25, 1910, 691; Impatient [pseud.], letter to the editor, *North-China Herald*, Apr. 1, 1910, 37; Bubbling Wellite [pseud.], letter to the editor, *North-China Herald*, Apr. 8, 1910, 85-86.

alterations. For instance the ‘Mosquito Extermination’ campaign was rebranded as a ‘Mosquito Reduction’ campaign; the department also abandoned the practice of publishing details about the acreage of water removed or treated (table 5.1).⁴⁴ These changes reflected the department’s realisation of the scale and complexity of the task at hand. Foreign malariologists nevertheless praised Stanley’s (and the Settlement’s) efforts. W. A. Lamborn of the Malaria Bureau in the Federated Malay States, for instance, reported that the Settlement’s anti-mosquito measures were “thoroughly carried out” though “the supineness of the Chinese authorities” of Greater Shanghai “enhanced” the difficulties of mosquito eradication.⁴⁵ As we shall see, the Settlement’s relationship with the city’s Chinese municipality profoundly impacted upon the former’s trans-municipal management of malaria. The Settlement’s reliance on ‘mosquito brigades’ represented a significant contrast to Hong Kong’s management of the disease. Firstly Shanghai’s approach encompassed the entirety of the territory under its jurisdiction, as opposed to Hong Kong’s prioritisation of the city of Victoria and the prophylactic protection of the colonial state in the New Territories. This contrast significantly impacted upon the expansion of both governments’ anti-malaria campaigns in the 1930s. Whereas Hong Kong contented itself with extending its efforts within its borders, the International Settlement increasingly managed the disease *beyond* its jurisdiction. Secondly Stanley’s brigades laid the foundations from which the Settlement’s Malaria Prevention Unit evolved in the 1930s. Without this legacy, the Settlement would most probably have resorted to importing foreign experts as Hong Kong did.

Table 5.7. Mosquito Extermination Work, 1909-11.⁴⁶

Year	Acres of stagnant waters removed on land	Acres of stagnant waters removed in and around houses	Acres of stagnant waters oiled weekly
1909	2,204	149,529	109,893
1910	26,736	170,623	17,000
1911	43,636	78,115	44,558

Breeding Pools and Legislation

C. Noel Davis’s appointment as Commissioner of Public Health in 1921 ushered in a new era of anti-malaria activity in the Settlement. He opened his first *Annual Report* by emphasising the “enormous economic significance” of public health measures, arguing that “the modern Public Health Department should be the most powerful and valuable force for individual and social good, and its efficiency the surest index of an enlightened and progressive

⁴⁴ Stanley, *Annual Report 1912*, SMA, U1/16/4651, 34.

⁴⁵ Lamborn conducted a survey into the prevalence of *Stegomyia fasciata*, the carrier of yellow fever, in three Japanese ports and two Chinese ones, including Shanghai. Although Stanley retired shortly before the survey took place his successor, Dr. C. Noel Davis, had not yet implemented any major changes to the Settlement’s anti-malaria campaign. W. A. Lamborn, “The Mosquitos of some Ports of China and Japan,” *Bulletin of Entomological Research* 12, no. 4 (1922): 403-404, 404.

⁴⁶ Data from Stanley’s annual reports for 1909 through 1911.

community”.⁴⁷ Though not a priority, he nevertheless considered mosquito prevention “an important problem from the point of view of health and comfort”, one that was rendered “peculiarly difficult” by Shanghai’s marshy alluvial topography.⁴⁸ As in previous years the sanitary inspectors collected mosquito specimens from all over the Settlement. But Davis extended the annual anti-mosquito campaigns over much larger areas of swampy land in the Eastern and Western Districts.⁴⁹ At the outset Davis identified two major challenges to the successful implementation of the department’s campaign. Firstly construction sites tended to promote mosquito breeding by inadvertently creating stagnant pools of water. Secondly the campaign faced opposition from within and without the Settlement. For example some of the Settlement’s Chinese population in the rural Western district actively opposed this campaign, whilst the “hostility of the native authorities” hampered the campaign along the edges of the Northern and Central Districts.⁵⁰ Davis also complained about the apathy of the Settlement’s foreign population.⁵¹

Faced with these two challenges, Davis called for an amendment to the Settlement’s building permits and the distribution of public health propaganda in the form of a municipal notice. Davis advised the Public Works Department to insert a clause into the building permit that instructed developers to prevent the formation of mosquito breeding sites.⁵² The Deputy Commissioner of Public Works initially dismissed this amendment as unnecessary, claiming that a bye-law already empowered the Public Health Department (P.H.D.) to take action against mosquito nuisances.⁵³ According to members of the department, however, the wording of the bye-law was too general and had rarely been used to prosecute offenders under Davis’s predecessor. One of the inspectors also noted that his mosquito brigade was powerless when it came to “wealthy ex-officials” and “influential foreigners” who refused access to their properties.⁵⁴ Davis eventually convinced the Commissioner of Public Works of the necessity of including the clause.⁵⁵ The Public Health Department also issued a municipal notification, in English, Japanese and Russian, stipulating that the presence of mosquito larvae in stagnant water constituted a nuisance.⁵⁶

The notification did little to solve the Health Department’s problems. The procedure under the bye-law was considered too cumbersome and time-consuming, and the notification

⁴⁷ C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1922* (Shanghai: Kelly & Walsh, 1923), SMA, U1/16/4653, 4.

⁴⁸ *Ibid.*, 6.

⁴⁹ *Ibid.*, 6, 46.

⁵⁰ *Ibid.*, 46.

⁵¹ *Ibid.*, 46. Although Stanley had only hinted at this foreign apathy, it certainly existed and was resented by some. Mosquito-Bitten [pseud.], letter to the editor, *North-China Herald*, July 1, 1911, 32; Scratching [pseud.], letter to the editor, *North-China Herald*, June 25, 1921, 893-894.

⁵² C. Noel Davis (C.P.H.) to Harpur (C.P.W.), 19 Jan. 1923, SMA, U1/14/2349, 2.

⁵³ (D.C.P.W.), to Davis, 26 Jan. 1923, SMA, U1/16/2693, 24.

⁵⁴ C. Hong (P.H.D.), 31 Jan. 1923, SMA, U1/16/2693, 5.

⁵⁵ Harpur to (Sec., S.M.C.), 17 Apr. 1923, SMA, U1/14/2349, 9.

⁵⁶ C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1923 (1924)*, SMA, U1-16-4653, 42. See also SMA, U1/16/2693, 7-11.

was “found to have no legal value”.⁵⁷ Wealthy Chinese residents, for instance, continued to refuse admittance to the department’s mosquito brigades. Davis lamented:

The breeding of mosquitoes within the Settlement must be an indictable offence before the mosquito is abolished. Until this is so we can only continue our present method of persuasion, tact and patient effort. This is slow, and expensive, an all good achieved may be undone by one recalcitrant householder.⁵⁸

Davis made similar complaints in his three subsequent *Annual Reports*.⁵⁹ The department was especially frustrated by its inability to tackle the environmental conditions beyond the Settlement’s borders.⁶⁰ No action could be taken, for example, in response to a complaint from a local resident about a mosquito-breeding creek because it lay beyond the Settlement’s limits, where the local villagers opposed the oiling of creeks.⁶¹ These conditions adversely affected the Settlement’s residents by promoting malaria and other contagious diseases.⁶² In a bid to improve the effectiveness of the Settlement’s anti-malarial campaign, responsibility for all creek cleansing and drainage operations was transferred to the Public Works Department in late 1927.⁶³ Ultimately the problem of mosquito breeding grounds beyond the Settlement’s borders soon emerged as a defining and controversial issue in the Settlement’s environmental management of the disease.

Davis’s department also innovated a new anti-mosquito measure: fish that fed on mosquito larvae. Stanley’s ‘Mosquito Notice’ had drawn the general public’s attention to the anti-malarial benefits of small fish in private ornamental ponds for over a decade.⁶⁴ But the department only began to conduct extensive experiments with different species of mosquito-eating fish under Davis.⁶⁵ Experiments with a batch of *Gambusia affinis* (‘Western Mosquitofish’) from the Bureau of Science in Manila, for instance, proved so successful that the P.H.D. ordered more.⁶⁶ The department hoped that by advertising the free distribution of these fish to owners of private ponds, *Gambusia affinis* and the ‘Henli’ minnow would make an important contribution towards the department’s annual anti-malarial campaign:

⁵⁷ (Actg. C.P.H.) to E. T. Maitland (Prosecuting Solicitor), 26 May 1924, SMA, U1/16/2693, 21; C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1924* (Shanghai: Kelly & Walsh, 1925), SMA, U1/16/4653, 44.

⁵⁸ Davis, *Annual Report 1924*, SMA, U1-16-4653, 45.

⁵⁹ C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1925* (Shanghai: Kelly & Walsh, 1926), SMA, U1/16/4653, 45; C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1926* (Shanghai: Kelly & Walsh, 1927), SMA, U1-16-4654, 68; C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1927* (Shanghai: Kelly & Walsh, 1928), SMA, U1-16-4654, 63.

⁶⁰ Meleney (P.H.D.), 26 May 1924, SMA, U1/16/2693, 20; Davis, *Annual Report 1924*, SMA, U1/16/4653, 44.

⁶¹ (D.C.P.W.) to P. W. Samman, 20 Apr. 1926, SMA, U1/14/2349, 97.

⁶² G. B. Marsh (P.H.D.) to H. Bland (P.H.D.), 1 Aug. 1926, SMA, U1/14/2349, 100.

⁶³ Bland to Davis, 11 Nov. 1927, SMA, U1/14/2349, 155.

⁶⁴ Stanley, *Annual Report 1909*, SMA, U1/16/4651, 33. This notice was reprinted verbatim in every *Annual Report* through 1921.

⁶⁵ Davis, *Annual Report 1923*, SMA, U1/16/4653, 42.

⁶⁶ Davis, *Annual Report 1924*, SMA, U1-16-4653, 44; Davis, *Annual Report 1925*, SMA, U1-16-4653, 45.

It is certain that such stocking of ponds will lead to increase in the comfort of householders and their neighbours by reducing somewhat the number of mosquitoes, though, as already noted, full public co-operation is needed to produce any marked reduction.⁶⁷

The department improved its breeding program, experimented with other species and increased its fish stocks with advice from the US Bureau of Fisheries and the Rockefeller Foundation.⁶⁸ In 1929, for instance, the department distributed 4,000 *Gambusia*, 14,000 local minnow and 300 Henli minnow.⁶⁹

Malaria and the Military

A surprise outbreak of malaria in 1927 amongst the troops stationed beyond the Settlement's borders profoundly impacted upon the geographical scope of the Settlement's management of the disease. An epidemic broke out amongst the Shanghai Defence Force, which was encamped near the Shanghai Golf Club in Hungjao some five miles to the west of the Settlement. The incidence of malaria rose at an alarming rate amongst both the British and Indian troops within months of the arrival of a contingent of Punjabi troops from Hong Kong and a Jhansi Brigade from India.⁷⁰ According to Lt. Col. MacArthur (R.A.M.C.), the troops stationed in Hungjao were forced to evacuate their camp because the medical authorities feared a "disaster".⁷¹ The outbreak revealed a startling local ignorance about the prevalence of the disease. Strikingly neither the military nor the civilian authorities were aware that malaria-carrying mosquitoes abounded along the western outskirts of the Settlement. Indeed in his report MacArthur stated that several medical and lay practitioners had assured him that malaria did not even exist in Shanghai. Moreover he was incredulous that the site at Hungjao had been selected for a military encampment in the first place given the prevalence of malaria-carrying *Anopheles hyrcanus*.⁷² Davis was perplexed by MacArthur's claims, particularly as his predecessor Stanley had highlighted the prevalence of the disease ever since the turn of the century.⁷³ Moreover Lamborn, the medical entomologist from the Federated Malay States

⁶⁷ C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1928*, (Shanghai: Kelly & Walsh, 1929), SMA, U1/16/4654, 67. Soochow Creek was nicknamed 'Henli' because it served as the Settlement's primary stretch of 'rowable' river. The buildings of the Shanghai Rowing Club, located on the Creek near the Garden Road Bridge (now known as the Waibaidu Bridge) and the creek's confluence with the Huangpu River, were restored in 2010.

⁶⁸ Davis, *Annual Report 1928*, SMA, U1/16/4654, 66; C. Noel Davis, *Shanghai Municipal Council. Public Health Department. Annual Report 1929* (Shanghai: Kelly & Walsh, 1930), SMA, U1/16/4655, 67; J. H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1931* (Shanghai: Kelly & Walsh, 1932), SMA, U1/16/4655, 63.

⁶⁹ Davis, *Annual Report 1928*, SMA, U1/16/4654, 66.

⁷⁰ Davis, *Annual Report 1927*, SMA, U1/16/4654, 23.

⁷¹ W. P. MacArthur, "The Adult Mosquitoes of Shanghai", ca. 1927, SMA, U1/16/2736, 3.

⁷² Ibid., 2-3; W. P. MacArthur, "The adult mosquitoes of Shanghai," *Journal of the Royal Army Medical Corps* 52, no. 4 (1929): 241-247.

⁷³ Davis to MacArthur, 3 June, 1929, SMA, U1/16/2739, 13.

who visited Shanghai in the early 1920s, had specifically identified the Settlement's outskirts as a major breeding site for this species.⁷⁴ MacArthur replied:

When at the beginning of the malaria outbreak, I told two practitioners of standing, known to you, that we had then thirty or forty men down with malaria they were dumbfounded, and argued that the troops had brought the malaria into Shanghai....My recollection is that the outbreak caused general surprise, and I cannot remember that anyone said, "Well, what else did you expect?"⁷⁵

The tone of Davis's entry on 'Mosquito Reduction' in the *Annual Report* for 1929, his last as Commissioner of Public Health, clearly hinted at his frustration at the apparent lack of popular awareness about the department's efforts. Not only did he draw attention to MacArthur's report in the *Journal of the Royal Army Medical Corps* as well as Stanley's old *Annual Reports*, but he emphatically stated that "as long ago as the 1840's and the 1850's, Dr. Lockhart and Dr. James Henderson wrote about malaria in Shanghai".⁷⁶ The lack of popular awareness about the prevalence of malaria in and around Shanghai is surprising, and suggests how ineffective the department's public health propaganda was.

The outbreak in the Hungjao area also raised a new and disturbing spectre: the possibility that Chinese communities residing immediately beyond the Settlement's borders served as malarial 'hosts'. The military outbreak was swiftly followed by reports of civilian cases of malaria nearby. The Public Health Department launched a "hurried survey" of seven Chinese villages in the area, identifying 200 "probable cases".⁷⁷ The general public initially blamed the outbreak on the newly-arrived contingent of Punjabi troops from the garrison in Hong Kong.⁷⁸ Davis, however, concluded that whilst the initial outbreak amongst the non-British troops was triggered by the arrival of the fresh troops, he traced the subsequent outbreak amongst the British troops and local residents to the Chinese population living in the rural areas immediately to the west of the Settlement.⁷⁹ The army's rigorous use of mosquito nets and the regular oiling of nearby breeding grounds appeared to reduce the prevalence of the disease in the year after the outbreak, but the number of civilian and military cases began to rise again in 1929 (fig. 24).⁸⁰ Dr. Jordan, who was appointed acting then full Commissioner of Public Health after Davis's departure at the end of 1929, was alarmed that "the very large increase in the number of Malaria cases opens up a vista which is by no means pleasant".⁸¹ Unlike the authorities in Hong Kong, the medial authorities had never previously thought of Greater Shanghai's Chinese inhabitants as a 'host' population and therefore a potential source of infection to the Settlement's foreign community. Reducing the number of notified civilian

⁷⁴ W. A. Lamborn, "The Mosquitos of some Ports of China and Japan," *Bulletin of Entomological Research* 12, no. 4 (1922): 404.

⁷⁵ MacArthur to Davis, 29 June 1929, SMA, U1/16/2739, 15-16.

⁷⁶ Davis, *Annual Report 1929*, SMA, U1/16/4655, 67.

⁷⁷ Davis, *Annual Report 1927*, SMA, U1/16/4654, 23.

⁷⁸ MacArthur, "The Adult Mosquitoes of Shanghai", ca. 1927, SMA, U1/16/2736, 3.

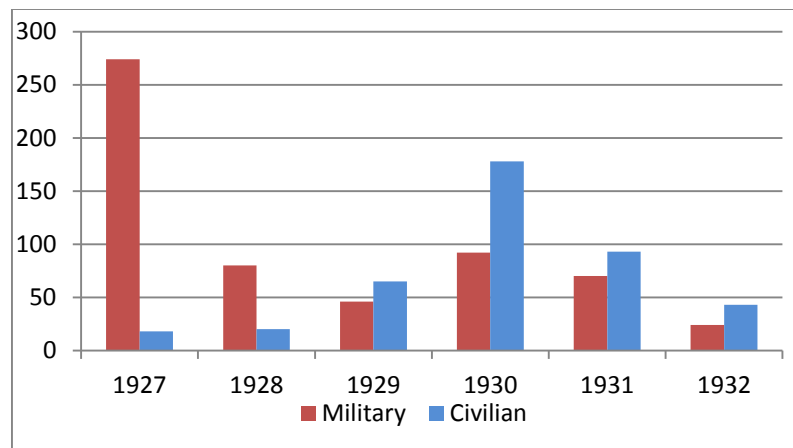
⁷⁹ Davis, *Annual Report 1927*, SMA, U1/16/4654, 24.

⁸⁰ *Ibid.*, 63.

⁸¹ J.H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1930* (Shanghai: Kelly & Walsh, 1931), SMA, U1/16/4655, 24.

and medical cases was therefore an urgent matter. But the medical authorities also recognised that the implementation of anti-malaria measures along and beyond the Settlement's borders was impossible without the support of the French and Chinese municipal authorities.⁸²

Figure 24. Military and Civilian Cases of Malaria, 1927-32.



The outbreak coincided with the Nationalists rise to power – a political development which had resulted in a significant deterioration in the Public Health Department's relationship with the recently-established Department of Health of Greater Shanghai. Shortly before his departure Davis lamented the Nationalists' duplicity in a confidential report:

In summing up it is clear that while Dr. Hou Ki Hu [the new Chinese Commissioner of Health] and the officials of the Municipality of Greater Shanghai were extended all possible facilities and co-operation by the Public Health Department they not only signally failed to return the courtesies extended to them but through the medium of the Press indulged in political chicanery and carried on a scurrilous campaign of misrepresentation against the S.M.C. in general and the P.H.D. in particular. In conclusion, it must be said, that until the Chinese are willing and able to think honestly, to observe and record facts as they are and not as they wish them to be... it is hopeless for Foreigners to attempt to meet them on a common ground of mutual trust, understanding and co-operation.⁸³

This animosity negatively impacted upon the Settlement's anti-malaria activities, notably in the vicinity of the British troops stationed beyond the Settlement's jurisdiction. For example Jordan informed the senior British military medical officer that "on one occasion a number of our oiling coolies were arrested by the Chinese authorities for interference".⁸⁴ By 1932 Jordan

⁸² Ambrose, (P.H.D.), "Report on General Sanitation Work. Western District, August 1930", *ca.* Aug. 1930, SMA, U1/16/4473, 27-28.

⁸³ Davis, "Relationship Between the Municipal Public Health Department and the Public Health Department of Greater Shanghai", Confidential, *ca.* 1929, SMA, U1/16/290, 7-8.

⁸⁴ J. H. Jordan (C.P.H.) to T. H. Robinson (Lt. Col., British Army Hospital), 27 June 1932, SMA, U1/16/2703, 11.

warned the military authorities that if they continued with their small-scale anti-larval measures, they would find themselves “faced by a riotous population”.⁸⁵

Innovation, Experimentation and the ‘Flying Column’

Jordan’s commissionership oversaw the most significant transformations in the Public Health Department’s management of malaria, including the establishment of the Malaria Prevention Unit. Whereas Wellington, Hong Kong’s first Director of Medical and Sanitary Services, was transferred from the Federated Malay States, Jordan had risen through the ranks of the Public Health Department and was therefore well-versed with his predecessor’s anti-malaria campaigns.⁸⁶ At the beginning of his tenure he presciently predicted that malaria would “be one of the diseases to be reckoned with in the future”.⁸⁷ As such he was especially eager for his department to solicit advice from abroad. Under Jordan the Public Health Department maintained a separate folder entitled “Methods of Control in Other Municipalities: Mosquitoes”, which contained information on malaria prevention in the Philippines, South Africa, Portugal, Great Britain and Hong Kong.⁸⁸ Jordan’s principal frame of reference was south-east Asia. He was certainly aware, for example, of Malcolm Watson’s anti-malaria campaigns in the Federated Malay States.⁸⁹ But it was to the Philippines – the source of the department’s earliest stocks of mosquito-eating fish – that Jordan turned to for advice. He enquired as to the possibility of despatching one of the Settlement’s Senior Health Inspectors to Manila to observe the Philippines’s anti-malaria efforts first-hand.⁹⁰ Dr. Farjardo, Director of the Philippines Health Service, supplied Jordan with a summary of his department’s anti-malaria work from a local scientific journal.⁹¹ Moreover he informed Jordan that “my government will only be too glad to welcome your Health Inspector”, not least because Dr. Wu Lien The, the new Commissioner of Health for Greater Shanghai, had recently visited the malaria field laboratory north of Manila only the year before.⁹²

Jordan’s subordinates were equally as passionate about malaria prevention, initiating a number of independent local experiments. For instance, his staff briefly trialled quick lime

⁸⁵ Jordan to T. H. Robinson (Lt. Col., British Army Hospital, 27 June 1932, SMA, U1/16.2703, 12.

⁸⁶ Jordan served as the Assistant Pathologist (1922-1924), Chief Pathologist (1925), Assistant Commissioner of Public Health (1926-1927), Deputy Commissioner of Public Health (1928-1929), Actg. Commissioner of Public Health (1930) and finally as Commissioner of Public Health (1931-1942). His earliest extant correspondence on the subject of malaria dates to 1926, when he informed Davis that “there is a distinct increase in [Benign Tertian] Malaria”. Jordan to Davis (C.P.H.), 9 Oct. 1926, SMA, U1/16/2626, 5.

⁸⁷ Jordan, *Annual Report 1930*, SMA, U1/16/4655, 2.

⁸⁸ SMA, U1/16/2754.

⁸⁹ Jordan to (Asiatic Petroleum Co.), 28 Jan. 1931, SMA, U1/16/2623, 40.

⁹⁰ Jordan to J. Fajardo, 15 Jan. 1931, SMA, U1/16/2754, 24. Jordan may also have been aware of the paper that Dr. Manalang delivered at the 8th Congress of the Far Eastern Association of Tropical Medicine (Bangkok, 1930). See bibliography.

⁹¹ C. Manalang, “Malaria Studies,” *Journal of the Philippine Islands Medical Association*, 9, no. 12 (1929), SMA, U1/16/2754, 17-21.

⁹² Farjardo to Jordan, 27 Jan. 1931, SMA, U1/16/2754, 25.

as a means of killing mosquito larvae. Having observed on a number of occasions that mosquitoes failed to breed in water containing quick lime, Inspector Noon conducted a series of successful tests in his office and then at various sites throughout the Settlement. He recommended that the department initiate its own experiments.⁹³ Sadly for Noon, these additional experiments proved unsuccessful. The Chief Analyst concluded that although the lime had “a definite, though slow, larvicidal action”, he argued that its effectiveness was restricted to small collections of water.⁹⁴ Further experiments in the Northern district confirmed the Chief Analyst’s conclusions.⁹⁵ Instead the department briefly shifted its attention to reports from India about a French mercury vapour lamp that allegedly killed mosquitoes.⁹⁶ Unable to secure additional information by himself, Jordan enlisted the help of the local French Consular authorities to contact Prof. Seguy, an entomologist at the Natural History Museum in Paris.⁹⁷ Seguy alleged that the ray could attract mosquitoes, but was “not prepared to say what effect it would have on oriental mosquitoes whose habits are not comparable to occidental ones”.⁹⁸ Fortunately for Jordan *The Shanghai Times* reported that the ray’s inventor was due to visit Shanghai in the near future to demonstrate the ray’s effectiveness to the all three municipal authorities.⁹⁹ Ultimately the department never adopted this idea, but the degree of innovation demonstrated by the International Settlement during this period stood in marked contrast to Hong Kong’s management of the disease.

Both Jordan and his subordinates became increasingly dissatisfied with the Settlement’s existing approach to malaria prevention as a result of the alarming increase in reported cases. Whilst the incidence amongst the foreign population had witnessed a dramatic decline since the early 1930s, the number of Chinese resident and non-resident cases was on the increase (fig. 25). In a Staff Memorandum to his Chief Health Inspectors Jordan concluded:

I really feel that the time is past for this department alone of all the health departments, to continue its oiling and disinfection with methods which are no better, after all, than an improved garden syringe, distributing large globules of disinfectant and penetrating nowhere except by accidental seepage.¹⁰⁰

⁹³ W. Noon (P.H.D.) to D. Heathcote (P.H.D.), 31 July 1933, SMA, U1/16/2746, 47-48.

⁹⁴ F. S. C. Walker (Chief Analyst) to Jordan, 7 Aug. 1934, SMA, U1/15/2746, 60.

⁹⁵ G. B. Marsh (P.H.D.) O. Hirano (P.H.D.) to P. Veit (P.H.D.), 14 Aug. 1934, SMA, U1/16/2760, 12-13.

⁹⁶ “New War on the Mosquitoes: Bombay’s Experiments,” *Shanghai Times*, July 6, 1934, SMA, U1/16/2703, 33.

⁹⁷ S. Fessenden (Sec., S.M.C.) to M. Baudez (Actg. Consul General for France), 13 July 1935, SMA, U1/4/593, 125.

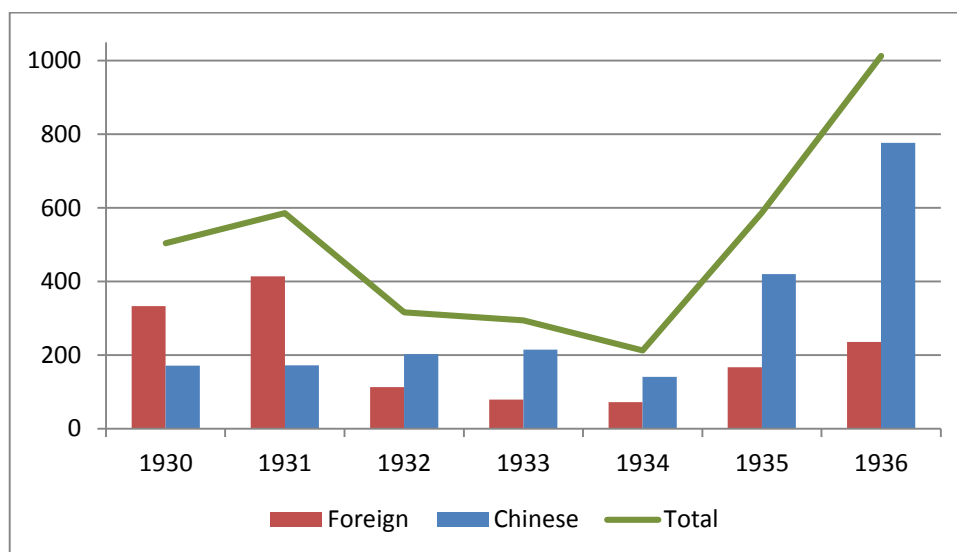
⁹⁸ Seguy to (Director, P.H.D., French Concession), translation, 14 Aug. 1935, SMA, U1/4/593, 129.

⁹⁹ “Death Ray War On Insects Proves Successful: Inventor Of Novel Machine Coming From India To Place Results Before Local Authorities,” *Shanghai Times*, Nov. 18, 1934, SMA, U1/16/2709, 35.

¹⁰⁰ Jordan, “Staff Memo No.26”, 9 Aug. 1934, SMA, U1/16/2694, 5.

Jordan increasingly identified Shanghai's urban expansion into the countryside as one of the driving forces behind this alarming increase.¹⁰¹ He argued that the "magnificent progress in road making" simultaneously encouraged Shanghai's residents to travel to the surrounding countryside where they were liable to be infected with malaria, and promoted the migration of malaria-infected individuals from rural areas to Shanghai.¹⁰² He even suggested that "automatic traffic to some extent functions as a carrier of Anophelines from suburban districts to the Central areas".¹⁰³ These comments echoed those of Hong Kong's medical officials.¹⁰⁴

Figure 25. Notified Cases of Malaria Amongst the Foreign and Chinese Communities, 1927-36.



The Public Health Department overhauled its approach to malaria prevention by initiating strategic, structural, technical and operational changes. Firstly Jordan called for district spot maps to be drawn up in order to pinpoint the source of an outbreak (see fig. 27).¹⁰⁵ The department had used spot maps to chart the distribution of plague rats, plague victims and anti-plague measures during the early 20th century.¹⁰⁶ The cholera outbreak of 1932 was similarly mapped out.¹⁰⁷ At a glance these maps provided a visual representation of

¹⁰¹ See for example Jordan to (Press Information Officer), 7 Oct. 1935, SMA, U1/15/2625, 14; J. H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1936* (Shanghai: North-China Daily News & Herald, Ltd., 1937), SMA, U1/16/4656, 14, 26.

¹⁰² "Dr. Jordan's Paper on 'Mosquito Larvicidal Measures' ", 3 Feb. 1937, SMA, U1/16/2746, 25.

¹⁰³ Jordan, *Annual Report 1936*, SMA, U1/16/4656, 14. He conceded the idea was "somewhat far-fetched" but plausible nonetheless. Jordan to (Press Information Officer), 7 Oct. 1935, SMA, U1/15/2625, 14.

¹⁰⁴ See for instance Hong Kong Government *Administrative Reports: Sanitary Report for the Year 1925*, Mar. 31, 1926, Hong Kong Government Records Online (hereafter HKGRO), 49.

¹⁰⁵ Jordan, "Staff Memo No.29: Malaria", 15 Aug. 1934, SMA, U1/16/2624, 32.

¹⁰⁶ See for example Arthur Stanley, *Shanghai Municipal Council. Health Department. Annual Report 1908*, (Shanghai: Kelly & Walsh, 1909), SMA, U1/16/4651, 17a.

¹⁰⁷ J. H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1932* (Shanghai: Kelly & Walsh, 1933), SMA, U1/16/4655, 21a.

the most insalubrious neighbourhoods. By chronologically colour-coding notified cases of malaria, Jordan believed that the task of identifying the “anopheline foci” would be relatively straightforward.¹⁰⁸ Secondly his staff in the Eastern and Western districts called for the number of mosquito brigades to be doubled and for the number of staff to be increased from 24 to 59 (table 5.2).

Table 5.8. Proposed changes to the anti-malarial staff in the Eastern and Western Districts.¹⁰⁹

District	Existing Staff (1934)		Proposed Staff (1935)	
	Sub-District	Staff	Sub-District	Staff
Eastern	1 & 2 E	1 Overseer, 1 Foreman & 9 Coolies	1 E	1 Overseer, 1 Foreman & 9 Coolies
			2 E	1 Overseer, 1 Foreman & 9 Coolies
			3 E	1 Foreman 5 Coolies
			4&5 E	1 Foreman & 5 Coolies
Western	1, 2 & 3 W	1 Overseer & 5 Coolies	1, 2 & 3 W	1 Overseer and 3 squads of 4 coolies
	4 W	7 Coolies	4 W	3 squads of 4 coolies

The Public Health Department also overhauled the technical apparatus used by these mosquito brigades. All four District Inspectors agreed that the department’s reliance on two-wheeled tanks to transport anti-mosquito oil to the breeding sites was outdated. These tanks were unsuitable for the terrain and they were allegedly a “direct incentive to waste as the coolies feel that as soon as the oil was finished then they could loaf a little bit more”.¹¹⁰ But selecting which new spraying apparatus to purchase was easier said than done. The department assiduously researched the models that were available on the international market.¹¹¹ Jordan’s staff reported that the “Martsmith Headland Knapsack Sprayer”, a type of backpack sprayer, would be ideal for Shanghai.¹¹² Jordan was hesitant, however, to import the modern sprayers favoured by some of his subordinates before testing cheaper locally-obtainable varieties.¹¹³ Inspector Wolnizer dismissed the haversacks being used by the Chinese authorities; his superior disparagingly reported that “This is a locally made machine, they have faithfully copied TRADEMARK and all”.¹¹⁴ Eventually the department purchased

¹⁰⁸ Jordan, “Staff Memo No.29: Malaria”, 15 Aug. 1934, SMA, U1/16/2624, 32.

¹⁰⁹ For the Eastern District see W. Wolnizer (P.H.D.) to H. E. Brewster-Gow (P.H.D.), 30 Aug. 1934, SMA, U1/16/2699, 12-14; Brewster-Gow to Jordan, 4 Sept. 1934, SMA, U1/16/2699, 8. For the Western District see G. Bloom (P.H.D.) to D. Heathcote (P.H.D.), 27 Aug. 1934, SMA, U1/16/2699, 15-16; Heathcote to E. F. Duck (Actg. D.C.P.H.), 5 Sept. 1934, SMA, U1/16/2699, 5.

¹¹⁰ J. A. Stoddart (P.H.D.) to P. Veit (P.H.D.) *ca.* Aug. 1934, SMA, U1/16/2699, 11.

¹¹¹ The department kept five folders on “equipment” including a folders on “oils sprayers”, “oil sprayers and accessories” and “locally made sprayers”. See bibliography.

¹¹² U1-16-2705 G. Bloom (P.H.D.) to Heathcote, 8 Sept. 1934, SMA, U1/16/2705, 12; W. Wolnizer (P.H.D.) to Jordan, 30 Mar. 1935, SMA, U1/16/2705, 22.

¹¹³ Jordan, “Staff Memo No.26”, 9 Aug. 1934, SMA, U1/16/2694, 5.

¹¹⁴ Wolnizer to H. E. Brewster-Gow (P.H.D.), 25 June 1935, SMA, U1/16/2705, 2.

twelve haversack sprayers and imported four patent spray tanks.¹¹⁵ The spray tanks were mounted on carriages “designed particularly for use in camps, hospitals, schools, factories and large foreign houses” because they were found to be “too heavy and awkward for the Chinese coolies”.¹¹⁶ Wolnizer also developed his own prototype of a horizontal pressure sprayer tank mounted on wheels.¹¹⁷ He managed to build the tank in just over three weeks despite a brief setback when his “experimental tank exploded, which proved the big joke of the week”.¹¹⁸ Jordan was so impressed that he tried to persuade a Birmingham-based company that built sprayers to purchase Wolnizer’s design, though Wolnizer was later forced to defend himself against accusations of plagiarism. Jordan’s active interest in the development of the department’s spraying equipment was striking. He regularly visited the sub-districts where his staff was experimenting with the new equipment and he held strong views about the type of equipment that was needed.¹¹⁹

The most innovative operational change, at least as far as Jordan was concerned, was the formation of a mobile anti-mosquito squad: ‘The Flying Column’. Given Shanghai’s flat, urban landscape, Jordan was adamant that mobility was the key to modernising the department’s approach to malaria prevention. In a lecture to his staff, Jordan dismissed his predecessor Stanley’s claims about the effectiveness of the department’s early anti-malaria measures as “absurd” and claimed that the department “had been muddling through ever since”.¹²⁰ He tasked District Inspector Bloom to trial “a flying mechanised column” using one of the department’s vans.¹²¹ By deploying this “flying column” against the larger pools of water in the Eastern and Western districts, Jordan hoped that the regular mosquito squads, who travelled on foot, would be able to operate more efficiently within their respective health districts.¹²² Moreover the trials provided an ideal opportunity to experiment with Ginsburg’s larvicide on a large scale.¹²³ Despite minor setbacks – one of the pumps “blew out from the bottom” and an overseer injured himself by falling into a ditch – the initial trial in the Eastern

¹¹⁵ H. Cruden (P.H.D.) to Heathcote, 30 May 1935, SMA, U1/16/2705, 16-17; Wolnizer to Brewster-Gow, 2 June 1935, SMA, U1/16/2705, 49-51; J. H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1935* (Shanghai: North-China Daily News & Herald, Ltd., 1936), SMA, U1/16/4656, 73.

¹¹⁶ Wolnizer to Brewster-Gow, 2 June 1935, SMA, U1/16/2705, 50; Jordan, *Annual Report 1935*, SMA, U1/16/4656, 73.

¹¹⁷ Wolnizer to Brewster-Gow, 30 Aug. 1934, SMA, U1/16/2699, 12-14; Jordan, *Annual Report 1936*, SMA, U1/16/4656, 73.

¹¹⁸ Wolnizer to Jordan, 30 Mar. 1935, SMA, U1/16/2705, 22-24.

¹¹⁹ Cruden to Heathcote, 30 May 1935, SMA, U1/16/2705, 16-17; Jordan to Heathcote, 3 June 1935, SMA, U1/16/2705, 30-31.

¹²⁰ Jordan, “Mosquito Work”, 18 Aug. 1936, SMA, U1/16/212, 113. Jordan mistakenly attributed Stanley’s comments to the *Annual Report* of 1907 instead of that for 1909.

¹²¹ Jordan to G. Bloom, 11 July 1936, SMA, U1/16/2701, 3.

¹²² Jordan, “Staff Memo No.28”, 11 July 1936, SMA, U1/16/2701, 2; Jordan to Bloom, 11 July 1936, SMA, U1/16/2701, 3-4.

¹²³ Jordan, “Staff Memo No.28”, 11 July 1936, SMA, U1/16/2701, 2. Jordan subsequently published two articles on the subject of larvicides. See bibliography.

District proved highly promising.¹²⁴ So too did subsequent trials in both the Western and Eastern Districts.¹²⁵ Jordan was so pleased with the result of Bloom's trials that he organised a demonstration – using water instead of larvicide – on the lawns of the Isolation Hospital for the benefit of the press (fig. 26).¹²⁶



Figure 26. The Public Inauguration of the Flying Column, ca. Aug. 1936.
Four Mosquito Coolies with Sprayers and one Coolie standing next to the pump (front-left).¹²⁷

Popular criticisms about the Public Health Department's anti-malaria measures may have contributed to the timing of this trial. The idea of forming a mobile squad was not in fact a novel one. Bloom had first proposed the idea of a "flying squad" as early as August 1934 as part of the re-organisation of the department's anti-mosquito staff.¹²⁸ But his suggestion was only taken up two years later, shortly after the editor of *The North-China Daily News* forwarded a very critical letter from a local resident to Jordan. The letter's author, who used the pseudonym 'More Than Once Bitten', complained that "the extent of the mosquito

¹²⁴ Bloom to E. F. Duck (D.C.P.H.), 16 July 1936, SMA, U1/16/2701, 5. The personnel for the Flying Column initially consisted of 1 van driver, 3 van staff, 8 coolies, 1 foreman and 1 overseer. Their technical apparatus included 2 Meyer pressure pumps and 2 Four Oaks pressure pumps.

¹²⁵ Bloom to Duck, 21 July 1936, SMA, U1/16/2701, 10; Bloom to Duck, 23 July 1936, SMA, U1/16/2701, 11.

¹²⁶ "Council's Flying Column Seen in Attack Formation: First Line of 'Defence' Against Mosquitoes," *North China Daily News*, Aug. 22, 1936, SMA, U1/16/2700, 67.

¹²⁷ " 'Flying Squad' of Health Department," *North-China Daily News*, 22 Aug. 1936, SMA, U1/16/2700, 65.

¹²⁸ Bloom to Heathcote, 27 Aug. 1934, SMA, U1/16/2699, 15-16, 15.

menace in a city as large and wealthy as Shanghai is surprising and disgraceful”, and he suggested that most residents thought Jordan’s department did “very little to suppress” this menace.¹²⁹ Jordan drafted a disparaging letter to the paper’s editor in a moment of “haste and in heat both external & internal” that opened with: “I really think this sort of ‘twaddle’ is quite impossible to answer”.¹³⁰ Rather than sending this letter, though, Jordan drafted a more sober reply in which he explained that the death rate from malaria was much lower in Shanghai than in Hong Kong (0.12 per 1,000 compared to 0.39), in spite of the fact that the Settlement’s reported population was larger by some 165,000 inhabitants (or 16.6%).¹³¹

Jordan deliberately infused his discussions about the ‘Flying Column’ with a militaristic rhetoric. Whereas his colonial counterpart Dr. Wellington (fittingly) envisioned malaria prevention the way a general strategized for war, Jordan outlined his approach in terms of tactical deployments. Thus in his report outlining the Flying Column’s workings, he compared the haversack sprayers to “rifles”; the mosquito brigades to infantry units; the ten-gallon drum and the knapsack sprayers to “a squad of Maxim guns”; and the compressed-air sprayers to “big guns for heavy work”.¹³² This rhetoric was far more explicit than the pseudo-military references that he had briefly used the year before.¹³³ They were also far more explicit than Wellington’s comments. Jordan explicitly used “quasi-military language throughout as it would seem it is the only language which expresses the idea satisfactorily”.¹³⁴ Indeed he claimed that the inspiration behind the very name ‘Flying Column’ came from the fact that most of his staff had military experience. In a lecture on malaria prevention to his staff, he suggested that the Column’s purpose was comparable to that of the Police’s “Red Maria”, rounding up “undesirables”:

The local Policeman on his beat reports to the local Inspector (also on his beat) that there has been an armed robbery, a riot, or some other infringement of the law, which requires the presence of more policemen than are available on the spot. The Red Maria immediately supplies these; the area is combed and it is to be hoped that the malefactors are picked up. Applying this simile to mosquito work, the local Inspector looks at his map, ticks off anophelene breeding areas which are too large to be dealt with by his own staff, and calls in the Flying Column. The Flying Column deals with the area in half an hour, as against the three or four days previously occupied, and then passes on to other work. But the Inspector has not finished nor has his staff any more than our policeman in the previous simile. He must scout round and see if any

¹²⁹ More Than Once Bitten [pseud.] to the Editor of *The North-China Daily News*, 16 June 1936, SMA, U1/16/2760, 49.

¹³⁰ Jordan to E. Harward (Editor, *N.C.D.N.*), 17 June 1936, SMA, U1/16/2760, 45. This letter was never sent.

¹³¹ Jordan to Harward, 19 June 1936, SMA, U1/16/2624, 48. Given that Jordan gave the populations of Shanghai and Hong Kong as 1,159,775 and 994,492, the death rate per 1,000 should actually have been 0.129 and 0.367 respectively.

¹³² Jordan, “Flying Column. Mosquito Fumigation”, 18 July 1936, SMA, U1/16/2701, 6-7.

¹³³ Previously Jordan had recommended “two lines of attack”: the wheeled sprayers or “heavies” (i.e. heavy cavalry) in the lead with the knapsack sprayers following behind as “moppers up”. Cruden to Heathcote, 30 May 1935, SMA, U1/16/2705, 16.

¹³⁴ Jordan, “Flying Column. Mosquito Fumigation”, 18 July 1936, SMA, U1/16/2701, 6.

criminals or *Anopheles* larvae have escaped the attention of the Flying Column. He must deal with them and at the same time watch the area combed by the Flying Column for the reappearance of such larvae.¹³⁵

For Jordan, the Flying Column's mechanised mobility represented the modern antithesis to the department's current reliance on "bows and arrows".¹³⁶ According to this militaristic approach to malaria prevention, accurate maps and precisely-rehearsed strategies underpinned the successful deployment of the Column. Jordan gave specific instructions as to how the breeding sites of both *Anopheles* and *Culex* mosquitoes were to be mapped and he drew a schematic of the Column's larvicidal "drill".¹³⁷

For all Jordan's rhetoric about a modern militaristic campaign against malaria, the Flying Column was still in its infancy. It was most certainly not a highly mobile squad equipped with 'big guns', 'Maxims' and 'rifles'. Rather it consisted of a van with some spraying equipment. Indeed the department only discussed the possibility of mounting the Column's staff on bicycles at the conclusion of the anti-mosquito campaign for that year.¹³⁸ Jordan must have realised how tenuous his militaristic similes were when he compared "oil cans" to "close quarter weapons":

Inspectors with their squads thus ... represent Infantry, and like infantry will be armed with weapons of precision....Like infantry however, at times they will need close quarter weapons, which in the case of anti-mosquito warfare seem to be to be represented largely by suitable oil cans for pouring film into gutters etc., not get-at-able by the sprayers.¹³⁹

Strikingly this rhetoric was abandoned almost as quickly as it had appeared. Neither Jordan nor any of his staff ever resorted to this rhetoric again after 1936. Precisely why is unclear, but the outbreak of the Sino-Japanese War may have trivialised Jordan's military metaphors: knapsack and compressed-air sprayers could hardly be compared to machine guns and artillery at a time when the atrocities of modern warfare encircled the Settlement. Within the context of the Settlement's management of malaria, however, the formation of the Flying Column nevertheless marked an important turning point. Firstly the retention of the Column's foreign and Chinese coolie staff on a permanent basis – as opposed to temporarily hiring staff afresh every spring – enabled the authorities to promote specialist knowledge, thereby increasing the effectiveness of its anti-malaria campaigns.¹⁴⁰ Secondly the Flying Column marked the genesis of a dedicated departmental sub-unit to Hong Kong's Malaria Bureau: the

¹³⁵ Jordan, "Mosquito Work", 18 Aug. 1936, SMA, U1/16/212, 114.

¹³⁶ Jordan, "Mosquito Work", 18 Aug. 1936, SMA, U1/16/212, 114. See also Jordan to Bloom, 11 July 1936, SMA, U1/16/2701, 3; Jordan, "Flying Column. Mosquito Fumigation", 18 July 1936, SMA, U1/16/2701, 7-8.

¹³⁷ Jordan, "Staff Memo No.28", 11 July 1936, SMA, U1/16/2701, 2; Jordan to Chief Health Inspectors, 15 Aug. 1936, SMA, U1/16/2736, 13; Jordan, "Mosquito Work", 18 Aug. 1936, SMA, U1/16/212, 114-116; Jordan, "Memo for Staff: Flying Column", 31 Aug. 1936, SMA, U1/16/2701, 66-67; Jordan, "Flying Column: Rough Illustrations Showing Methods", SMA, U1/16/2701, 68-69.

¹³⁸ Jordan to P. Veit (P.H.D.), 19 Nov. 1936, SMA, U1/16/2701, 36-37.

¹³⁹ Jordan, "Flying Column. Mosquito Fumigation", 18 July 1936, SMA, U1/16/2701, 7.

¹⁴⁰ U1-16-212 Jordan, "Mosquito Work", 18 Aug. 1936, SMA, U1/16/212, 116; "Addenda to Staff Memo: B12 Anti-Mosquito & Disinfection Unit", 26 Oct. 1936, SMA, U1/16/2701, 34.

Malaria Prevention Unit (M.P.U.). Unlike Hong Kong's Malaria Bureau, however, the M.P.U. was responsible for co-ordinating a much more systematic coverage of the territory under its jurisdiction.

The Malaria Prevention Unit

The Malaria Prevention Unit gradually evolved out of the Settlement's existing anti-malaria materiel. District Inspector W. J. Silvey, who was placed in charge of the column in the autumn of 1936, was responsible for amalgamating the Flying Column with the Settlement's district mosquito squads and for managing this M.P.U. through to early 1943.¹⁴¹ Silvey's appointment to the Flying Column was largely a matter of coincidence, rather than the product of any specialist knowledge on his part. Despite the paucity of source material, it is clear that his involvement in the department's anti-malaria operations during the early 1930s was not exceptional.¹⁴² On the contrary, Health Inspector Sundblad was chosen instead of Silvey to conduct the delegates to the ninth congress of the Far Eastern Association of Tropical Medicine (Nanjing, 1934) – possibly including Hong Kong's Government Malariologist R. B. Jackson – on a tour of the Settlement's anti-malarial activities; Inspector Mentor was selected to conduct the leprosy tour.¹⁴³ But by the time of the Flying Column's press launch in August 1936, Silvey was a District Inspector in the Western District.¹⁴⁴ The fact that the addenda to the staff memorandum stipulated that the Flying Column would "in future act under the instructions of the District Inspector (at present Mr. Silvey)" clearly indicated that Silvey earned the appointment by dint of his position rather than his person.¹⁴⁵ He was simply in the right place at the right time.

From the outset Silvey recognised the need for close co-operation between the permanent staff of the Flying Column and the temporary staff of the district mosquito squads.

¹⁴¹ "Addenda to Staff Memo: B12 Anti-Mosquito & Disinfection Unit", 26 Oct. 1936, SMA, U1/16/2701, 34. Initially the 'Malaria Prevention Unit' simply referred to the 'Flying Column'. For the sake of clarity I use 'Malaria Prevention Unit' to refer to the Settlement's district mosquito squads and the mobile units of the Flying Column. "Addenda to Staff Instructions: A26a Mosquito Reduction – Units", 6 Jan. 1937, SMA, U1/16/2700, 6; W. J. Silvey (P.H.D.) to Veit, 15 Feb. 1937, SMA, U1/16/2700, 7; U1-16-2700 "Addenda to Staff Memo: B26 Mosquito Reduction – Campaign 1937", 10 Mar. 1937, SMA, U1/16/2700, 20.

¹⁴² Following his appointment as a Health Inspector in 1929, Silvey worked primarily in the Western district save for a brief interlude in the mid-1930s with the Veterinary Department. He may have supervised one of the Western district's mosquito squads and he was certainly involved in the distribution of the department's public health posters, including a "mosquito reduction" poster. Silvey to Heathcote, 17 July 1933, SMA, U1/16/247, 105.

¹⁴³ Heathcote to Jordan, 5 Oct. 1934, SMA, U1/16/2690, 29. As noted in the preceding chapter, Jackson delivered a paper at this congress. It is highly likely that he visited the Settlement

¹⁴⁴ As such he was invited to attend Jordan's lecture on the trial Flying Column shortly before its press launch, along with his fellow District Inspectors such as Sundblad and Bloom. Morell (D.C.P.H.) to Veit, Gow, Bogomoloff, Sundblad, Silvey, Bloom, Mingozi and Robbins, 13 Aug. 1936, SMA, U1/16/2746, 21.

¹⁴⁵ "Addenda to Staff Memo: B12 Anti-Mosquito & Disinfection Unit", 26 Oct. 1936, SMA, U1/16/2701, 34.

He suggested that he be “authorised to advise and assist” the sanitary inspectors in charge of the latter squads in order to bring the Settlement’s management of the disease “a little more up-to-date”.¹⁴⁶ Inevitably his suggestion led to a “bone of contention” with the Chief Health Inspectors, who were reluctant to relinquish control over their respective district mosquito brigades, especially to a man who was junior to them in status.¹⁴⁷ Instead they expected Silvey to report the Flying Column’s weekly programme of activities to them in advance. Moreover J. A. Stoddart, Chief Health Inspector for the Central District, argued that “one man can not effectively and efficiently supervise this work throughout the whole Settlement”.¹⁴⁸ Silvey, however, explained that he merely wanted to advise the district mosquito squads working on the outer fringes of the Western and Eastern districts, i.e. the “principal mosquito breeding areas” and therefore the focus of the Flying Column’s activities.¹⁴⁹ He also dismissed Stoddart’s claim by stating that “the Settlement is a mere back-yard in comparison to one man [sic] supervised areas in other parts of the world”.¹⁵⁰ Ultimately the authorities sided with Silvey: he was placed in charge of the Flying Column as well as the mosquito squads in the Eastern and Western Districts.¹⁵¹ The Chief Health Inspectors of the Northern and Central Districts retained control of their respective squads until early 1939, when these were also handed over to Silvey.¹⁵²

Silvey was instrumental in co-ordinating and developing the Malaria Prevention Unit’s various elements. The ‘Flying Column’ was divided into squads: the former consisting of a foreign inspector, one foreman and sixteen permanent coolies, the latter of an inspector or overseer and three permanent coolies. The first squad used a van to transport the heavier spraying equipment between the Western and Eastern districts, where they focused on tackling the larger mosquito breeding sites, whilst the latter was tasked with investigating reported cases of malaria and destroying all adult as well as larval mosquitoes in the vicinity.¹⁵³ Accurate maps of notified cases of malaria as well as mosquito breeding spot maps were deemed essential for this work (fig. 27).¹⁵⁴ Meanwhile the temporary coolies of the district mosquito squads searched for mosquito larvae, conducted house-to-house inspections, treated small breeding sites, and distributed posters and handbills.¹⁵⁵ Responsibility for the Public Health Department’s mosquito fish stocks was divided between the Malaria Prevention Unit and the Chief Health Inspector in the Western District: the Flying Column was tasked with

¹⁴⁶ Silvey to Veit, 15 Feb. 1937, SMA, U1/16/2700, 7.

¹⁴⁷ G. J. Turnbull (Sec., P.H.D.) to Veit, 25 Feb. 1937, SMA, U1/16/2700, 11-15, 15.

¹⁴⁸ J. A. Stoddart to Jordan, 24 Feb. 1937, SMA, U1/16/2700, 13.

¹⁴⁹ Silvey to Jordan, 1 Mar. 1937, SMA, U1/16/2700, 18-19, 19.

¹⁵⁰ Silvey to Jordan, 1 Mar. 1937, SMA, U1/16/2700, 19.

¹⁵¹ Veit, “Mosquito Reduction Work”, 8 Mar. 1937, SMA, U1/16/2700, 40.

¹⁵² “Addenda to Staff Instructions: A43 – Malaria Prevention Unit”, 26 Nov. 1938, SMA, U1/16/2700, 39.

¹⁵³ “Addenda to Staff Memo: B26 - Mosquito Reduction: Campaign 1937”, 10 Mar. 1937, SMA, U1/16/2700, 20-21; Silvey, “Notes for the Information of the Malaria Prevention Staff”, 6 May 1937, SMA, U1/16/2700, 26.

¹⁵⁴ Silvey, “Notes for the Information of the Malaria Prevention Staff”, 6 May 1937, SMA, U1/16/2700, 26; Silvey to Duck, 16 Apr. 1937, SMA, U1/16/2700, 24-25.

¹⁵⁵ “Addenda to Staff Memo: B26 - Mosquito Reduction: Campaign 1937”, 10 Mar. 1937, SMA, U1/16/2700, 20-21

distributing the stocks maintained by the latter.¹⁵⁶ These fish were principally destined for ponds in the Settlement's public parks, ornamental ponds in private properties, rice fields in the Eastern district and a number of creeks throughout the Settlement.¹⁵⁷ The number of fish distributed rose from 6,200 in 1936 to a staggering 70,000 in 1939.¹⁵⁸

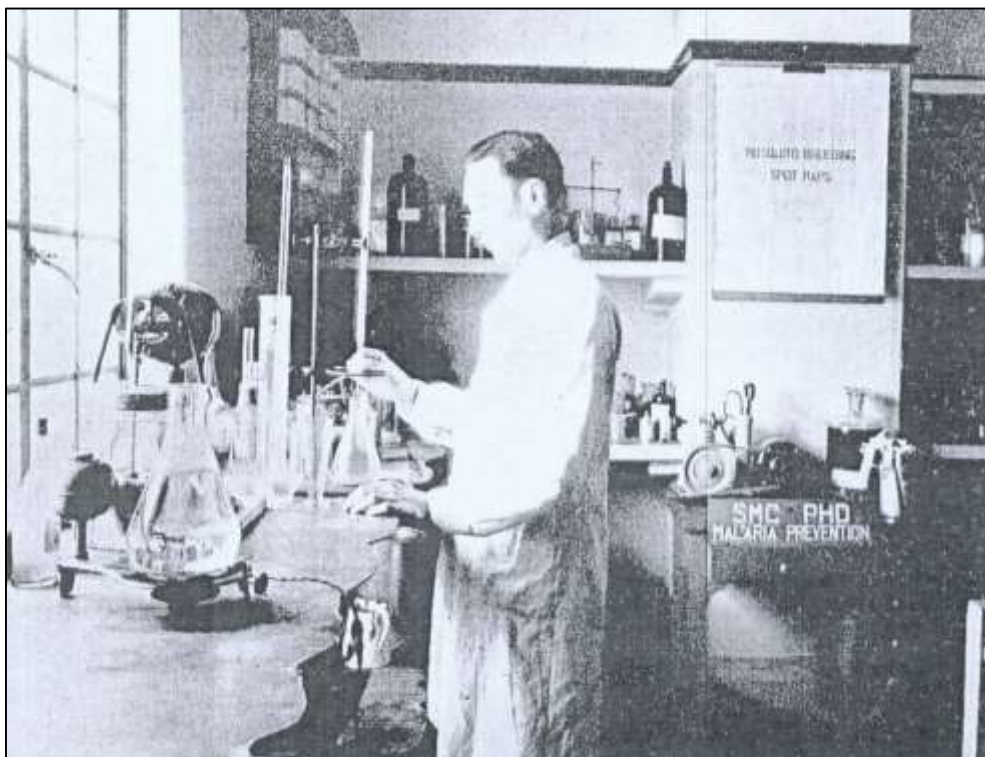


Figure 27. A corner of the M.P.U. experimental laboratory, ca. 1939.
Note 'Mosquito Breeding Spot Maps' on the wall to the right.¹⁵⁹

Silvey, like Jackson in Hong Kong, emphasised the importance of developing the expertise of both his permanent and temporary staff. He ensured that all the inspectorial staff possessed a copy of "Staff Memoranda: B26 – Mosquito Reduction: Campaign 1937", which detailed the M.P.U.'s activities. Further literature could be loaned on request. He also gave clear instructions as to his inspector's responsibilities towards their respective native staffs:

¹⁵⁶ Silvey to Veit, 15 Feb. 1937, SMA, U1/16/2700, 7-10.

¹⁵⁷ See Jordan, *Annual Report 1936*, SMA, U1/16/4656, 78. Maps of these various sites were compiled and kept by the Public Health Department. Jordan to Chief Health Inspectors, 15 Aug. 1936, SMA, U1/16/2736, 23.

¹⁵⁸ The department began selling them from 1937 and instituted a small transportation charge in 1941. Jordan, *Annual Report 1936*, SMA, U1/16/4656, 78; J. H. Jordan, *Shanghai Municipal Council. Public Health Department. Annual Report 1939* (Shanghai: North-China Daily News & Herald, Ltd., 1940), SMA, U1/16/4656, 57; Silvey, "Notes for the Information of the Malaria Prevention Staff", 6 May 1937, SMA, U1/16/2700, 24; Silvey to Jordan, 7 July 1941, SMA, U1/4/704, 22.

¹⁵⁹ H. Crozier Faulder, "Malaria Prevention with Special Reference to Shanghai," *The China Journal* 30, no. 5 (1939): 310a.

Native Staff should be taught to identify mosquito larvae and to distinguish anopheline from culicine. They should also be taught the reason for spraying larvicide, not to waste larvicide and to treat all equipment with care, to recognise potential anopheline breeding places...to report existence [*sic*] of stagnant water and other sources of mosquito breeding, to be polite to the public, not to enter private grounds or houses unless accompanied by the Cadet or Overseer, to keep their uniforms clean and to be conversant with the information contained on mosquito handbills.¹⁶⁰

Silvey also held weekly meetings at which the M.P.U. Inspectorial Staff could “discuss difficulties, methods, improvement of routine measures, equipment efficiency and malaria control generally” to ensure the effectiveness of the anti-mosquito campaign.¹⁶¹ The increasing number of ponds under surveillance, for instance, necessitated a specialist sub-unit. Initially one of the Unit’s mosquito coolies was trained to monitor and stock all the private ponds in the Western District; by 1940 the Unit had its own dedicated “Ornamental Pond Squad”, which was later mounted on bicycles¹⁶²

Some residents resented the Malaria Prevention Unit’s intrusiveness. For example a Mr. Turner of Haiphong Road – a road in the Western district only a handful of streets away from the Brennan Road Emergency Leprosarium – complained that these regular visits were a waste of time, and he informed the P.H.D.: “I shall be glad if they keep out altogether”.¹⁶³ M.P.U. Junior Inspector Woo conceded that the weekly inspection of private ornamental ponds was admittedly “futile” in Turner’s case, but lamented that this was “an example of the ingratitude and lack of appreciation of Malaria Prevention Work shown by the public”.¹⁶⁴ Jordan empathised with Woo, and requested the Commissioner of Public Works – an “old friend” of Turner’s – to “persuade him to be a little more reasonable”:

I consider Mr. Turner is showing an ungrateful state of mind and I am inclined to take some steps to make him realise that he is not entitled to get [mosquito] fish for nothing and then make himself objectionable, but I thought you might persuade him to be a little more reasonable. You might let me know what you think, as I am strongly inclined to see what can be done in regard to Mr. Turner’s stagnant water.¹⁶⁵

Obviously fish were not the principal means of combatting malaria-carrying mosquitoes in the Settlement, and Jordan admitted that they were “a somewhat capricious method of mosquito control”.¹⁶⁶ But the distribution of mosquito-fish was nevertheless considered integral to the M.P.U.’s management of the disease, reflecting the urban nature of the Settlement’s environment.

¹⁶⁰ Silvey, “Notes for the Information of the Malaria Prevention Staff”, 6 May 1937, SMA, U1/16/2700, 24.

¹⁶¹ *Ibid.*, 24.

¹⁶² Silvey to Jordan, 2 Mar. 1939, SMA, U1/16/2693, 45. Silvey to Jordan, 31 Oct. 1940, SMA, U1/16/4607, 14; Silvey to Stoddart, 1 May 1941, SMA, U1/16/4607, 30.

¹⁶³ R. C. Turner to (P.H.D.), 29 June 1939, SMA, U1/14/2349, 125.

¹⁶⁴ K. J. Woo to Silvey, 3 July 1939, SMA, U1/14/2349, 126.

¹⁶⁵ Jordan to A. F. Gimson (C.P.W.), 4 July 1939, SMA, U1/14/2349, 124.

¹⁶⁶ “Dr. Jordan’s Paper on ‘Mosquito Larvicidal Measures’”, 3 Feb. 1937, SMA, U1/16/2746, 29.

To the Border and Beyond

The Public Health Department's efforts to tackle mosquito breeding sites on the fringes of the International Settlement and beyond represented the most striking difference between the Settlement's and Hong Kong's management of malaria. Whereas the colonial authorities were reluctant to intervene in the rural New Territories, let alone beyond the colony's borders, Jordan tried repeatedly to enlist Chinese municipal support in the years immediately preceding the outbreak of the Sino-Japanese War. His association with the Shanghai Yacht Club, located to the south-west of the Settlement precipitated his first overture. As the club lay beyond the jurisdiction of Greater Shanghai, Jordan attempted to enlist the support of a local Chinese benevolent association but the initiative ultimately fell through. Undeterred Jordan seized upon the establishment of the Flying Column and the Malaria Prevention Unit in 1936 and 1937 respectively as ideal opportunities to initiate a joint anti-malaria campaign in Chinese territory. His Chinese counterpart's dismissal of both proposals not only hindered the Settlement's efforts to reduce the prevalence of the disease within its own borders, but damaged its relationship with a trans-municipal medical research institution: the Henry Lester Institute.

Jordan increasingly believed that the key to reducing the prevalence of malaria in the International Settlement lay in eradicating malaria-carrying mosquitoes on both sides of the border. His efforts to reduce the threat from tertian malignant malaria from the environs of the Shanghai Yacht Club in the mid-1930s represented an early attempt to tackle the disease beyond the Settlement's borders. A survey of the new mosquito-screened club revealed that malignant malaria, the most dangerous form of the disease, abounded in the neighbouring Chinese villages.¹⁶⁷ Jordan was concerned that the Settlement's pleasure-seeking house boat-frequenting residents would not only be inconvenienced by the disease, but would serve as a reservoir on their return to the Settlement.¹⁶⁸ He believed that the prevalence of malaria near the yacht club presented "an opportunity of doing some interesting research work, both in regard to vectors and possibly in regard to mass treatment".¹⁶⁹ As a member of the Yacht Club himself, Jordan also had a vested interest in reducing the prevalence of the disease.¹⁷⁰ But the Club and its environs lay several miles beyond the Settlement and therefore the department's jurisdiction.¹⁷¹ The club was also beyond the jurisdiction of Dr. Li Ting An, Commissioner of Public Health for Greater Shanghai. Jordan therefore initiated negotiations between the Shanghai Yacht Club and Dr. Huang, who presided over a "Benevolent Society" that operated in the neighbourhood.¹⁷² He successfully convinced the club to agree to supply quinine to the

¹⁶⁷ H. J. Mentor (P.H.D.) to W. K. Dunscombe (P.H.D.), 29 Oct. 1934, SMA, U1/16/2625, 2-5.

¹⁶⁸ Jordan to (Press Information Officer), 7 Oct. 1935, SMA, U1/16/2625, 14.

¹⁶⁹ Jordan to H. G. Earle (Director, Henry Lester Institute), 28 Sept. 1935, SMA, U1/16/2625, 17.

¹⁷⁰ See Jordan to N. D. Lloyd (Hon. Sec., Shanghai Yacht Club), 4 Oct. 1935, SMA, U1/16/2625, 29.

¹⁷¹ Jordan to Li Ting An, (C.P.H., Shanghai City Government), 28 Sept. 1935, SMA, U1/16/2625, 19.

¹⁷² The society was the 'Association for the Improvement of the Rural Districts of Shanghai'. Huang was also a member of the railway medical service. Jordan to Lloyd, 4 Oct. 1935, SMA, U1/16/2625, 29-30; Jordan to Li Ting An, 4 Oct. 1935, SMA, U1/16/2625, 21. For an account of the Association's anti-malaria activities see T. L. Su and T. F. Huang, "Malaria as a Rural Social Problem in the South-Western Suburbs of Shanghai," *Chinese Medical Journal* 51 (1937): 963-70.

club's members and to the villages in the area.¹⁷³ This represented the Settlement's first and only attempt to manage the disease through the wide-scale distribution of quinine. Jordan also persuaded the medical staff of Huang's association to agree to visit the club on a regular basis. Unfortunately these negotiations fell through because Huang considered the club's relative geographical isolation too inconvenient to be included on the society's weekly rounds.¹⁷⁴ The Yacht Club therefore had to content itself with displaying "Precautions against Malaria", a notice produced especially for the Club by the Public Health Department.¹⁷⁵

The inauguration of the Flying Column the following year presented the Public Health Department with a fresh opportunity to initiate a joint anti-malaria campaign with the Chinese authorities, this time on a much broader scale. The Nationalist Government had only recently begun to conduct local investigations into the prevalence of the disease as part of its efforts to build a modern health system.¹⁷⁶ For instance Dr. L. C. Feng's investigation into the mosquito-borne transmission of *Wuchereria bancrofti* (roundworm) at Woosung, a small town fourteen miles downriver from the International Settlement, represented the Nationalist Ministry of Health's first mosquito survey in the Shanghai area.¹⁷⁷ This nascent local interest coincided with a gradual rapprochement between the Settlement's Public Health Department and the Nationalist government. Jordan, for instance provided the Nationalist Health Administration in Nanjing – the same administration with whom Hong Kong's Malaria Bureau exchanged specimens – with information about the habitat preferences of his department's mosquito-eating fish.¹⁷⁸ Word soon spread from Nanjing to the Bureau of Entomology in Hangzhou, and later to the Zhejiang Provincial Fisheries Experiment Station.¹⁷⁹ As well as supplying information and specimens, the Public Health Department also arranged for a number of Chinese officials to observe the Settlement's anti-malarial activities first-hand.¹⁸⁰ Following the Flying Column's successful trials in the summer of 1936, Jordan felt that the time was finally "ripe" for an official overture towards the Chinese municipal health authorities.¹⁸¹

¹⁷³ Jordan, "Notes: Interview – Dr. Huang, Malaria", 8 Oct. 1935, SMA, U1/16/2625, 51. Jordan calculated the cost at between \$362 and \$526. Jordan to Lloyd, 7 Oct. 1935, SMA, U1/16/2625, 35-37.

¹⁷⁴ T. F. Huang to Jordan, 12 Oct. 1935, SMA, U1/16/2625, 42; Jordan to Lloyd, 14 Oct. 1935, SMA, U1/16/2625, 41.

¹⁷⁵ Jordan to Lloyd, 5 Oct. 1935, SMA, U1/16/2625, 31, 35.

¹⁷⁶ Ka-che Yip, "Antimalarial work in China: a historical perspective," *Parassitologia* 40, nos. 1-2 (1998), 29-30.

¹⁷⁷ Feng was a noted medical entomologist in the Peiping Union Medical College's Division of Parasitology who, as we saw in the previous chapter, exchanged information with Hong Kong's Malaria Bureau. Lan-Chou Feng, "*Anopheles hyrcanus* var. *sinensis* Wied., Transmitter of *Wuchereria (Filaria) bancrofti* in Woosung District, Shanghai, China," *American Journal of Epidemiology* 14, no. 2 (1931): 502-14.

¹⁷⁸ Jordan, C.P.H. to S. K. M. Hu (National Health Administration), 15 June 1932, SMA, U1/16/2703, 26.

¹⁷⁹ G. P. Yung (Director, Bureau of Entomology, Hangzhou) to Jordan, 2 May 1934, SMA, U1/16/2703, 39; T. P. Chen (Director, Zhejiang Provincial Fisheries Experiment Station) to Jordan, 11 May 1936, SMA, U1/16/2703, 113.

¹⁸⁰ Jordan to Hu, 20 June 1932, SMA, U1/16/2703, 30; Jordan to Ling, 30 Oct. 1936, SMA, U1/16/2703, 84; T. Hsian Wang to Jordan, 12 Dec. 1936, SMA, U1/16/2703, 88.

¹⁸¹ Jordan to (Sec., S.M.C.), 23 Sept. 1936, SMA, U1/16/2697, 3-4.

He was optimistic that Li Ting An, his Chinese counter-part, would readily appreciate the mutual benefits of such a campaign:

It occurs to me that it might be practicable for us to cooperate fruitfully in [the deployment of the Flying Column], particularly if it were possible for a Liaison Officer to be detailed to work at certain periods with the Squad when the areas to be attended to are areas over which control is divided, or else is under the control of the Shanghai City Government. The Settlement would benefit by a diminution of Malaria, and the City Government would benefit by not having to spend sums of money on oil, apparatus etc. to attend to areas not largely populated, and would thus be enabled to concentrate on areas inhabited by ratepayers.¹⁸²

Jordan identified two areas of concern (see map 13). The first lay along the Settlement's north-eastern extremity, in the vicinity of the Japanese-owned Kung Dah Cotton Mill.¹⁸³ The majority of the site lay beyond the Settlement's border even though the mill technically lay within the Shanghai Municipal Council's jurisdiction.¹⁸⁴ The second area of concern was the land to the west of the Settlement as far as the railway line. The area officially lay beyond the Settlement's borders, but in reality was regarded as the fourth Western sub-district (4W). The Public Health Department's district mosquito squads had been operating in this extra-Settlement district since the early 1930s and many of the ornamental ponds under the department's (and later the M.P.U.'s) surveillance lay in this district. Jordan's request for co-operation principally concerned the outer extremities of this sub-district, notably along the Shanghai-Hangzhou railway line and in the vicinity of Tunsin and Yu Yuen Roads. Dr. Li's assertion that the Chinese Municipality already had the matter in hand came as a disappointing response.¹⁸⁵

The establishment of the Malaria Prevention Unit the following year reopened the possibility of conducting an extensive joint anti-mosquito campaign beyond the Settlement's borders. Silvey proposed deploying the M.P.U.'s mobile units much further to the west of the Settlement, from the 4 Western sub-district as far as Monument Road, as well as to the north of the Kung Dah Cotton Mill (see map 13).¹⁸⁶ Silvey's proposal came on the very eve of war. He secured permission from a Colonel Tang for the M.P.U. to operate in the 4 Western sub-district, i.e. within the railway line, to prevent his squads' spraying equipment and bicycles

¹⁸² Jordan to Li Ting An, 11 Nov. 1936, SMA, U1/16/2697, 14.

¹⁸³ The Mill's medical officer, Dr. Shimidzu, had drawn the Public Health Department's attention to the high prevalence of malaria the year before. "Translation of Letter from Kung Dah No. 1 Cotton Mill", 28 May 1935, SMA, U1/16/2626, 21.

¹⁸⁴ S. Koyama (P.H.D.) to H. G. Brewster-Gow (P.H.D.), 29 May 1935, SMA, U1/16/2626, 23. Jordan tried to persuade the Chinese municipal authorities to take the matter in hand themselves in 1935, but when his overtures proved unsuccessful he instructed his department to eliminate all the breeding sites in the immediate vicinity of Mill, notably by stocking the nearby rice fields with mosquito-eating fish, "with as little publicity as possible". The Public Health Department's assistance was largely limited to the provision of mosquito-eating fish. Jordan to Li Ting An, 11 June 1935, SMA, U1/16/2626, 32; Brewster-Gow to Jordan, 3 July 1935, SMA, U1/16/2626, 42-43.

¹⁸⁵ "Translation of Despatch No.8895 to the Public Health Department from Dr. Li Ting An", 9 Dec. 1936, SMA, U1/16/2697, 17.

¹⁸⁶ Silvey to Jordan, 1 Mar. 1937, SMA, U1/16/2700, 19.

from being confiscated.¹⁸⁷ Meanwhile Jordan tried once again to secure Chinese support for a joint venture, to the northeast of the Settlement in the vicinity of the Kung Dah Cotton Mill and to the west *beyond* the railway line as far as Monument Road. Jordan emphasised the “steady growth of malaria throughout Shanghai” and highlighted the technical superiority of the Malaria Prevention Unit’s apparatus.¹⁸⁸ Rather than agreeing to Jordan’s request for co-operation, Li opposed the deployment of the M.P.U. in Chinese territory and made it adamantly clear that the Settlement’s borders clearly demarcated its sphere of responsibility.¹⁸⁹ Jordan’s subordinates actually translated Li’s reply twice: the second was couched in a more diplomatic tone than the first, presumably to avoid provoking Jordan’s notorious and self-professed “Celtic temperament”.¹⁹⁰ Unsurprisingly Jordan considered Li’s responses a “setback”, informing the Shanghai Municipal Council that Li’s “so-called squads will be unable to deal with the matter at all, and it is, therefore, quite obvious that the whole matter is merely a political move”.¹⁹¹ Reports from his staff allegedly ‘confirming’ the ineffectiveness of the Chinese anti-mosquito squads aggravated Jordan further.¹⁹² To make matters even worse, residents in the western extra-Settlement area that was to be included in the joint-operation complained to the Department about the prevalence of mosquitoes.¹⁹³ Jordan dramatically informed the S.M.C. Secretary:

Unless I receive some assurance [from Dr. Li Ting An] that this work is actually to be done, I really must inform the Council officially that I cannot be held in any way responsible, should Malaria get out of hand....

It will, I think, be fairly evident that the logical thing to do is to kill the mosquitoes or their larvae, rather than find out for the “nth” time where they are, and since even our resources fall lamentably short of this desideratum, I feel that to allow the *laissez-faire* attitude of the Chinese authorities to continue might possibly result in a catastrophe, though of course that would depend on the luck of the town.¹⁹⁴

Jordan hoped to pressure Li into conceding that the Chinese authorities were woefully under-prepared to deal with the situation without the Settlement’s help by detailing how complex, extensive and expensive the Settlement’s anti-malarial operations were.¹⁹⁵ But the S.M.C.

¹⁸⁷ *Ibid.*, 19.

¹⁸⁸ Jordan to Li Ting An, 22 Mar. 1937, SMA, U1/16/2697, 28-29.

¹⁸⁹ “Translation of Despatch No.7312 to Public Health Department, S.M.C. from Dr. Li Ting An”, 23 Mar. 1937, SMA, U1/16/2697, 32.

¹⁹⁰ “Translation of despatch No. 7362 to Public Health Department from Bureau of Public Health: Mosquito extermination”, 8 Apr. 1937, SMA, U1/16/2697, 37; Li Ting An to Jordan, 8 Apr. 1937, SMA, U1/16/2697, 41. Jordan acknowledged his infamous outbursts in a private letter to the S.M.C.’s Secretary. Jordan to Phillips, 30 July 1940, SMA, U1/16/2695, 4.

¹⁹¹ Jordan to Phillips, 13 Apr. 1937, SMA, U1/16/2697, 43.

¹⁹² Silvey to Jordan, *ca.* Apr. 1937, SMA, U1/16/2697, 46.

¹⁹³ For an example of the complaints see the department’s correspondence with Mr. H.C. Eustace of the Imperial Chemicals Industries (China). SMA, U1/16/2760, 89-92.

¹⁹⁴ Jordan to Phillips, 15 Apr. 1937, SMA, U1/16/2697, 38.

¹⁹⁵ Jordan sarcastically “presumed” that Dr. Li Ting An would assume responsibility for: dealing with “several hundred” requests from the general public; replenishing the cit’s ponds with some 8,000 to 10,000 mosquito fish per year; spraying 800 gallons of concentrated solution at \$1,000 per month over 25,000 sq. yds of creeks, 2,500 sq. yds. of swamps, and 35,700 sq. yds. of ponds. And that was

Secretary considered Jordan's draft letter inappropriate, and he was forced to send a simple formal acknowledgement instead.¹⁹⁶

Relations between the two public health authorities deteriorated to such an extent that the Settlement's anti-malarial units began operating covertly. Jordan was alarmed by reports that an M.P.U. squad operating in the 4 Western sub-district, i.e. the extra-Settlement area that lay within the railway line, was wearing distinctive departmental uniforms: "would [it] not be preferable for outlying areas to be handled 'in mufti'???" (figs. 28 and 29).¹⁹⁷ Silvey's response was striking, and bears reprinting in full:

Whilst agreeing that it would seem the best policy for our Mosquito Coolies to avoid wearing distinctive uniforms while employed in 4 Western, it is felt that this practice might eventually weaken our position, in that the public in missing our familiar uniformed Staff may obtain the impression that the work was being conducted by the Greater Shanghai City Government and the latter authority obtain credit where none was really due.

With all due respect to the Greater Shanghai Public Health Dept. officials it is considered that we would be playing into their hands if we adopted the policy of hiding our light under [sic] a bushel. In this respect, and in an effort to cope with the Malaria problem, we might put our own feelings in the matter aside and suggest to the Greater Shanghai Health authorities that we conduct the work with our Staff wearing the uniforms, if any, of the Greater Shanghai Public Health Department.

In the meantime the wearing of uniforms has been stopped and I further propose to take the present foreign Overseer off the 4 Western job and replace him with a [Chinese] Cadet. The fact that the 4 Western Mosquito Staff was entirely Chinese might eliminate possibility of trouble and be of interest to the Commissioner of Public Health of Greater Shanghai.¹⁹⁸

Silvey was clearly dedicated to eradicating malaria by any means possible. As well as working covertly in the 4 Western sub-district, Silvey informed his superiors that the activities of the Chinese Municipality's anti-mosquito staff would be "closely, and discreetly, followed".¹⁹⁹

simply for the annual summer campaign. Jordan to Li Ting An, draft, 15 Apr. 1937, SMA, U1/16/2697, 50-51.

¹⁹⁶ G. Turnbull (Sec., P.H.D.) to Jordan, 17 Apr. 1937, SMA, U1/16/2697, 47; Jordan to Li Ting An, 19 Apr. 1937, SMA, U1/16/2697, 52.

¹⁹⁷ Emphasis in the original. Turnbull to Veit and Silvey, 3 May 1937, SMA, U1/16/2695, 100.

¹⁹⁸ Silvey to Jordan, 3 May 1937, SMA, U1/16/2695, 101.

¹⁹⁹ Silvey to Jordan, 8 June, 1937, SMA, U1/16/2697, 53. This small squad was observed "dipping for mosquito larvae" for the very first time; Cadet Waung reported that the squad did not have any spraying equipment. The Chinese-language *Shun Pao* newspaper reported that the Shanghai City Government's "Mosquito and Fly gang" consisted of twelve sanitary coolies and a sanitary engineers. C. M. Zao, "Trans. of "Article on Mosquito & Fly Prevention Work by the S'hai City Government in the 'Shun Pao'", ca. 9 June 1937, SMA, U1/16/2697, 54.



Figure 28 & 29. The distinctive Public Health Department uniforms, *ca.* 1936-39.²⁰⁰

Li Ting An's refusal to support a joint anti-malaria campaign not only impacted on Jordan's perception of the Chinese medical authorities (and their anti-malaria efforts) for the worse, it soured Jordan's close relationship with the Henry Lester Institute. The Institute, which was located in the Settlement's Western district on Avenue Road, was formally inaugurated in 1932.²⁰¹ From the outset the Institute's Division of Pathological Sciences focused its entomological research on the vectoral role of mosquitoes in the transmission of filariasis and malaria.²⁰² Dr. Robert C. Robertson, the man who would later criticise the Chinese

²⁰⁰ Jordan, *Annual Report 1936*, SMA, U1/16/4656, 12; Faulder, "Malaria Prevention," 310a.

²⁰¹ Henry Lester Institute of Medical Research, *Untitled annual report*, (Shanghai, 1934), 10-13.

²⁰² For instance Stephen M.K. Hu built on Feng's research into the mosquito-borne transmission of roundworm at Woosung. See bibliography. After completing a Doctor of Science at John Hopkins

Mission to Lepers for its handling of the evacuation of the National Leprosarium in the autumn of 1937, headed this division. Robertson and his entomological staff developed a close working relationship with Jordan and his Public Health Department by the early 1930s. On the one hand, the Settlement's Public Health Department drew on the division's specialist knowledge by sending in mosquito specimens for positive identification.²⁰³ Robertson subsequently provided Jordan with a selection of all the mosquitoes that were common to the Shanghai area, which Jordan mounted in a glass-fronted case in the Public Health Department's library for the benefit of his staff.²⁰⁴ On the other hand, Jordan agreed to investigate the mosquito nuisance at the home of Robertson's friends on Lucerne Road, a small lane one kilometre south of the Brenan Road Emergency Leprosarium, in return for copies of the Institute's scientific papers on mosquitoes.²⁰⁵

Jordan was therefore fully supportive of Robertson's proposal to relocate the Institute's Field Entomological Station from Kao-chiao in Pudong (i.e. to the west of the Settlement across the Huangpu River) to the Millington Boy Scouts Camp, which lay to the west of the railway line on Hungjao Road.²⁰⁶ For one thing the camp's proximity to the Settlement ensured that the research would be beneficial to Jordan's department. The selection of the Millington Camp was doubly convenient: Silvey was Assistant Commissioner for the Boy Scouts Association.²⁰⁷ At Silvey's request, Robertson provided a "simple non-technical article" about the proposed experiments for *The Totem: Official Organ of Shanghai Scouting* in which he compared the Institute to "the Scouts of Medical Science".²⁰⁸ Thus the Settlement's M.P.U. worked in close co-operation with the Institute's field station through May 1937, providing details about notified cases of malaria amongst the local municipal tax-paying residents, and Jordan himself was fully supportive of Robertson's work.²⁰⁹

University, Hu briefly worked with the Chinese Republic's National Health Administration in Nanjing as a medical entomologist before joining the Henry Lester Institute in 1933. Hu first contacted Jordan regarding the use of mosquito fish during his time in Nanjing.

²⁰³ See Jordan to Robertson, 4 Sept. 1935, SMA, U1/16/2739, 32. The Division also provided copies of its reports. Jordan to Robertson, 25 May 1936, SMA, U1/16/2739, 55.

²⁰⁴ Jordan to Robertson, 25 Sept. 1935, SMA, U1/16/2739, 25.

²⁰⁵ Robertson to Jordan, 27 May 1936, SMA, U1/16/2626, 95; Jordan to Roberts, 2 June 1936, SMA, U1/16/2626, 96-99.

²⁰⁶ Robertson to Jordan, 2 Dec. 1936, SMA, U1/16/2736, 75-77; Jordan to Robertson, 12 and 31 Dec. 1936, SMA, U1/16/2736, 80, 83. The Institute established the Field Entomological Station at Kao-chiao in the spring of 1933 with the support of Dr. Li Ting An and the local Chinese authorities. See R. C. Robertson, Stephen M. K. Hu and R. V. Dent, "Mosquito Control: An Entomological Field Research Station in the Shanghai District," *China Journal* 20, no. 6 (1934): 344-56; Daniel G. Lai, Yu-Jen Li and Wei Chang, "A Malaria Survey in Kao-Chiao, Shanghai," *Chinese Medical Journal* 49 (1935): 462-69.

²⁰⁷ Jordan to Robertson, 12 Dec. 1936, SMA, U1/16/2736, 80.

²⁰⁸ In true scouting fashion Robertson explained that the experiment's objective was to "spy out the situation, with regard to the enemy, in this case mosquitoes" and report back to the "main combatant forces", namely the public health authorities. Silvey to Robertson, 11 Mar. 1937, SMA, U1/16/2736, 36; R. C. Robertson, "Mosquitoes," *Totem: Official Organ of Shanghai Scouting* 7, no. 7 (May 1937): 122-123, 122.

²⁰⁹ Robertson to Jordan, 29 Mar. 1937, SMA, U1/16/2736, 88; Silvey to Robertson, 4 June 1937, SMA, U1/16/2736, 93; Jordan to Robertson, 31 May, 1937, SMA, U1/16/2736, 89-90

This support quickly evaporated following Li Ting An's refusal to support the deployment of the Settlement's newly-inaugurated Malaria Prevention Unit in the Hungjao area beyond the railway line as part of a joint anti-malaria campaign. Robertson called a meeting with Jordan in the hope of persuading the Public Health Department to pay for a doctor to treat the malaria cases that Robertson's staff uncovered in the Hungjao area.²¹⁰ Jordan refused, informing Robertson that the Public Health Department had been "'warned off' the areas" in question by the Chinese health authorities and that he "failed to understand how he could be of any assistance" to Robertson.²¹¹ Robertson dismissed Jordan's suggestion that the Institute turn to the Chinese authorities for support by stating that they had already done so but that the man sent by Li Ting An had provided had been "found tactless at work, and more of a nuisance than a help amongst the villagers".²¹² A heated exchange rapidly ensued between the two men:

The Commissioner reiterated that this did not concern the P[ublic] H[ealth] D[e]partment and asked whether he (Dr. Robertson) expected us, after having been snubbed by Dr. Li to pursue the latter, begging for co-operation, or what?...

Dr. Robertson suggested that in any event, the Public would no doubt blame the Department for not taking more vigorous steps, whereupon the Commissioner replied that in such a case he would not have the slightest hesitation in releasing for publication all of the documentary evidence, which would the truth quite clear to the Public [*sic*].²¹³

Despite Jordan's protestations, the Public Health Department was caught between a rock and a hard place. On the one hand the Chinese authorities refused to allow them to operate to the west of the railway lines. On the other, as Silvey pointed out, the department was in "an unenviable position" because it was unable to satisfy the expectations of Hungjao's municipal tax-paying residents.²¹⁴ Duck, who assumed Jordan's duties following the latter's departure on leave later that month, was reluctant to exacerbate the situation further. He asked Hungjao's residents not to disclose the department's statements regarding "the restriction of our activities outside the Settlement" because "it may be misconstrued and possibly impair existing friendly relations with the City Government Administration which we are anxious to maintain".²¹⁵ Silvey actually began to assist Dr. S. K. M. Hu of the Institute with one of his experiments at the Millington Camp.²¹⁶ But the outbreak of the Sino-Japanese war and the Battle of Shanghai permanently disrupted the Institute's work and rendered the question of the Public Health Department's support moot.

²¹⁰ Robertson to Jordan, 11 June 1937, SMA, U1/16/2736, 94; "Malaria Prevention – Extra-Settlement Areas: Notes on round-table conference", 16 June 1937, SMA, U1/16/2697, 56-57, 56.

²¹¹ "Malaria Prevention – Extra-Settlement Areas: Notes on round-table conference", 16 June 1937, SMA, U1/16/2697, 56.

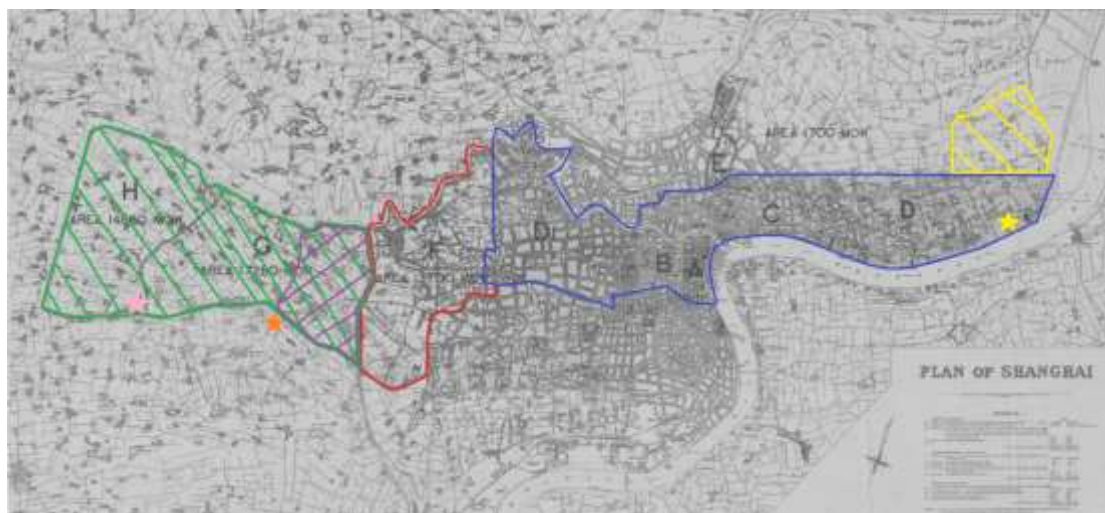
²¹² *Ibid.*, 56.

²¹³ *Ibid.*, 57.

²¹⁴ Silvey to Veit, 2 July 1937, SMA, U1/16/2626, 120.

²¹⁵ Duck (Actg. C.P.H.) to Hickmott (Assist. Mgr., Shanghai Land Investment Co.), 3 July 1937, SMA, U1/16/2760, 104. The Land Investment Company had complained about the prevalence of mosquitoes on Kinnear Road, in the 4 Western sub-district. See SMA, U1/16/2760, 99-107.

²¹⁶ The experiment was terminated abruptly. Silvey to Jordan, 20 May 1938, SMA, U1/16/2736, 102.



Map 23. A Trans-Municipal Approach to Malaria Prevention, 1936-42.²¹⁷

The International Settlement is outlined in blue and the 4 Western sub-district in red. The Kung Dah Cotton Mill is shaded in yellow (the star denotes the mill building) whilst the Hungjao area from the 4 Western sub-district west as far as Monument Road is shaded green (this area comprised Jordan's proposed joint-campaign for 1937). Silvey was only able to deploy his M.P.U. squads in a portion of this area in 1940, namely as far as Warren Road (shaded purple). The Millington Boy Scouts Camp, which served as the Henry Lester Institute's Field Entomological Research Station is starred orange, and the Hungjao Golf Club is starred pink.

The Sino-Japanese War and the Western Extra-Settlement Areas

The outbreak of the Sino-Japanese War and the encirclement of Shanghai by Japanese troops impacted upon the Malaria Prevention Unit's operations along the Settlement's eastern and western extremities. The economic ramifications resulted in an immediate reduction of the M.P.U.'s staff: Silvey was only able to deploy three district mosquito squads, primarily in the Western district, in 1938.²¹⁸ The M.P.U.'s mobile squad, which now consisted of an Austin 7 accompanied by five coolies on bicycles, was initially confined to the Western District though Silvey hoped to secure the necessary passes from the Japanese authorities to operate in the vicinity of the Kung Dah Cotton Mill in the 6 Eastern sub-district (fig. 30 and map 13).²¹⁹ The following year the M.P.U. actually secured permission from the Japanese authorities to operate to the west of the railway line, i.e. well into occupied-territory.²²⁰ Silvey took the initiative to apply for passes to enter the area, arguing that "apart from the

²¹⁷ Source of map: <http://nla.gov.au/nla.map-brsc47>.

²¹⁸ One overseer and nine coolies were deployed with 4 haversack sprayers in the 4 Western sub-district, whilst one foreman and six coolies equipped with 4 haversack sprayers were tasked to cover 1, 2 and 3 Western sub-districts. The M.P.U.'s activities in the Eastern district was limited to two coolies with haversack sprayers in the 6 Eastern sub-district only. No measures were taken in any of the 5 other Eastern sub-districts, nor in the Northern or Central sub-districts. Silvey to Jordan, 30 May 1938, SMA, U1/16/2699, 53-54.

²¹⁹ Silvey to Jordan, 30 May 1938, SMA, U1/16/2699, 53.

²²⁰ A request for assistance from the Hungjao Area Association prompted this move. K. M. Cumming to Jordan, 24 May 1939, SMA, U1/16/2624, 70.

desirability, or otherwise, of working in the area for political reasons”, the passes would enable his staff to tackle breeding sites in the vicinity of military outposts and to conduct further experiments.²²¹ He dispatched his subordinate Woo to survey the land running immediately parallel to the railway line and the areas either side of Hungjao Road in the vicinity of municipal tax-paying residents.²²² But the M.P.U. crucially failed to secure this permission in writing, as recommended by the S.M.C.’s Treasurer.²²³ The fresh contingent of Japanese troops who replaced those stationed in the area refused Silvey’s staff permission to operate west of the railway line. The matter “was not pressed” because of “the prevailing anti-British and anti-S.M.C. agitation” and because rumours circulated that the Japanese lieutenant who had verbally assured Silvey that the M.P.U. would not be obstructed had been shot.²²⁴ Moreover the Japanese authorities had recently apprehended some of the Public Health Department’s vehicles.²²⁵ The Unit’s troubles did not end with its retreat within the confines of the railway line. By now French troops patrolled the southern portion of the 4 Western sub-district adjacent to the French Concession. These troops refused to allow the M.P.U. to respond to complaints from local residents without written permission from the French Municipal Council.²²⁶ The Public Works Department were similarly barred from taking any action to abate the mosquito nuisance.²²⁷ Jordan suggested that the French authorities would be more amenable once they discovered that the Chairman of the Shanghai Municipal Council resided within the area in question.²²⁸

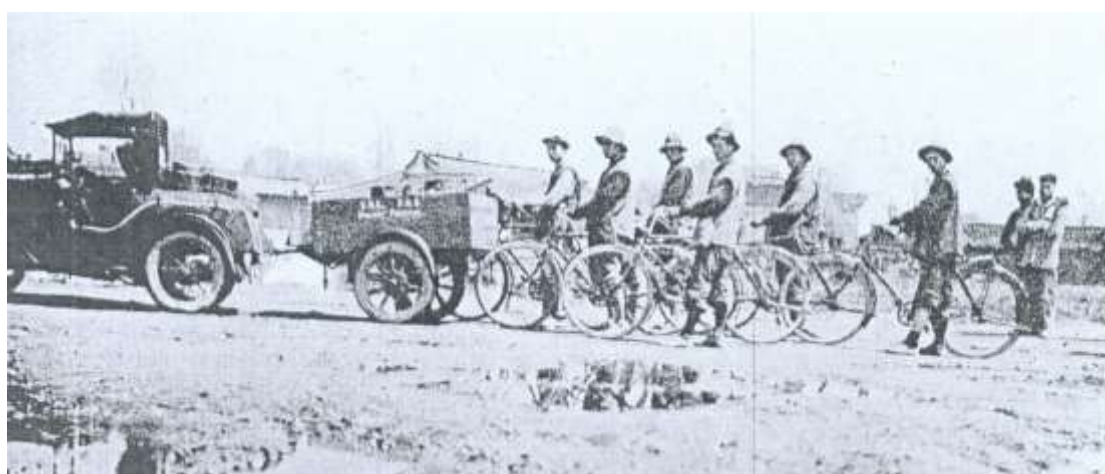


Figure 30. The Flying Column: the Austin 7, Trailer Pump and Five Mounted Mosquito Coolies.²²⁹

²²¹ Silvey to Jordan, 26 May 1939, SMA, U1/16/2624, 71.

²²² Silvey to C. A. E. Carr (Actg. Sec., P.H.D.), 13 July 1939, SMA, U1/16/2624, 75.

²²³ J. T. Ford (Treasurer, S.M.C.), 8 June 1939, SMA, U1/16/2624, 72.

²²⁴ Silvey to Jordan, 30 Aug. 1939, SMA, U1/16/2624, 77. Silvey’s superior minuted that the Japanese lieutenant had merely been sick and was back on duty. Jordan nevertheless advised his staff to drop the matter.

²²⁵ Jordan to G. G. Phillips (Sec. & Com. Gen., S.M.C.), 27 Apr. 1940, SMA, U1/16/224, 81.

²²⁶ Silvey to Jordan, 26 and 30 Aug., SMA, U1/16/2700, 95, 91.

²²⁷ N. W. B. Clarke (Deputy C.P.W.), to Jordan, 8 Sept. 1939, SMA, U1/16/2700, 93.

²²⁸ Jordan to Phillips, 1 Sept. 1939, SMA, U1/16/2700, 90.

²²⁹ Faulder, “Malaria Prevention,” 306a.

The prospect of deploying the Malaria Prevention Unit's squads to the west of the railway line in 1940 initially appeared bleak. In response to a renewed appeal for assistance from the Hungjao Area Association, a local residents' association, Silvey was forced to concede that he lacked the resources to adequately control the situation within the Settlement, let alone beyond its borders.²³⁰ As well as expressing concern about the prospect of fresh confiscations, Jordan highlighted the enormity of the challenge of dealing with the "thousands of acres of water" to the west of the railway line:

To properly undertake the work in this area is a stupendous task as may be judged from the difficulties which the American nation had when tackling the Panama Canal, which went through a similar watery country.²³¹

Matters had changed by the summer. An improvement in the drainage operations in the Eastern district enabled the M.P.U.'s two mobile units – a squad with a van and a squad with a hand-powered trailer pump – to be redeployed in the Hungjao area. Jordan recommended detailing one of the Department's Japanese Inspectors to oversee the unit's work as he was still "a little nervous of the re-action [*sic*] of the Japanese military".²³² The Shanghai Municipal Council successfully petitioned the Japanese authorities, and "after considerable negotiation" both mobile units were permitted to operate to the west of the railway line as far as Warren Road (see map 13).²³³ Silvey tempted fate with his reports that neither the Japanese military nor the local Chinese authorities interfered with the M.P.U.'s mobile units: one of the hand-powered trailer pumps was detained by the Japanese authorities in the 4 Western sub-district less than a fortnight after he announced that this squad was due to be withdrawn from the Hungjao area.²³⁴ Fortunately the Deputy Commissioner of Public Health for Greater Shanghai negotiated the pump's release, for which Jordan was especially thankful.²³⁵ Despite this inauspicious end to the anti-malaria campaign for 1940, the Malaria Prevention Unit nevertheless continued to deploy its mobile squads in Western extra-Settlement area and beyond the railway line at Hungjao the following year.²³⁶

The Western extra-Settlement area became increasingly volatile under the Chinese puppet administration. Confrontations between the puppet police and the Shanghai

²³⁰ Cumming to Phillips, 23 Apr. 1940, SMA, U1/16/2624, 79; Silvey to Jordan, 26 Apr. 1940, SMA, U1/16/2624, 80.

²³¹ Jordan to Phillips, 27 Apr. 1940, SMA, U1/16/2624, 81.

²³² Jordan to Phillips, (personal), 30 July 1940, SMA, U1/16/2623, 4. During the month of July the M.P.U. deployed the "Dodge-Bulldozer Pump Squad" (i.e. the main mobile unit), 4 knapsack squads (6E, 1-5E, 1-3W, C&N), 1 knapsack and hand-power pump squad (4W), and 1 ornamental pond squad. Silvey to Jordan, 1 Aug. 1940, SMA, U1/16/2607, 3-4.

²³³ Silvey to Jordan, 31 Aug. 1940, SMA, U1/16/4607, 7-8. The M.P.U. was expressly forbidden from operation to the south of Hungjao Road. Silvey to Jordan, 23 Aug. 1940, SMA, U1/16/2626, 129.

²³⁴ Silvey to Jordan, 31 Oct. and 2 Dec. 1940, SMA, U1/16/4607, 14, 17; Silvey to J. A. Stoddart (P.H.D.), 14 Dec. 1940, SMA, U1/16/4607, 124.

²³⁵ Silvey to Stoddart, 14 Dec. 1940, SMA, U1/16/2700, 124; Jordan to C. L. Liu, 17 Dec. 1940, SMA, U1/16/2700, 125; Silvey to Jordan, 3 Jan. 1941, SMA, U1/16/4607, 19.

²³⁶ Silvey to Jordan, 20 Mar. 1941, SMA, U1/16/3108, 47; Silvey to Stoddart, 1 May and 1 July, SMA, U1/16/4607, 29-31, 35-36; Silvey to Jordan, 14 and 26 June, SMA, U1/16/2700, 128-129.

Municipal Police in the “Badlands” became increasingly common.²³⁷ Anti-Settlement sentiment continued to threaten the Malaria Prevention Unit’s activities even after the Settlement negotiated the establishment of the Western Area Special Police Force (W.A.S.P.) early in 1941. For instance an incident involving the Unit’s innocuous ornamental pond squad quickly turned hostile. On June 18th, 1941, Tsang King-kwei, one of the squad’s three coolies, requested permission to inspect a pond at the Loh Kuo Hotel on avenue Haig.²³⁸ According to Silvey “the Coolie, wearing P.H.D. uniform, politely tendered his Identity card for inspection”, whereupon the gate-keeper proceeded to beat him “stating that he intended to beat and kill all S.M.C. employees”.²³⁹ Fortunately for Tsang his companion was able to alert their superiors at the Malaria Prevention Unit. Tsang and the gate-keeper were first taken to the nearby police station – located on the same road as the hotel – but they were all sent on to the W.A.S.P. headquarters because of the gate-keepers’ intimidating threats.²⁴⁰ W.A.S.P. Inspector Wilkinson reported that “both parties accused each other of being aggressive and causing the quarrel”.²⁴¹ Silvey instructed his ornamental pond squad “not to enter premises occupied by W.A. Special Police or political factions” pending the settlement of the assault; the watchman was merely reprimanded by the police.²⁴²

Ironically the outbreak of war resulted in a rapprochement between the Settlement’s medical authorities and the Henry Lester Institute. The Institute’s main building was closed for over a year and many of the foreign staff retired, left China or else did not return from leave; Robertson was invited to join the League of Nations’ Epidemic Commission to China.²⁴³ Consequently the Institute’s diminished research on malaria relied increasingly on the Public Health Department’s support.²⁴⁴ Unable to conduct field research, the Institute switched its focus to examining mosquito breeding habits under urban conditions.²⁴⁵ Silvey and Hu, for instance, began to collaborate on a joint paper in early 1941.²⁴⁶ Meanwhile Silvey’s Malaria

²³⁷ Frederic Wakeman Jr., *The Shanghai Badlands: Wartime terrorism and urban crime, 1937-1941* (Cambridge: Cambridge University Press, 1996), 81-83, 104.

²³⁸ Silvey to Jordan, 19 June 1941, SMA, U1/16/2700, 55; Paul French, *The Old Shanghai A-Z*, (Hong Kong: Hong Kong University Press, 2010), 235. French stated that 346 ave. Haig, referred to in Silvey’s letter, was the Loh Kuo Hotel.

²³⁹ Silvey to Jordan, 19 June 1941, SMA, U1/16/2700, 55-56, 55. The doctor at the Chinese Lester Hospital reported that Tsang had “abrasions over right and left arm and back with one haematoma over the right leg”.

²⁴⁰ Silvey to Jordan, 19 June 1941, SMA, U1/16/2700, 55-56.

²⁴¹ J. E. Wilkinson, “Dispute between P.H.D. coolie and the watchman of Loh Ker Van Tien, Avenue Haig”, 19 June 1941, SMA, U1/16/3108, 153.

²⁴² Silvey to Jordan, 1 July 1941, SMA, U1/16/4607, 36; J. B. Clissold, (Deputy Com., W.A.S.P.F.) to (Shanghai Municipal Police), 30 June 1941, SMA, U1/16/3108, 152; Silvey to J. A. Stoddart (P.H.D.), 5 July 1941, SMA, U1/16/3108, 154.

²⁴³ Robertson returned home to England in October 1937 and then returned to China in early 1938. Henry Lester Institute of Medical Research, *Annual Report 1937-1938* (Shanghai, 1939), 7-8, 38.

²⁴⁴ Henry Lester Institute, *Annual Report 1937-1938*, 57-58.

²⁴⁵ Henry Lester Institute of Medical Research, *Annual Report 1939* (Shanghai, 1940), 39.

²⁴⁶ Silvey to Jordan, 7 Feb. 1941, SMA, U1/16/2624, 87; Silvey to Stoddart, 2 Apr. 1941, SMA, U1/16/4607, 28. The paper was never published. Hu did however publish a series of studies on the susceptibility of different mosquito species to experimental infection with microfilaria in the early 1940s. See Henry Lester Institute of Medical Research, *Report 1941-1945* (Shanghai, 1946), 5-6.

Prevention Unit continued to stock the ponds at the Millington scout camp, which lay well beyond the Settlement's jurisdiction, with mosquito-eating fish.²⁴⁷ Jordan passed on Silvey's warnings about the necessity of additional anti-mosquito measures to the Commissioner of the Shanghai Boy Scouts Association:

I understand that we have already heavily stocked the mosquito ponds in the neighbourhood with anopheline larvae – eating fish but this is only a palliative. Moreover, though I have never been a scout, I believe that one of the features of scouting is to have Fireside Talks, etc., and to go in for exercises long after dusk. This would give the Malaria Mosquito the best possible opportunity to infect and, coupled with the obvious disinclination of small boys to take any trouble about their mosquito nets, makes it practically impossible for me to advise any suitable measures other than the one you do not wish to take, namely the abandoning of the Camp for the summer months.²⁴⁸

Jordan explained that he was hoping to secure a new mosquito repellent from the United States, and that he would be more than happy to let the scouts have some. The fact that the International Settlement's Commissioner of Public Health and the Commissioner of the Boy Scouts Association (Shanghai Branch) were discussing the possibility of importing repellent for the benefit of local campers might seem trivial if it were not for the fact that these discussions took place a little over a month before the Japanese invasion of the Settlement itself.

The Eastern District: The Kung Dah Cotton Mill and the Public Works Department

The Settlement's war-time anti-malaria measures in the Eastern district strained the Public Health Department's relationship with the Public Works Department so severely that the Malaria Prevention Unit was forced to justify its very existence. By now the Public Works Department had been responsible for filling in or draining mosquito breeding sites for more than a decade. As was customary, Silvey compiled lists of the mosquito-breeding sites in the Eastern district that needed to be filled in by the Public Works Department.²⁴⁹ The land around the Kung Dah Cotton Mill, which now lay in occupied territory, remained a focal point of concern. The Settlement's medical authorities identified the mill's employees as "a reservoir [of malaria] for areas within the Settlement".²⁵⁰ The fact that the mill was surrounded by cultivated rice paddies complicated the task of tackling the incidence of the disease: these important mosquito breeding grounds could not simply be filled in. Jordan was nevertheless far from impressed with the P.W.D.'s efforts. In a confidential letter to G. G. Phillips, S.M.C. Secretary & Commissioner General, Jordan complained that the M.P.U. was forced to expend valuable time and expensive resources spraying mosquito breeding sites in the Eastern District

²⁴⁷ Silvey to Jordan, 22 Oct. 1941, SMA, U1/16/2703, 179.

²⁴⁸ Jordan to W. C. Cassels (Com., Boys Scouts), 25 Oct. 1941, SMA, U1/16/2746, 119.

²⁴⁹ Silvey to Jordan, 13 Feb. 1940, SMA, U1/14/2349, 51.

²⁵⁰ Jordan to (Sec. & Com. Gen., S.M.C.), 3 Oct. 1940, SMA, U1/16/2694, 113-115, 114. Health Inspector Yoshisumi reported that of the 249 cases of malaria that occurred in the sub-district in 1939, 180 were employees of the mill. Yoshisumi to (P.H.D.), 24 Apr. 1940, SMA, U1/16/2695, 7.

because the Public Works Department had “so far done absolutely nothing”.²⁵¹ Moreover he was outraged by a report by one of the P.W.D.’s engineers, which “contained remarks reflecting very gravely on my competence, and phrased in somewhat unrestrained language”.²⁵² Jordan sent Phillips a personal letter shortly after the two men had inspected some of the sites together, which though allegedly “pitched in as conciliatory tone as seems possible”, remained highly reproachful of the P.W.D.’s efforts.²⁵³ Jordan was also offended by the suggestion that Silvey had “readily deceived” him about the true extent of the P.W.D.’s efforts.²⁵⁴ Jordan composed an urgent personal letter to Phillips following a report from Silvey to the effect that the P.W.D. had failed to take any action:

You will see that in spite of my having written to you on the subject and in spite of the that fact it is costing the Council \$1,200 a month to do a job which we abolished last year by using eight temporary coolies for a few days, nothing as yet has been done in regard to the rice-fields in the Eastern District. Really, it is too much! A most insulting letter was written about me and read by a Committee in which letter it was stated that a group of unsupervised coolies could do our Malarial work and yet I have to wait until well on into the malaria season for ‘tuppenyha’penny’ rice-field jobs to be finished and at the same time I am requested not to criticise [*sic*].²⁵⁵

Initially Phillips sided with A. F. Gimson, the Commissioner of Public Works, but he soon realised the futility of antagonising either Jordan or Gimson further.²⁵⁶ Instead he proposed a trial compromise which uniquely placed the onus for departmental co-operation on their respective subordinates, namely Silvey and Harbottle.²⁵⁷ Both Jordan and Gimson accepted the Secretary’s proposal, the latter albeit somewhat grudgingly.²⁵⁸

Whilst this compromise proved highly successful, the breakdown in relations between the two departments placed the M.P.U.’s very existence in jeopardy. With both departments’ anti-malaria expenditures under review, the Public Works Department’s filling-in operations appeared to offer the cheapest management of the disease. Jordan claimed that the Settlement’s authorities had come to the conclusion that the M.P.U. “could be abolished or nearly so”.²⁵⁹ At Jordan’s request, Silvey marshalled statistical data demonstrating that the M.P.U. was spraying nearly ten times more land than the P.W.D. was filling in.²⁶⁰ Jordan instructed Silvey to describe the conditions in the Hungjao area and in the north-eastern

²⁵¹ Jordan to (Sec. & Com. Gen., S.M.C.), Confidential, 24 May 1940, SMA, U1/16/2694, 94-95. Jordan’s highly critical comments earned Phillips’s censure. Phillips to Jordan, 27 May 1940, SMA, U1/4/779, 41.

²⁵² Jordan to Phillips, 28 May 1940, SMA U1/4/779, 40.

²⁵³ Jordan to Phillips, (personal), 2 June 1940, SMA, U1/4/779, 23-25, 23.

²⁵⁴ *Ibid.*, 24.

²⁵⁵ Jordan to Phillips, (urgent personal), 21 June 1940, SMA, U1/16/2694

²⁵⁶ Phillips to Jordan, 28 June 1940, SMA, U1/16/2694, 103-104.

²⁵⁷ Phillips to Jordan, Confidential, 2 July 1940, SMA, U1/16/2694, 107-108; Phillips to A. F. Gimson (C.P.W.), 2 July 1940, SMA, U1/4/779, 29-30.

²⁵⁸ Jordan to Phillips, 3 July 1940, SMA, U1/16/2694, 109; Gimson to Phillips, Confidential, 3 July 1940, SMA, U1/4/779, 21-22.

²⁵⁹ Jordan to W. J. Silvey, 18 July 1940, SMA, U1/16/2700, 99-100, 99.

²⁶⁰ *Ibid.*, 99-100; Silvey to Jordan, 30 July 1940, SMA, U1/16/2694, 111-112.

corner of the Settlement as “breeding reservoirs”.²⁶¹ Consequently Silvey’s report, which Jordan forwarded to the Health Sub-Committee, stated:

In the event of an almost complete abolishment of anopheline breeding places within the Settlement other than ornamental ponds ... it is considered that we would still be faced with a malarial mosquito menace arising from the prolific breeding areas which almost completely surround the Settlement.²⁶²

At Jordan’s request Silvey also began compiling monthly reports detailing the M.P.U.’s activities in a bid to improve transparency, and to emphasise the extent of the M.P.U.’s operations.²⁶³ Ultimately the Malaria Prevention Unit’s activities were deemed sufficiently necessary to warrant the Unit’s continued existence. This incident highlights the internal challenges that the Settlement’s dedicated malaria prevention unit faced at a time when the Japanese occupation of Shanghai and the hostility of the Chinese community greatly restricted the M.P.U.’s trans-municipal sphere of operations.

Epilogue

The significant volume of material in the Shanghai Municipal Archives attesting to the M.P.U.’s activities in the first half of the 1940s suggests that the Unit was able to resume some of its work, both within and without the Settlement, after an initial period of severe disruption.²⁶⁴ Within days of the Japanese attack on Pearl Harbour, Inspector Woo and Inspector Noda were transferred from the M.P.U. to other duties – the former temporarily, the latter permanently.²⁶⁵ Woo’s reinstatement came at Silvey’s expense: he was placed on “special duty” for almost four months.²⁶⁶ Some of the Unit’s permanent coolies were also transferred to other duties.²⁶⁷ The Unit’s headquarters, which were located in the 3 Western sub-district, were briefly blockaded, stranding the small group of mosquito coolies who had

²⁶¹ Jordan to Silvey, 18 July 1940, SMA, U1/16/2700, 100.

²⁶² Silvey to Jordan, 30 July 1940, SMA, U1/16/2694, 112.

²⁶³ The Shanghai Municipal Archives preserved all of Silvey’s reports from July 1940 through November 1941, along with his subordinate K.J. Woo’s monthly reports from December 1941 through December 1942. See SMA, U1/16/4607.

²⁶⁴ For instance the Shanghai Municipal Archives contain the M.P.U.’s monthly reports through December 1942 and the department’s *Annual Report* for 1942. I uncovered an additional 22 documents in English from 1942 relating specifically to malaria and mosquito prevention, 9 from 1943, 6 from 1944 and a single document from June 1945.

²⁶⁵ Woo was temporarily transferred to Food Control. K. J. Woo (M.P.U.) to J. A. Stoddart (P.H.D.), 20 Dec. 1941, SMA, U1/16/4607, 57.

²⁶⁶ Silvey was transferred on the day that Woo resumed his post. The precise nature of Silvey’s ‘special duty’ is unclear. B.H.O. Woo to Stoddart, 20 Dec. 1941, SMA, U1/16/4607, 57; Silvey to Jordan, 13 Apr. 1942, SMA, U1/16/2699, 74.

²⁶⁷ Woo to Jordan, 30 Jan. 1942, SMA, U1/16/4607, 60.

managed to enter the building.²⁶⁸ Woo, who was temporarily in charge of the Unit, had applied for identity papers in preparation for just such an eventuality but to no avail.²⁶⁹

The Unit's seasonal campaigns proceeded nonetheless. For instance winter drainage and filling-in operations and the Unit's investigations into foreign and Chinese cases of malaria proceeded, albeit on a reduced scale.²⁷⁰ Moreover the Unit launched a regular summer spraying campaign following Silvey's reinstatement, though the scarcity of petrol precluded the deployment of the Unit's mobile squads.²⁷¹ Temporary coolies were employed and three knapsack spraying squads were deployed in the western and eastern sub-districts, including in the vicinity of the Kung Dah Cotton Mill.²⁷² Indeed the squad that was responsible for supervising the sub-district in which the mill lay was twice as big as the other two squads, and was equipped with the Unit's two hand-powered pumps.²⁷³ Silvey also persuaded his superiors to secure the Western Area Authorities' permission for the deployment of the M.P.U.'s ornamental pond squad and a knapsack spraying squad in the western extra-settlement area by arguing that a "dislocation of this work would seriously impede malaria mosquito control locally".²⁷⁴ Consequently the M.P.U.'s ornamental pond squad supervised up to 128 ponds that year and distributed almost 17,000 fish during the course of the summer.²⁷⁵ By contrast Jordan suspended all of the M.P.U.'s operations, including the inspection of ponds, in the Hungjao area – the area *beyond* the 4 Western sub-district and the railway line – doubtless to the dismay of local rate-paying residents.²⁷⁶

As winter drew near, the squads were withdrawn and the M.P.U. shifted its efforts to drainage operations and adult mosquito extermination. By January 1943 Silvey reported that

²⁶⁸ Woo reported that the Robison Road area was blockaded from 8th to 19th March, but his earlier correspondence indicates the blockade began a few days earlier. Woo to Stoddart, 7 and 9 Mar. 1942, SMA, U1/16/3108, 2-3; Woo to Stoddart, 1 Apr. 1942, SMA, U1/16/4607, 64.

²⁶⁹ Woo to Stoddart, 2 Mar. 1942, SMA, U1/16/4607, 62; Woo to Stoddart, 7 Mar. 1942, SMA, U1/16/3108, 2. During the blockade the M.P.U.'s office was relocated to the 1W sub-district. In total seven coolies and one foreman managed to enter the blockade, but they were prevented from leaving it. Woo to Stoddart, 9 Mar. 1942, SMA, U1/16/3108, 3; (Staff Office) to K. Noguichi (S.M.C.), 14 Mar. 1942, SMA, U1/16/3108, 4.

²⁷⁰ See for instance Woo to Stoddart, 2 Mar. and 1 Apr. 1942, SMA, U1/16/4607, 61-64.

²⁷¹ The staff car and Austin van were withdrawn from service in December 1941. Woo to Stoddart, 30 Dec. 1941, SMA, U1/16/4607, 58.

²⁷² Silvey to Jordan, 13 Apr. 1942, SMA, U1/16/2699, 74; E. F. Duck (D.C.P.H.) to (Treasurer, S.M.C.), 17 Apr. 1942, SMA, U1/16/3108, 60; Silvey to Jordan, 2 June 1942, SMA, U1/16/4607, 68-70.

²⁷³ The 6E squad consisted of 1 overseer, 2 acting foremen, 10 permanent coolies and 8 temporary coolies, compared to 1 foreman, 1 acting foreman and 10 coolies in the 1-5E squad and 1 overseer, 1 foreman and 8 coolies in the 1-3W&C squad. Silvey to Jordan, 2 June 1942, SMA, U1/16/4607, 68-70.

²⁷⁴ Silvey to Jordan, 13 Apr. 1942, SMA, U1/4/593, 4; Jordan to (Sec., S.M.C.), 15 Apr. 1942, SMA, U1/4/593, 3;

Silvey to Woo, 22 May 1942, SMA, U1/16/2700, 135. By September the 4W squad consisted of an acting foreman and 8 coolies equipped with 5 knapsack sprayers, 1 hand-powered wheelbarrow pump and a motor-powered pump. Silvey to Jordan, 1 Oct. 1942, SMA, U1/16/4607, 83.

²⁷⁵ The squad consisted of 1 acting foreman and 3 "trained coolies". Silvey to Jordan, 2 June 1942, SMA, U1/16/4607, 68. Data on fish distribution from Silvey's monthly reports.

²⁷⁶ Silvey to Jordan, 12 May 1942, SMA, U1/16/2700, 131; Jordan to R. Heyng, 12 May 1942, SMA, U1/16/2700, 132.

“the full staff of the Unit” was engaged in filling in the breeding sites in the Eastern District with waste ashes taken from the Shanghai Power Company.²⁷⁷ This was Silvey’s last extant report. He was interned along with many other ‘Allied’ personnel, in the early spring of 1943.²⁷⁸ His subordinate K. J. Woo succeeded him.²⁷⁹ Many of the M.P.U.’s non-Allied (and Axis) personnel continued to work on malaria prevention through the Second World War. For instance Woo put B. A. Vouich, who was first hired as a Sanitary Overseer in 1926 and was assigned to the M.P.U. in 1937, in charge of the 1-3 Western squad during the summer anti-mosquito campaign of 1943, and in charge of the filling-in operations in the Western District during the winter of 1943-44. The following summer Woo dispatched Vouich to deal with a request for assistance from the Deutscher Hockey Club, whose emblem now consisted of a swastika-clutching German eagle.²⁸⁰ Woo’s promotion coincided with the amalgamation of the Settlement’s malaria and fly prevention work under the “Fly & Malaria Prevention Unit”.²⁸¹ Woo was responsible for organising the summer anti-mosquito campaigns – including the spraying squads and the ornamental pond squad – as well as the winter drainage operations until at least the summer of 1944.²⁸² It is striking that the highly-specialised Unit that had been created during the mid-1930s was thus still operational almost a decade later, albeit with limited resources and only within the Settlement’s limits.

Conclusion

Until now the only published account of the International Settlement’s management of malaria during the 20th century was a contemporary summary in *The China Journal* by a non-specialist.²⁸³ H. Crozier Faulder published a range of articles in this journal during the 1930s, but in 1939 he contacted W. J. Silvey, the District Inspector of the Malaria Prevention Unit, about the possibility of writing an article on malaria prevention in Shanghai. Jordan granted his approval for the project, but stipulated that Silvey was only to provide the barest

²⁷⁷ Silvey to E. F. Duck (D.C.P.H.), 4 Jan. 1943, SMA, U1/16/4607, 91. The M.P.U. presently had 20 permanent coolies, and the Commissioner of Public Health requested authority to engage 20 temporary coolies for the coming season. (C.P.H.) to (Treasurer, S.M.C.), 7 Jan. 1943, SMA, U1/14/2349, 78.

²⁷⁸ Silvey was interned in Lunghwa Camp. See the list of allied civilian internees in the Lunghwa camp (‘Lunghwa Camp part 3’) compiled by the Chinese researchers at the Shanghai Academy of Social Sciences, which is available through the University of Bristol’s Chinese Maritime Customs Project. <http://www.bristol.ac.uk/history/customs/ancestors/shanghai.html>.

²⁷⁹ Woo’s promotion occurred sometime between mid-January and early April. Woo to Silvey, 4 Jan. 1943, SMA, U1/16/4607, 92-93; Woo to (P.H.D.), 3 Apr. 1943, SMA, U1/16/3108, 87-88.

²⁸⁰ Woo to (P.H.D.), 3 Apr. 1943, SMA, U1/16/3108, 87; Woo to G. Mingozi (P.H.D.), 21 Oct. 1943, SMA, U1/16/3108, 99; Woo to Cheng, 10 June 1944, SMA, U1/16/2694, 137.

²⁸¹ U1-16-2700 Silvey to (C.P.H.), 31 Aug. 1942, SMA, U1/16/2700, 86; U1-16-2700 P. S. Page (P.H.D.) to Duck, 31 Aug. 1942, SMA, U1/16/2700, 87; “Addendum to Staff Memo: B5/43 – Fly & Mosquito Prevention Work”, 18 Feb. 1943, SMA, U1/16/2700, 88.

²⁸² See for example Woo to (P.H.D.), 3 Apr. 1943, SMA, U1/16/3108, 87-88; Woo to C. Bogomoloff (P.H.D.), 11 May 1943, SMA, U1/16/3108, 23; U1-16-3108 Woo to Mingozi, 21 Oct. 1943, SMA, U1/16/3108, 99; Woo to (P.H.D.), 25 July 1944, SMA, U1/16/2693, 304-305. The latter is Woo’s last extant report in English.

²⁸³ Faulder, “Malaria Prevention,” 305-312.

details of the M.P.U.'s activities "in order to prevent people with more leisure than we have to get all the credit for investigation work done by us".²⁸⁴ Both Jordan and Silvey were delighted, however, with Faulder's piece, and requested several copies for distribution to sanitary staff in the Settlement and the French Concession.²⁸⁵ At Silvey's request copies were also sent to Mackie and to Deb, the Government Malariologist and Assistant Malariologist in Hong Kong.²⁸⁶ For Silvey this represented an opportunity to thank the latter for giving him a guided tour of the Malaria Bureau's activities during a recent holiday in Hong Kong.²⁸⁷ Given that Silvey had informed Jordan that "the duties of the [Malaria Bureau's Chinese] Inspector [*sic*] were difficult to define and did not appear to be of a strenuous nature", Crozier's article must also have represented a cunning opportunity for Silvey to showcase the Settlement's (and his own) anti-malarial work – work which Silvey considered superior to Hong Kong's management of the disease.²⁸⁸ But as this chapter has shown, the International Settlement's management of the disease emerged at a much later stage compared to Hong Kong's extensive fin de siècle innovations, largely as a result of the comparative rarity of malaria in Shanghai until the inter-war period. Moreover the Settlement approached malaria prevention in a fundamentally different way. Whereas Hong Kong pursued an enclavist strategy, limiting its management of the malarious colonial environment to the city of Victoria, the Settlement actively sought to manage the Chinese environment both with and without its borders.

²⁸⁴ Jordan to Silvey, 4 Feb. 1939, SMA, U1/16/2693, 225.

²⁸⁵ Jordan to G. G. Phillips (Sec., S.M.C.), 19 May 1939, SMA, U1/16/2693, 230; Silvey to Jordan, 23 May 1939, SMA, U1/16/2693, 234; Silvey to C.A.E. Carr (Sec., P.H.D.), 25 May 1939, SMA, U1/16/2693, 245.

²⁸⁶ Silvey to Jordan, 23 May 1939, SMA, U1/16/2693, 234; Jordan to Deb (Assist. Govt. Malariologist, Hong Kong), 10 June 1939, SMA, U1/16/2693, 249; Jordan to J. B. Mackie (Govt. Malariologist, Hong Kong), 10 June 1939, SMA, U1/16/2693, 250.

²⁸⁷ Silvey to Jordan, 10 Jan. 1939, SMA, U1/16/2754, 2. Mackie and Deb had also provided Silvey with a copy of the Bureau's annual report for 1937. Silvey to W. D. Wells, 19 Jan. 1939, SMA, U1/16/2754, 3.

²⁸⁸ Silvey to Jordan, 10 Jan. 1939, SMA, U1/16/2754, 2.

Conclusion

This dissertation explored the management of colonial bodies and colonial environments through the prisms of leprosy and malaria. Chapters two and three explored the evolution of Hong Kong's and the International Settlement's reliance on deportation at the exclusion of domestic segregation as the principal means of managing Chinese leprosy sufferers. The colony pursued this practice more vigorously and from a much earlier stage. Whereas the disease emerged as a pressing social and policing issue in Hong Kong in the 1870s, the International Settlement only began to interrogate the disease as a public health issue from the late 1920s. The Settlement nevertheless embraced the same justifications that underpinned Hong Kong's management of the disease. On the one hand, Chinese migrants were held responsible for importing the disease. Deportation was therefore considered both an obvious and a morally-justifiable expedient. On the other, Western medical practices were deemed inherently superior – a superiority that was allegedly recognised throughout mainland China. Accordingly both Hong Kong and Shanghai feared that the establishment of Western medical facilities would trigger an influx of destitute mainlanders. Cantlie's trope of the "El Dorado to the leprosy Chinaman from the mainland" thus applied as much to the International Settlement as it did to Hong Kong.

These two chapters explored the challenges that confronted Hong Kong's and the Settlement's extreme coercive measures. Hong Kong's fin de siècle geo-political expansion, for instance, unwittingly incorporated a traditional Chinese leprosy village into the colonial sphere at a crucial juncture in international medical and metropolitan discourses on domestic segregation. Chinese agency profoundly impacted upon both territories' management of the disease from the late 1920s onwards. In particular the Chinese Mission to Lepers and its auxiliaries challenged the colonial contention that all Chinese leprosy sufferers were illegal destitute immigrants from the mainland. Both Hong Kong and the International Settlement were forced to recognise the emergence of local identities within the broader Chinese community by assuming the maintenance of a distinctive sub-set of deported Chinese leprosy sufferers: British Chinese subjects in Hong Kong and bona-fide residents of the International Settlement. This agency had greater ramifications in Hong Kong. The colony's Chinese elite contested the indiscriminate management of the disease, calling for the segregation of British Chinese patients within the colony. Hong Kong's experiences therefore highlight the need for a more critical scholarly usage of the term 'repatriation'.¹ Repatriation constituted a process of *returning* an individual to his or her place of origin whereas deportation was simply a form of *expulsion* that did not necessarily imply a relationship between the deportee's destination, nor indeed his or her point of departure. This distinction was of little concern in the Empire's white dominions because Chinese communities, and by extension Chinese leprosy sufferers, were considered members of an immigrant ethnic minority. But this distinction assumed much

¹ Many historians have used 'deportation' and 'repatriation' interchangeably. Edmond, for instance, did not discriminate between the 'deportation' of Chinese leprosy sufferers from Australia to China, i.e. across national borders, and the 'deportation' of Hawaiian leprosy sufferers from one Hawaiian island to another. Rod Edmond, *Leprosy and Empire: A Medical and Cultural History* (Cambridge: Cambridge University Press, 2006), 107, 166, 232. See also Angela Ki Che Leung, *Leprosy in China: A History* (New York: Columbia University Press, 2009), 12.

greater significance in Hong Kong precisely because of the emergence of a colonial Chinese majority. The colonial Chinese elite protested against the deportation of *British Chinese* leprosy sufferers because this practice appeared akin to exile. By contrast they wholeheartedly endorsed the government's repatriation of non-British Chinese leprosy sufferers. Ultimately the outbreak of the Sino-Japanese war overturned both Hong Kong's and the International Settlement's reliance on deportation and staunch opposition to domestic segregation, prompting the confinement of diseased Chinese bodies *within* their respective spheres.

The second pair of core chapters explored the evolution of Hong Kong's and the International Settlement's management of malaria within the context of major global shifts in the disease's aetiology and prevention. Ironically the comparative prevalence of the disease in East Asia mirrored that of leprosy: malaria emerged as a major public health issue in the International Settlement at a much later stage compared to Hong Kong. This comparative prevalence profoundly impacted upon the extent of the local research into the transmission of the disease, the reception of new theories regarding its vectoral propagation, and the importance attached to the local validation of these new theories. Thus the new theories were disputed far more vigorously in Hong Kong, where they challenged decades of received experience. Moreover a much greater emphasis was placed upon the local validation of these new theories than in the International Settlement. The local validation process fed into the colony's existing reactive management of the disease: Kennedy Town became a focal point precisely because the new ideas were diffused within the context of the Sanitary Board's inability to protect the European staff at the Animal Depôts. Local medical men with amateur interests in entomology, men such as Thomson, Young, Ladds and Ford, played a crucial role in this process, dictating the timing, loci and nature of the colony's early anti-mosquito experiments. This competitive process profoundly impacted upon all of their careers: some briefly experienced local and metropolitan recognition, for others this period laid the foundations of unique career opportunities as world-renowned local specialists. Educational opportunities, timing, initiative and luck all came to bear on their fates.

These two chapters also explored the emergence and development of Hong Kong's and the International Settlement's efforts to manage the disease through environmental interventions. Initially the Settlement lagged behind both Hong Kong and even the neighbouring French Concession. By the time of the Settlement's first larvicidal trial in 1909 the colony had developed a broad range of anti-mosquito measures on Hong Kong Island, developed an oral prophylactic regime for the members of the colonial state posted in the New Territories, and instituted a public health education scheme that targeted both adults and students. Moreover the medical authorities in Hong Kong appropriated the latest Imperial-sanctioned malarial discourses on racial segregation to push through a controversial proposal for a European reservation in Kowloon. The significance of this discourse should not, however, be exaggerated: it came to the fore within the context of the colony's urban expansion, and was abandoned almost as quickly as it was taken up. Instead the colonial authorities restricted the geographical scope of its anti-malaria program, confining its anti-mosquito measures to the city of Victoria on Hong Kong Island and resorting to prophylactic

measures in the New Territories. By contrast the pathologisation of Shanghai's Chinese communities prompted the *extension* of the Settlement's management of the disease to the environment beyond its borders. Thus whereas the colonial authorities resisted internal calls for reform until the late 1920s, the Settlement's Public Health Department responded to the emergence of malaria as a major urban health issue by pioneering a mechanised and highly mobilised specialist staff and by attempting to initiate joint operations with the Chinese municipal authorities. The Settlement's Malaria Prevention Unit was thus marked as much by local innovation as Hong Kong's Malaria Bureau was defined by its Malayan inheritance. The Settlement's trans-municipal operations prior to, and during the Sino-Japanese war, provide original and fascinating insights into the contestations of power that paralleled the International Settlement's complex negotiations with the Chinese Mission to Lepers.

Post-war

The Second World War irrevocably altered the foreign Imperial landscape in China. War-time alliances with Chiang Kai-shek's Nationalists prompted the signing away of all of Britain's treaty-ports including the International Settlement in 1943; the French Concession was similarly abolished.² Of Britain's pre-war possessions and concessions, only colonial Hong Kong was reclaimed after the war.³ The post-war colonial authorities considered malaria prevention a priority. As chapter 4 noted, J. B. Mackie resumed his work as the Government Malariologist within months of the Japanese surrender. A Malaria Sub-Committee was appointed to facilitate co-operation between the civilian, naval and military experts.⁴ The colonial administration briefly experimented with the aerial spraying of DDT – a technological approach that achieved global prominence during this period – but this method was deemed inefficient and unsafe. Instead the authorities relied on pre-war anti-larvicidal measures, which focused principally on the colony's main urban centres on Hong Kong Island and the Kowloon Peninsula, just as they had done for much of the early 20th century.⁵ Gradually the authorities extended these measures to the New Territories, prompting a marked decline in the indigenous incidence of the disease. Indeed the final quarter of the century witnessed a major epidemiological shift: the disease that had once been so inextricably associated with the colony was increasingly regarded as an imported disease. The disease was thus no longer a major environmental concern, but, like leprosy before it, a social one.

² Robert Bickers, "Settlers and Diplomats: The End of British Hegemony in the International Settlement, 1937-1945," in *In the Shadows of the Rising Sun: Shanghai under Japanese Occupation*, eds. Christian Henriot and Wen-Hsin Yeh (Cambridge: Cambridge University Press, 2004), 229, 251.

³ For a concise summary of the colony's 'recovery', see John M. Carroll, *A Concise History of Hong Kong* (Lanham, MD: Rowman & Littlefield, 2007), 126-129.

⁴ Some of the committee meeting minutes are preserved in the Hong Kong Public Records Office, HKRS146/1/1.

⁵ Ka-che Yip, "Colonialism, Disease and Public Health: Malaria in the History of Hong Kong," in *Disease, Colonialism, and the State, Malaria in Modern East Asian History*, ed. Ka-che Yip (Hong Kong: Hong Kong University Press, 2009), 22-29.

As chapter two explained, the colonial authorities initially resumed the indiscriminate practice of deporting Chinese leprosy sufferers to the mainland, with the exception of prisoners suffering from the disease who were placed in solitary confinement, just as they had been in the Victoria Gaol's "Leper Cell" in the late 19th century. But the establishment of the People's Republic of China and the formation of a Hong Kong Auxiliary to the (British) Mission to Lepers – an auxiliary completely unrelated to the pre-war Chinese Mission to Lepers Hongkong Auxiliary – prompted the erection of a temporary leprosarium at Sandy Bay and a permanent isolation facility at Hay Ling Chau. These developments bore testament to a new era in the colonial management of the disease. Whereas the Kennedy Town Leprosarium served primarily as an isolation facility, Hay Ling Chau represented a modern missionary-run medical institution.⁶ The institution proved so 'successful' that it was closed in the mid-1970s and the government shifted to a reliance on out-patient facilities. The Leprosy Mission devoted the majority of the summer issue of its magazine *New Day* to "Project Completed: The Hay Ling Chau Story".⁷ Ironically the leprosarium's closure fell just shy of the centenary of the ordinance that had first sanctioned the colony's deportation of Chinese leprosy sufferers to the mainland. Many of the issues that chapters two and three analysed with regard to Hong Kong's and Shanghai's pre-war leprosaria, such as expressions of patient agency and unrest, the production of health subjectivities, the evolution of evangelistic opportunities, and the complex interplay between popular stigma and institutional confinement have yet to be explored within the context of Hong Kong's post-war leprosaria. Moreover my analysis of the impact that the presence of an 'Open House' leprosarium on Hong Kong Island had upon the colonial stigmatisation of the disease suggests that further research into post-war stigma is necessary. A preliminary survey of the public outcry at the government's closure of Hay Ling Chau and its shift towards out-patient facilities suggests that this institution actually entrenched the popular aversion to the disease.⁸ The fact that the island was given over to

⁶ The Mission to Lepers Hong Kong Auxiliary's annual reports as well as the publications of Olaf K. Skinsnes, the leprosarium's pathologist, and A. Grace Warren, a medical superintendent in the 1960s, provide insights into the leprosarium's focus on medical, religious and occupational therapy.

⁷ "Project Completed: The Hay Ling Chau Story," *New Day: Magazine of the Leprosy Mission*, no. 312 (1975): 3-6. Some 40 remaining inmates were transferred to the new Lai Chi Kok Hospital. K. H. Lau, "Leprosy in Hong Kong: From Hay Ling Chau to Cheun Sha Wan," *Hong Kong Journal of Dermatology and Venereology* 10, no. 3 (2002): 107; N. R. Honey, "Leprosy in Hong Kong, Past, Present and Future," *The Bulletin Journal of Society of Community Medicine Hong Kong* 9, no. 1 (1978): 24-26; N. R. Honey and M. Y. Ho, "Leprosy in Hong Kong," *Public Health & Epidemiology Bulletin* 5, no. 1 (1996): 2; L. Y. Chong and N. R. Honey, "Leprosy control programme in Hong Kong," *Journal of The Hong Kong Medical Association* 45, no. 1 (1993): 70-71; C. K. Ho and K.K. Lo, "Epidemiology of leprosy and response to treatment in Hong Kong," *Hong Kong Medical Journal* 12, no. 3 (2006): 174-175.

⁸ The colonial authorities anticipated significant popular opposition to the closure of the Hay Ling Chau Leprosarium as early as the late 1960s. See for instance the confidential reports in HKPRO, HKRS489/7/18, as well as HKPRO, HKRS880/2/79; HKRO, HKRS79/988/1 and HKPRO, HKRS163/10/117.

drug addiction treatment facilities rather than to recreational facilities suggests that the 'The Isle of Happy Healing' has never freed itself from the stigma.

Colonial Medicine

This dissertation explored the locality, production and dissemination of medical knowledge and practices from the perspective of these two British territories in China. Hong Kong and the International Settlement shared similar conceptualisations of both diseases, but these ideas were inherently rooted in local actors, local institutions, and local circumstances. Both territories provided local and visiting physicians with unique opportunities. Durand-Fardel, for instance, established his expertise on leprosy amongst French circles as a result of his visits to Shanghai in the 1870s. Hong Kong provided Cantlie with a unique opportunity to research leprosy. On the one hand, he was granted prolonged access to patients under observation and treatment in the colony's hospitals. On the other, the colony's proximity to Canton and Macao facilitated comparisons between Chinese and European segregation methods. Moreover as a British Chinese colony and a major point of departure for Chinese indentured labour, Hong Kong placed Cantlie at the very heart of Imperial fears of a leprosy pandemic in the Pacific. The local environments also proved especially fruitful fields for entomological research, in terms of the 'discovery' of new species of mosquitoes previously unknown within Western medical discourses; the identification of known species within new nationally-defined habitats; and the accumulation of knowledge about breeding patterns – all of which were central to the formulation of effective malaria prevention strategies.

Both Hong Kong and the International Settlement represented important loci within broader networks of communication. Scientific forums such as Hong Kong's trans-national medical society and the Shanghai-based *China Medical Missionary Journal* provided linkages for debate and for the dissemination of local and 'foreign' ideas and practices. Western medical practitioners engaged with scientific and lay audiences both with and without China through a variety of mediums, including newspapers, peer-reviewed journals, and regional and international conferences. This dissertation has highlighted the contemporary importance placed upon the validation of new ideas that were regarded as controversial. Hong Kong's and the International Settlement's experiences also highlight fluctuations in local innovation and scientific initiative. The interwar period witnessed the waning of Hong Kong's scientific agency, at least in terms of its research on malaria and leprosy, and the rise of the International Settlement's proactive stance. This shift was most clearly exemplified by the contrast between the formation of both territories' dedicated anti-malaria units: the Settlement's Malaria Prevention Unit was an organic, home-grown affair whereas the colony's Malaria Bureau was a foreign import.

Race, Sex, Medicine and Colonial Space

This dissertation explored the interplay between race, medicine and colonial space by focusing on two forms of segregation: institutional and residential. The former served to confine the threat of leprosy, the latter established a cordon sanitaire between the European residents and the threat of inhabited malarial environments. Both forms served primarily to protect the colonial European population but also increasingly the Chinese elite. Hong Kong's and the International Settlement's abhorrence of leprosy was underpinned by a racialised conceptualisation of the disease, one that presumed that the disease was inherently associated with destitute Chinese mainlanders. Deportation thus served a dual purpose: 'returning' these diseased immigrants beyond the colony's borders precluded the necessity of confining leprosy sufferers *within* the colonial sphere. Hong Kong's and the International Settlement's relationships with mainland leprosy broadens our understanding of the management of leprosy in China. The accommodation of deported leprosy sufferers, and the extent and nature of official versus popular financial support suggest ways of complicating Leung's identification of three distinct types of China leprosy. Moreover chapter 4 uncovered a completely new field within the historiography on China by demonstrating how the discovery of a Russian leprosy patient in the International Settlement of Shanghai in the late 1930s precipitated a unique, racialised response. Non-Chinese leprosy sufferers struck at the very heart of colonial fears about contagion. Numerous studies have explored how leprosy often internally segregated patients along racial lines but until now the racialised management of leprosy within Chinese leprosy has been completely ignored.⁹

This dissertation also fundamentally revised the existing historiography on the racialised management of malaria. At the turn of the century, metropolitan-endorsed research in Africa identified the lower Chinese classes as the principal source of malarial infection amongst Europeans living in the tropics. As such it provided an urgent justification for the establishment of European reservations, including an existing proposal for a reservation in Kowloon. But this justification needs to be understood both within the context of the colony's broader history of racial segregation and the evolution of Hong Kong's fin-de-siècle malarial discourse. Firstly this new theory was vigorously contested in Hong Kong, principally because it appeared to fly in the face of received wisdom, most notably with regard to the prevalence of malaria at the police stations in the New Territories. Secondly this discourse was appropriated to convince the local colonial administration to sanction an existing, controversial, twice-rejected and economically-motivated proposal for a European reservation in Kowloon. Thirdly this discourse was never used to justify racial segregation in Hong Kong, in any form, ever again. Indeed the reservation of the Peak District, which was

⁹ Harriet Deacon, "Leprosy and racism at Robben Island," in *Studies in the History of Cape Town*, vol. 7 ed. Elizabeth van Heyningen (Rondebosch: UCT Press, 1994), 72-74; Harriet Deacon, "Racial Segregation and Medical Discourse in Nineteenth-Century Cape Town," *Journal of Southern African Studies* 22, no. 2 (1996): 302-304; Edmond, *Leprosy and Empire*, 157, 163-165; Janice Dickin McGinnis, "'Unclean, Unclean': Canadian Reactions to Lepers and Leprosy," in *Health, Disease and Medicine: Essays in Canadian History*, ed. Charles G. Roland (Hannah Institute for the History of Medicine, 1984), 267.

proposed and promulgated only two years after the Kowloon reservation, made no reference whatsoever to malaria prevention precisely because the malarial discourse did not pathologise the Chinese elite. The presumption that the lower Chinese classes were nevertheless the principal hosts of the malaria parasite – or “salted” – continued well into the 20th century. The Medical Officer of Health, for instance, faced the awkward task of explaining this discourse to a Chinese member of the Sanitary Board in the 1920s. Coincidentally this period witnessed the emergence of this discourse in Shanghai. The Settlement’s public health authorities increasingly identified the rural Chinese communities along and beyond the Settlement’s borders as the principal source of infection as a result of the unexpected outbreak of malaria amongst the British and Indian troops stationed beyond the International Settlement in Chinese territory in 1927.

The segregation of leprosy sufferers provided a variety of opportunities for internal forms of sexual, as well as racial and social segregation. The segregation of male from female leprosy patients reflected contemporary debates about the sexual transmission of the disease and the disease’s alleged heredity. Popular assumptions about the inherent promiscuity of leprosy sufferers compounded these debates further. Leung has explored how the popularity of such beliefs in China prompted the emergence as early as the thirteenth century of *guolai*, a custom whereby women suspected of suffering from leprosy sought to cure themselves by passing off or ‘selling’ the disease to men through sexual intercourse. Western medical practitioners became increasingly aware of this popular Chinese belief from the mid-nineteenth century.¹⁰ As this dissertation has demonstrated the absence of sexual segregation within traditional Chinese leprosaria convinced Western practitioners such as Cantlie that the disease *was* sexually-transmissible. This dissertation has extended the historiographical discussions about the sexual segregation of leprosy sufferers in places such as India, South Africa and Brazil by broadening our awareness of the various forms of institutional sexual segregation in China.¹¹ The patients in the leprosy village at Au Tau, for instance, were not segregated at all. In some missionary leprosaria such as the Rhenish asylum at Tung Kun or Lake’s asylum on Tai-Kam, segregation was only *de rigueur* at night, each sex being accommodated within separate wards (or clusters of wards). This form of segregation emerged in Hong Kong in the late 1930s as a result of the hardening of official attitudes towards domestic segregation; whereas Au Tau was left to its own devices, the Kennedy Town Leprosarium was a Chinese- and later government-run institution. The asylums at Sheklung and in Macao represented the most extreme form of sexual segregation: male and female

¹⁰ Leung, *Leprosy in China*, 114-124, 149.

¹¹ For examples of the sexual segregation in other contexts see Simone Horwitz, “Leprosy in South Africa: A Case Study of Westfort Leper Institution, 1898-1948,” *African Studies* 65, no. 2 (2006): 286-287; Sanjiv Kakar, “Medical Developments and Patient Unrest in the Leprosy Asylum, 1860-1940,” in *Health, Medicine and Empire: Perspectives on Colonial India*, eds. Biswamoy Pati and Mark Harrison (Hyderabad: Orient Longman, 2001), 198-202; Yara Nogueira Monteiro, “Prophylaxis and exclusion: compulsory isolation of Hansen’s disease patients in São Paulo,” *História, Ciências, Saúde – Manguinhos* 10, no. S1 (2003): 98, 110; Jo Robertson, “The Leprosy Asylum in India: 1886-1947,” *Journal of the History of Medicine and Allied Sciences* 64, no. 4 (2009): 503-504.

leprosy sufferers were confined to separate islands. The Nationalists attempted to heighten this segregation at Sheklung by posting two squads of armed troops on the islands.¹² By contrast the Chinese Mission to Lepers not only opposed such forms of internal differentiation, but actually promoted a sense of community by modelling the National Leprosarium of Shanghai on a “cottage plan”.¹³

Health Subjectivities

This dissertation principally interrogated disease prevention in East Asia from the perspective of those who managed rather than those who were managed. This approach nevertheless provided insights into popular experiences and indigenous resistance. These insights were often fleeting snapshots; the authorities in Hong Kong and the International Settlement shed little thought for the emotional and physical costs of their policies, particularly with regard to the deportation of leprosy sufferers. This dissertation’s close analysis of the records documented how traumatic the admissions procedure could be. Separations from loved ones profoundly impacted upon the emotional and physical well-being of both parties. For instance the admission of Tsa Tsang Z, a heavily-pregnant refugee patient from the International Settlement, to the temporary leprosarium in the Salvation Army Camp came at an exceptionally high price. The trauma of her separation from her husband and four year-old daughter and the absence of adequate medical facilities within the leprosarium doubtless contributed to the death of the child that she bore within days of her confinement.

Many refused to submit to the colonial prophylactic or treatment regimes. For instance colonial officials resorted to ever more coercive regimes to ensure that the Chinese railway staff in Hong Kong received the necessary dosage of quinine. Some of Hong Kong’s and Shanghai’s leprosy sufferers vigorously rejected their incarceration. The increasingly rigorous confinement policies that accompanied the segregation of patients within Hong Kong and Shanghai during the late 1930s provoked patient unrest in both the Emergency Leprosarium and the Kennedy Town Leprosarium. The “unruly and turbulent body” of patients in the Kennedy Town leprosarium resented the government take-over of the institution, and the resultant erection of a barbed wire fence, the “continuous police patrol” and the government’s refusal to grant voluntary discharges.¹⁴ Over a third of the patients escaped that year: in absolute terms, this was three times as many escapes as in the year preceding the government take-over. Comically audacious break-outs revealed how easily patients could

¹² Leung, *Leprosy in China*, 169-170.

¹³ T. C. Wu, “How to Build A Modern Leprosarium,” *Leper Quarterly* 15, no. 3 (1941): 90. Wu’s “guide” was largely modelled on the National Leprosarium that his Mission had established just a few miles north of the International Settlement in 1935. He drafted this piece, however, at a time when this leprosarium was housed in the Emergency Leprosarium on Brenan Road in the extra-Settlement area – the third temporary premises since the outbreak of the war.

¹⁴ Hong Kong Government, *Administrative Reports: Annual Medical Report for the Year 1938, 1939*, Hong Kong Government Records Online (hereafter HKGRO), 12.

undermine coercive colonial medical policies. Unsanctioned breaches of exile-enclosure, whether real or rumoured, struck at the very heart of popular fears about the contagiousness of the disease. Significantly this dissertation's focus on the 'colonial' management of the disease revealed examples of patient unrest in non-state-run mainland leprosaria such as the National Leprosarium of Shanghai which were expunged from the official institutional narratives.

For many patients, though, colonial confinement defined formative periods of their lives. Wang Kyong-ziang served the longest sentence of all of the Chinese leprosy sufferers maintained by the International Settlement. Diagnosed with the disease in early adolescence, he was institutionalised at the age of 18 in the National Leprosarium before it had even officially opened its doors. On the outbreak of war just over a year and a half later, he was transferred to a mainland leprosarium, where he remained for seventeen months before being *readmitted* to the National Leprosarium, which was now situated on Brenan Road within the western extra-Settlement. Ironically this institution was located only a stone's throw away from the St. Faiths Settlement, where Wang had spent more than a decade of his life before being admitted to the original National Leprosarium. By the time of the Japanese occupation of the Settlement on December 8th, 1941, the Settlement had maintained Wang's confinement in the National Leprosarium and its wartime incarnations for a total of 1,746 days at a total cost of £1,548.61.¹⁵ This was in addition to the interim period he spent at the leprosarium in Hangzhou. The Settlement maintained Wang's confinement for another 1,239 days. By the time he was "repatriated" April 1945, he had been institutionalised for a third of his life.¹⁶ Despite the rarity of 'cured' cases, the Shanghai Municipal Archives nevertheless preserves a handful of exceptionally rare documents that attest to a patient's efforts to secure the *Japanese* Commissioner of Public Health's support for his post-discharge rehabilitation in the summer of 1943!

This dissertation has also shed light on the extent of patient agency, specifically the agency of leprosy sufferers during the 1930s. Whereas malaria cases were temporarily hospitalised, leprosy sufferers were permanently institutionalised. Contrasts between the administrative structures of Hong Kong's and the International Settlement's leprosaria fundamentally impacted upon the extent and nature of this agency. On the one hand, the Kennedy Town Leprosarium was simply an isolation facility: the patients were only provided with basic provisions and supplied with a modicum of medical supervision. Little changed following the government take-over and the leprosarium's official promulgation as a leprosy

¹⁵ Wang was confined in the National Leprosarium from Nov. 1st, 1935 to July 31st, 1937 and then readmitted on Nov. 28th 1938. 1936 and 1940 were leap years. The total maintenance therefore equals 61 days in 1935 at \$20/month + 366 days in 1936 at \$20/month + 212 days in 1937 at \$20/month + 3 days in November 1937 at \$20 for *that* month (\$0.67/day) + 31 days in December 1937 at \$20/month + 365 days in 1939 at \$20/month + 366 days in 1940 at \$30/month + 334 days for January through November 1941 at \$45/month + 8 days in December 1941 at \$45 for *that* month (\$1.45/day).

¹⁶ 1944 was another leap year. Unfortunately the records do not explain where he was repatriated to, or why. T. C. Wu (C.M.L.) to (C.P.H.), 20 May 1945, Shanghai Municipal Archives, U1/16/760, 121.

settlement in late 1938. Despite a gradual improvement in living conditions, little was done in the way of promoting occupational therapy. As the Director of Medical and Sanitary Services conceded, the patients lived “necessarily restricted and monotonous lives”.¹⁷ By contrast the Chinese Mission to Lepers designed the National Leprosarium in such a way as to promote the importance of patients’ “social, intellectual and religious welfare”.¹⁸ Despite severe financial constraints and a wartime shortage of resources, the Mission facilitated patient agency in the Brenan Road Emergency Leprosarium as best it could, enabling the production of a newspaper and the exhibition of a patient’s artwork.

The greater evidence of patient agency in the National Leprosarium, particularly in the emergency premises on Brenan Road, compared to Hong Kong’s Kennedy Town Leprosarium may also have reflected a stronger sense of cohesiveness among the former patients. The patients must have developed strong bonds with one another as a result through the shared experience of multiple evacuations and being forced to make do in cramped, squalid and poorly-insulated temporary premises with little or no outside support or supplies. A select few of the patients in the temporary premises at the Salvation Army Camp, including the very first ‘refugee patient’ Chen Siao Wong, who was a boy of only 13 or 14, would have remembered the stressful evacuation from the Chung San Hospital. At least twenty of the ‘bona-fide residents’ and ‘refugee’ patients who had been admitted to the Salvation Army Camp in 1938 experienced the relocation to the Brenan Road Leprosarium, where many of them remained for a number of years (six of them until 1945). This was on top of those who were admitted as non-residents and those who were admitted from outside the International Settlement. Furthermore two resident patients who had been evacuated out of the National Leprosarium at Tazang to other mainland leprosaria before the outbreak of the war were (re)admitted to the Brenan Road Emergency Leprosarium. As such, Wang and Nyi Kying Ziang would have been able to share their experiences of the pre-war conditions in other leprosaria – including the comparative freedoms and luxuries of the original National Leprosarium – with the Emergency Leprosarium’s growing patient population. By contrast the transient nature of the Kennedy Town Leprosarium’s community hindered opportunities for patient agency. Of the 835 patients admitted to the Kennedy Town Leprosarium between 1935 and 1939, 376 (or 45%) were deported to the mainland. Others escaped, were discharged, or died. In any given year at least 60% of the hospital’s total annual population were dismissed for one reason or another; this figure exceeded 85% in 1936. Admission to Kennedy Town was temporary. Admission to the National Leprosarium was considered indefinite.

¹⁷ Hong Kong Government, *Administrative Reports: Annual Medical Report for the Year 1939, 1940*, HKGRO, 21, 54.

¹⁸ Daniel G. Lai, “What the National Leprosarium of China May Serve,” *Leper Quarterly* 8, nos. 1&2 (1934): 4.

Disease, Medicine and Evangelisation

Hong Kong's and the International Settlement's management of leprosy sufferers during the 1930s and early 1940s broadens our understanding of the evangelistic opportunities that leprosaria provided. Kipp argued that the extent of these opportunities varied according to the degree to which a leprosarium was a "total institution".¹⁹ Thus in Sumatra:

Leprosy patients were attracted to the missionaries' religion because therapy entailed separation from kin and community and then incorporation into a new kind of community, an asylum, where the authority structure, the dispensation of resources, and the constructed spaces of everyday life made the idea of a supreme deity an experienced reality.²⁰

All of these internal factors were present in Hong Kong's Kennedy Town Leprosarium but the absence of any missionaries precluded the possibility of taking advantage of the patients' receptiveness. Granted this may seem an obvious point, but it highlights the importance of identifying the nature of a leprosarium's administrative structure, and the levels of access that non-missionary or state-run institutions accorded to missionaries. Thus the evangelisation of leprosy sufferers in Hong Kong's leprosaria only emerged in the post-war period precisely because the Stanley Bay and Hay Ling Chau leprosaria were jointly administered by the newly-formed Mission to Lepers Hong Kong Auxiliary. By contrast the Kennedy Town Leprosarium was initially managed by the Tung Wah authorities – a Chinese (non-Christian) charitable organisation – before becoming a secular state-run isolation facility.

Shanghai's experiences complicate Kipp's argument by highlighting the importance of external factors upon patient receptivity. The Chinese Mission to Lepers did not report any conversions in the National Leprosarium prior to the outbreak of the Sino-Japanese war, though services were regularly held in the institution's chapel. Instead the institution focused on providing medical treatment, educational and occupational therapy.²¹ War-time deprivations triggered the Emergency Leprosarium's patients' receptiveness to evangelisation, notably from the foreign missionaries attached to the Chinese Mission to Lepers. Unlike the Mission's Chinese members, the movements of figures such as the American missionary Dr. Lee S. Huizenga were less restricted. Within the space of just three years the Emergency Leprosarium's Christian community grew from a small group of dedicated members and new converts in late 1938 to encompass over three-quarters of the institution's 100-some patients.

¹⁹ Rita Smith Kipp, "The Evangelical Uses of Leprosy," *Social Science & Medicine* 39, no. 2 (1994): 166.

²⁰ Kipp, "The Evangelical Uses of Leprosy," 165.

²¹ See for instance Daniel G. Lai, "The First Annual Report of the National Leprosarium of Shanghai for the Year 1936," *Leper Quarterly* 11, no. 2 (1937): 81-94, 91-92.

'Semi-Colonial' Medicine?

This dissertation opened by asking whether the nature of medical practices in the foreign treaty-ports in China was markedly distinctive from the nature of colonial medicine. This dissertation's comparative analysis of the management of local bodies and environments in a British colony and a British treaty-port has shed light on how colonialism in China impacted upon the role, evolution and limitations of foreign medical strategies. In many ways Hong Kong's and the International Settlement's management of leprosy and malaria paralleled one another. Or, perhaps more accurately, the Settlement's management of these two diseases paralleled that of Hong Kong, given that both diseases emerged as public health issues at a much later stage. Some of the divergences, however, reflected Hong Kong's status as a colony and the International Settlement's position as a treaty-port within a broader tri-municipal city. This distinction manifested itself through issues of citizenship, extra-territoriality, jurisdiction and occupation.

Chinese agency challenged both Hong Kong's and the International Settlement's reliance on deportation as a means of permanently expelling Chinese leprosy sufferers beyond their respective spheres, forcing both authorities to assume the maintenance of local deportees in mainland leprosaria. Hong Kong provided annual grants in aid to the Sheklung asylum in support of deported British Chinese subjects, whereas the International Settlement maintained bona-fide and emergency residents in the National Leprosarium of Shanghai. The former deportees were thus defined in terms of their citizenship, the latter by their residency. This distinction crucially impacted upon the demands of local Chinese agency. On the one hand the Chinese Mission to Lepers not only endorsed but facilitated the segregation of these resident patients beyond the Settlement's borders. By contrast the C.M.L.'s Hongkong Auxiliary, and the colonial Chinese community more generally, staunchly *opposed* the government's indiscriminate deportation policy. To be clear, they did not resolutely oppose institutional segregation. On the contrary, they advocated the need for segregation along *national* lines. During the 1930s Chinese members of the Sanitary Board and the Legislative Council, as well as local community organisations such as the Kowloon Residents' Association, repeatedly challenged the government's refusal to establish a domestic leprosarium. Their demands reflected the confluence of humanitarian concern and colonial Chinese identities.

The contrast between Hong Kong's and the Settlement's sovereignty also impacted upon the geographical scope of their respective disease prevention strategies. Both Hong Kong and the International Settlement implemented a variety of anti-mosquito measures during the 20th century. But the colony restricted its direct interventions to the city of Victoria on Hong Kong Island and confined its management of the disease in the New Territories to the protection of the police force and later the railway authorities. For much of the early 20th century the colonial administration vigorously resisted calls from figures such as Dr. Koch of the Sanitary Board to extend the drainage, filling-in and nullah-training operations to the colony's rural hinterland. By contrast the International Settlement's anti-mosquito campaigns not only encompassed the Settlement but, from the mid-1930s, large areas of land *beyond* as

well. Contrasts in scale and topography certainly facilitated the Settlement's trans-municipal operations: the Settlement was smaller than Hong Kong Island itself, whilst the land around the Settlement consisted of (flat) alluvial plain rather than steep densely vegetated hills and mountains. Even so, the colony's sovereignty clearly demarcated both the limits of the colony's medical as well as its political jurisdiction. By contrast the International Settlement was situated at the heart of a much larger tri-municipal city – concerns about its residents' health and well-being therefore extended well beyond the confines of its own borders. The Settlement's medical authorities maintained close ties with their French counterparts, both of whom engaged in a complicated, volatile and unpredictable relationship with the Chinese municipal authorities. Commissioner of Public Health Davis, for instance, complained about a deterioration in relations following the Nationalists rise to power. His successor Jordan repeatedly tried to take advantage of an apparent rapprochement in the mid-1930s and the Settlement's rapidly developing anti-malaria materiel to secure the Chinese municipality's support for joint extra-Settlement prevention. Strikingly these overtures continued even after the Settlement was encircled by the invading Japanese forces. Jordan only suspended the deployment of the Malaria Prevention Unit's squads beyond the railway line, i.e. beyond the limits of the extra-Settlement area, in 1942.

The outbreak of the war revealed limits to the Settlement's medical jurisdiction compared to Hong Kong's. The Chinese Mission to Lepers was forced to evacuate the National Leprosarium to three consecutive sites within the space of a year as a result of the Japanese invasion. Eventually the inmates were permitted to settle at the Emergency Leprosarium on Brenan Road, which lay in the western extra-Settlement area. Within weeks the colonial authorities in Hong Kong proclaimed its own domestic leprosarium on Hong Kong Island. Both authorities emphasised the paramount importance of rigid confinement. Indeed the need to assuage popular fears about the unregulated movements of leprosy sufferers within the colony underpinned the government's take-over of the Tung Wah-administered institution at Kennedy Town. But whereas the colony's legislation empowered the authorities to detain the patients within the confines of an officially-recognised leprosarium such as the state-run institution at Kennedy Town, the Settlement lacked the authority to do so. The joint escape of Loh Liang and Li Ping within hours of being admitted against their will to the National Leprosarium by the Settlement's Public Health Department, was a case in point. Alternative policing priorities and the Chinese Mission to Lepers' deteriorating relationship with the Settlement's Public Health Department – due in part to a clash of personalities that was only inflamed by further escapes – compounded the fact that the Settlement lacked the wherewithal to vigorously enforce confinement.

The Japanese occupation of Hong Kong and the International Settlement in December 1941 revealed a fourth and final distinction that belied the impact of sovereignty upon official medical practices. Whereas the collapse of British sovereignty in Hong Kong severely disrupted colonial medical practices, the occupying forces preserved the bureaucracy that underpinned the Settlement's medical policies. Although Silvey was eventually interned along with all of the other Allied personnel in Shanghai, the Chinese and non-Allied members of the Malaria Prevention Unit continued along the same lines that Silvey had developed prior to the

outbreak of war, albeit on a reduced scale as a result of war-time shortages. Similarly the identification and maintenance of 'bona-fide' resident leprosy sufferers continued beyond the abolition of the International Settlement, i.e. the very territory upon which the distinction between 'bona-fide' residents and non-residents was made. By contrast the Kennedy Town Leprosarium was allowed to disintegrate shortly after the British surrender of Hong Kong. Not all of Hong Kong's colonial medical practices were abandoned however. Mackie was not interned until 1943, well over a year after most of the other Allied personnel. But this continuity reflected Japanese concerns about the threat of diseases such as malaria to its troops. These examples suggest that the geography of colonialism in China did indeed have a significant impact upon the geography of medicine. By exploring Hong Kong's and the International Settlement's disease prevention strategies through the prisms of malaria and leprosy – two diseases whose relation to one another Cantlie considered 'a burning question' – this dissertation has laid the foundations for further research into the nature of 'semi-colonial medicine'.

Appendix A: 'Hearty Gun's Warning'

'Hearty Gun's Warning'

'In spite of Dr.Hartigan's vigorous protests the Sanitary Board shows a singular reluctance to deal with the mosquito-infested pools, which, we are told provide breeding places for the malaria-bearing pests. – Daily Papers

Ye who would doubt that mosquitoes, malaria microbes imbibe.
List to the story of Hearty Gun, medicine man of the tribe.

Deep was the Hearty Gun's learning, great his renown as a chief,
Long had he ruled in the wigwam, bringing to sickness relief;
Potent the charms he could muster, yet did the warriors die.
Then met the wigwam in Council, demanding of Hearty Gun 'Why?'

Up spake a chief, 'O my brothers, malaria lurks in our camps.
Know ye the nimble mosquito doth spread it about from the swamps;
We find that he carries contagion, and who-so he bites droppeth dead,
He breedeth in pools and morasses and visits our camp. I have said.'

Then made the Hearty Gun answer, 'Wisely my brother doth speak;
Let us destroy the mosquito, ere further havoc he wreak;
Let us fill up all the puddles, where lurks our insidious foe.'
Swiftly the warriors checked him, 'That means expenditure. No!'

Wrathful was Hearty Gun's visage, burning the language he spoke.
'Are all our zealous researches, merely to end then in smoke?
Just of the sake of a dollar, must we see warriors die?'
'Brother the cost is excessive!' the Council as one made reply.

So did malaria ravage, warrior, papoose and squaw,
Spite of the Hearty Gun protests, spite of their science and law;
And, when they, weakened with ague, by worthier tribes were o'er-run.
Cursed their previous blindness. *Heed ye the story of Gun!*

DOLLY¹

¹ Italics in the original. Dolly [pseud.], "Hearty Gun's Warning," *China Mail*, Mar. 22, 1901, 2. This poem along with Dolly's other contributions were later published. Dolly [pseud.], *Tales of Hongkong in Verse and Story* (Hong Kong: Kelly & Walsh, 1902).

Appendix B: Additional Statistics

Table A2.9. Leprosy Cases in Hong Kong, 1880-1922
(A)dmmissions and (D)eaths

Year	Government Hospitals										Chinese Hospitals					
	Civil Hospt.		Gaol Hospt.		Infectious Diseases Hospt.		Victoria Hospt.		Total		Tung Wah Hospt.		Kwong Wa Hospt.		Total	
	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
1880	1								1							
1881																
1882																
1883	1								1							
1884	1								1							
1885	1								1							
1886	1								1							
1887	1	1							1	1						
1888																
1889																
1890																
1891																
1892																
1893																
1894																
1895																
1896	3								3							
1897	2								2		1				1	
1898	4								4							
1899			3						3							
1900	1				4	1			5	1	2				2	
1901	1				1				2		1				1	
1902	1								1		1				1	
1903	2								2		2				2	
1904											7				7	
1905											7	2			7	2
1906	2								2		2				2	
1907	3				1				4		14	2			14	2
1908	2				1				3		14	3			14	3
1909	1	1							1	1	5				5	
1910	1				1				2		14				14	
1911																
1912	1								1		6				6	
1913	2	1	3						5	1	4				4	
1914			5						5							
1915											1				1	
1916	3		1	1					4	1	6				6	
1917	6	1							6	1	4	1			4	1
1918	6								6		1				1	
1919	6								9		10	3			10	3
1920	8								8		10	1			10	1
1921	6								6		10	2			10	2
1922	3		1						4		13		3		16	

Table A2.10. Leprosy Cases in the International Settlement's Isolation Hospitals, 1903-31

	Foreign Cases		Chinese Cases		Total	
	Admitted	Died	Admitted	Died	Admitted	Died
1903	n/a	n/a	n/a	n/a	4	-
1904	n/a	n/a	n/a	n/a	2	1
1905	-	-	-	-	-	-
1906	1	1	-	-	1	1
1907	-	-	-	-	-	-
1908	-	-	1	-	1	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	1	-	1	-
1914	-	-	-	-	-	-
1915	-	-	2	-	2	-
1916	-	-	3	-	3	-
1917	-	-	-	-	-	-
1918	-	-	-	-	-	-
1919	-	-	-	-	-	-
1920	-	-	-	-	-	-
1921	-	-	-	-	-	-
1922	-	-	-	-	-	-
1923	-	-	-	-	-	-
1924	-	-	-	-	-	-
1925	-	-	-	-	-	-
1926	-	-	-	-	-	-
1927	-	-	-	-	-	-
1928	-	-	-	-	-	-
1929	-	-	-	-	-	-
1930	-	-	1	-	1	-
1931	-	-	2	-	2	-

Table A2.11. The International Settlement's Maintenance of Resident and Refugee Leprosy Sufferers, 1938-40

Period		Resident Patients		Refugee Patients	
		Number	Paid in Maintenance (\$)	Number	Paid in Maintenance (\$)
1938	Jan	3	33.2	<i>n/a</i>	<i>n/a</i>
	Feb	7	72.34	<i>n/a</i>	<i>n/a</i>
	Mar	16	254.84	15	254.84
	Apr	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
	May	6	87.06	18	318.08
	Jun	7	133.2	20	391.02
	Jul	13	197.62	25	469.96
	Aug	14	265.96	25	491.22
	Sep	13	244.62	25	492.54
	Oct	13	243.96	25	465.94
	Nov	15	255.84	27	520.06
	Dec	13	240	27	541.98
1939	Jan	15	255.18	31	570.16
	Feb	15	383.96	30	589.24
	Mar	18	335.64	29	580
	Apr	17	340	30	501.12
	May	17	310.56	30	567.72
	Jun	15	300	29	561.78
	Jul	15	300	31	608.38
	Aug	15	300	31	602.64
	Sep	16	320	30	600
	Oct	16	320	31	619.14
	Nov	16	320	31	620
	Dec	16	320	31	620
1940	Jan	16	480	32	960
	Feb	16	480	32	960
	Mar	16	480	33	962
	Apr	23	597	34	1,008.00
	May	24	720	34	1,018.00
	Jun	26	693	34	970
	Jul	22	660	32	937
	Aug	23	690	30	900
	Sep	28	711	31	923
	Oct	24	720	33	1,030.00
	Nov	24	720	32	960
	Dec	25	732	34	982

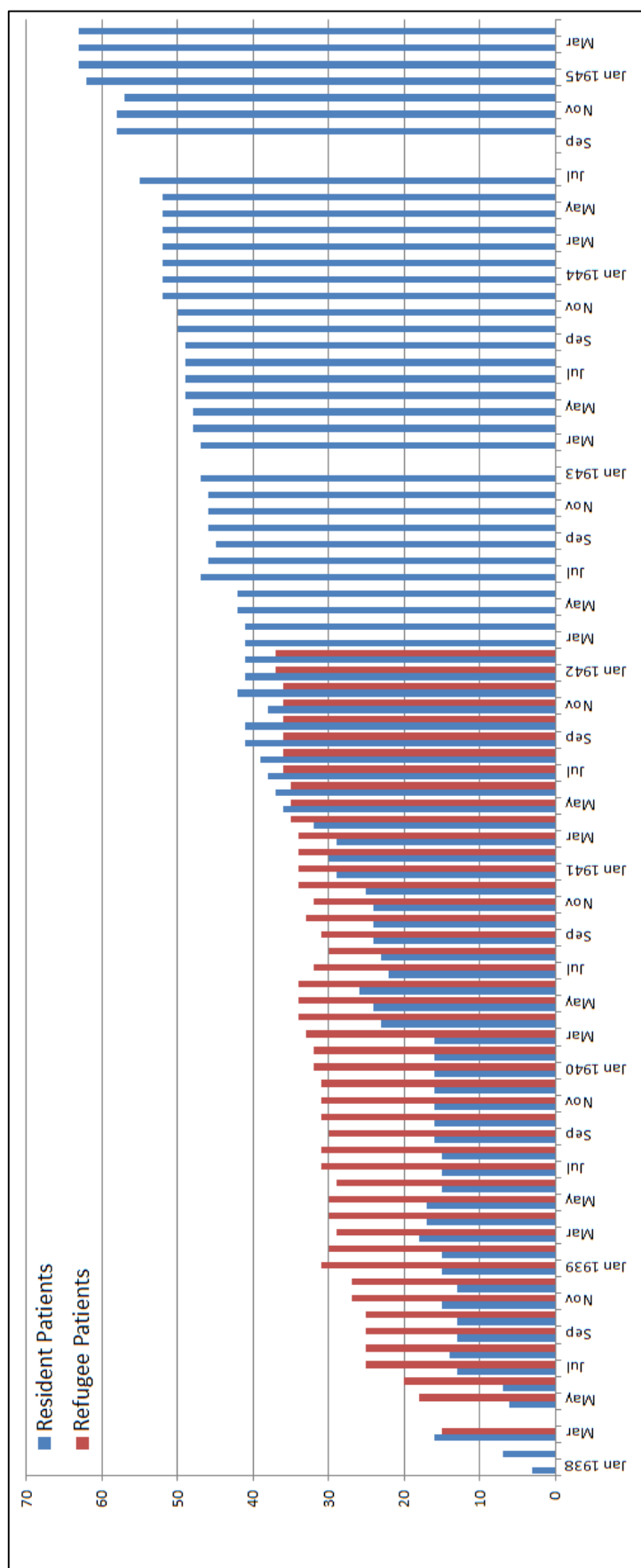


Figure 31. Resident and Refugee Admissions to the National Leprosarium, 1938-45

Note there is no data for Apr. 1938, Feb. 1943, Aug. and Sept. 1944

Table A2.12. Malarial Admissions amongst Hong Kong's Police Force, 1897-1920.

Year	From the City	From rest of the Colony	Total	Avg Strength of Police Force	% of Strength
1897	-	-	160	630	25
1898	-	-	121	630	19
1899	-	-	239	770	31
1900	167	223	390	929	42
1901	243	164	407	920	44
1902	121	55	176	919	19
1903	83	84	167	921	18
1904	40	67	107	993	11
1905	42	85	127	1018	12
1906	37	37	74	1047	7
1907	40	65	105	1049	10
1908	32	76	108	1018	10
1909	37	50	87	1050	8
1910	66	69	135	1039	13
1911	30	83	113	1031	11
1912	37	51	88	1120	8
1913	68	95	163	1170	14
1914	101	81	182	1206	15
1915	116	92	208	1289	16
1916	63	99	162	1057	13
1917	51	84	135	1192	11
1918	40	49	89	1228	7
1919	13	74	87	1228	7
1920	27	60	87	1281	6.7

Table A2.13. Annual Malaria Returns for the European Troops in Hong Kong, 1898-1914²

Year	Admissions	Deaths	Invalided	Avg. Annual Strength	% of Strength (per 1,000)
1898	595	10	18	1,569	379.3
1899	829	5	25	1,643	504.6
1900	629	4	16	1,484	423.8
1901	1,010	4	15	1,673	603.7
1902	1,523	6	24	1,381	1102.8
1903	937	2	6	1,220	768.0
1904	390	1	9	1,426	273.5
1905	348	0	1	1,370	254.0
1906	480	4	15	1,525	314.7
1907	287	0	12	1,461	196.0
1908	515	0	17	2,012	256.0
1909	269	2	10	1,943	138.9
1910	334	1	9	1,887	177.0
1911	232	0	4	1849	125.5
1912	151	1	0	1797	84.0
1913	80	0	1	1883	42.5
1914	87	0	0	1654	52.6

Table A2.14. Notified Civilian and Military Cases of Malaria in the International Settlement of Shanghai, 1927-32.

	1927		1928		1929		1930		1931		1932	
	Civilian	Military	Civilian	Military	Civilian	Military	Civilian	Military	Civilian	Military	Civilian	Military
Jan	-	-	-	-	-	1	-	1	1	-	-	-
Feb	-	-	1	-	-	1	2	-	3	-	-	-
Mar	-	2	-	-	-	-	1	1	3	-	-	-
Apr	-	29	2	-	2	-	-	1	2	1	2	2
May	-	12	1	2	3	-	2	-	3	-	0	1
Jun	-	17	3	1	1	-	5	1	3	-	1	0
Jul	-	45	4	6	5	18	19	4	12	7	4	6
Aug	-	71	2	16	9	7	11	36	14	35	3	9
Sep	3	59	3	20	15	20	19	32	10	26	5	14
Oct	11	35	3	28	6	16	22	91	12	14	4	9
Nov	2	3	1	5	2	1	9	10	7	6	2	2
Dec	2	1	-	2	3	1	2	1	-	4	3	0
TOTAL	18	274	20	80	46	65	92	178	70	93	24	43

²² Atkinson and Clark, *General Report*, Feb. 1, 1908, HKGRO, 407; Hong Kong Government, *Medical and Sanitary Reports for the Year 1914*, Mar. 9, 1915, HKGRO, 22.

Bibliography

Archival Sources

Archives and Libraries

Hong Kong University Library, Hong Kong

Hong Kong Medical Society. *Minutes of Meetings, 1886-1912*.

Lee, Lily Chan Lai. "A Regional Study of Hay Ling Chau." Undergraduate essay to the Department of Geography & Geology, University of Hong Kong, 1963.

London School of Hygiene and Tropical Medicine Library, London

Material on the Liverpool School of Tropical Medicine's expedition to Sierra Leone, 1901-1902 (Ross/79).

Conference on malaria at Nagpur, Central Provinces, 1902 (Ross/103/01).

Manuscript and photographs on malaria in Hong Kong by William Francis Clark, Medical Officer of Health, Hong Kong, 1911 (Ross.138.05).

The National Archives, London

Colonial Office: Hong Kong, Original Correspondence (CO129).

—: Hong Kong, Sessional Papers (CO131).

—: Subjects Affecting Colonies Generally, Confidential Print (CO885).

Foreign Office: Shanghai, General Correspondence (FO 671).

Old China Hands Archive, The Oviatt Library, Northridge CA

Robertson, R. C. "Mosquitoes." *Totem: Official Organ of Shanghai Scouting* 7, no. 7 (May 1937): 122-123.

Public Records Office, Hong Kong

As to the projected purchase by Government of the plot of padi under Sha Tau and of an area to be defined between Taiipo Police Station and village; 2. As to the possibility and cost of draining the Taiipo marsh. (HKRS58/1/15/31).

Correspondence Relative to the Magistrate's Court, Police and Prisons, Jan. 1880 – Nov. 1881 (HKRS101/1/4/4).

—, Jan. 1881 – Dec. 1881 (HKRS101/1/4/5).

—, Jan. 1908 – Dec. 1908 (HKRS101/1/4/21).

Housing of Lepers: Erection of a temporary building at the coffin house at Sandy Bay (HKRS156/1/2835).

Justices of the Peace. Appointment of ... for visiting Leprosarium at Sandy Bay (HKRS41/1/5724).

—, List of ... for visiting the Leprosarium at Sandy Bay (HKRS41/1/5725).

—: Reports by ... on Leprosarium at Sandy Bay (HKRS41/1/5726).

Kowloon: 1. Complaining again Certain Nuisances; 2. Proposed European Reservation at Kowloon & the Peak (HKRS58/1/14/78).

Leper Prisoners: Segregation of... in Prison Hospital [*sic*] (HKRS41/1/2910).
 Lepers (HKRS48/1/204).
 Leprosarium at Ni Ku Chau (Hay Ling Chau) (HKRS503/2/11).
 Leprosarium: Proposed Site for ... in the N.T. (HKRS503/2/12).
 Letters from Government, vol. I 1903 (Correspondence of the Sanitary Board)
 (HKRS203/1/4).
 —, vol. II 1903 (Correspondence of the Sanitary Board) (HKRS203/1/25).
 Letters to Government, vol. II 1900 (Correspondence of the Sanitary Board) (HKRS202/1/1).
 —, vol. II 1903 (Correspondence of the Sanitary Board) (HKRS202/1/6).
 —, vol. III 1903 (Correspondence of the Sanitary Board) (HKRS202/1/8).
 —, vol. III 1904 (Correspondence of the Sanitary Board) (HKRS202/1/11).
 Malaria Fever in Shaukiwan & its environs, Recommendations for the prevention of –
 (HKRS58/1/47/52)
 Malaria. Anti-Malaria Measures (HKRS146/1/1).
 Padi Land & marsh close to Starling Inlet Police Station. Recommends purchase of –
 (HKRS58/1/15/29).

Royal College of Physicians, London

Replies to the College's Leprosy Committee, *ca.* 1860s (OFFIP/4119).

Shanghai Municipal Archives, Shanghai

Administrative Data: Annual Requirements for Mosquito Control – Staff, Equipment &
 Larvicides (U1/16/2699).
 —: Malaria Prevention Unit (U1/16/2700).
 —: Measures of Mosquito Control – Activities of the Districts (U1/16/2695).
 —: Measures of Mosquito Control – Filling-In and Drainage Operations (U1/16/2694).
 —: Measures of Mosquito Control – General (U1/16/2693).
 Chinese Mission to Lepers (U1/16/2622).
 Chinese Public Sanitarium & (Shanghai Insanity Asylum) (U1/16/763).
 Chinese Staff: Divisional – Malaria Prevention Unit (U1/16/3108).
 Contracts – Mosquito Mixture. Miscellaneous (U1/16/452).
 Co-Operation With City Government (U1/16/2697).
 Disease: Malaria (U1/4/779).
 Enquiries & Exchange of Information (U1/16/2703).
 Equipment: Anti-Mosquito Mixture Plant & Storage Tank (U1/16/2715).
 —: Experimental Ponds – Larvicides (U1/16/2707).
 —: Locally Made Sprayers (U1/16/2706).
 —: Mosquito Lamps & Traps (U1/16/2709).
 —: Motor Pumps & Trailers (U1/16/2710(1)).
 —: Oil Sprayers (U1/16/2711).
 —: Oil Sprayers and Accessories (U1/16/2705).
 Far Eastern Association of Tropical Medicine, 9th Congress at Nanking – Local Reception &
 Press Cuttings, 1934 (U1/16/2690).

Flies: Surveys (U1/16/2737).

General: Low-Lying Ground – Western District. General (U1/14/2356).

Grant-in-Aid: National Leprosarium of China (U1/4/232).

—: National Leprosarium of China (U1/4/233).

—: Red Cross Hospital (U1/4/234).

Health Committee: Minutes 1939 (U1/16/32).

—: Minutes, 1908-1909 (U1/16/9).

—: Minutes, 1910 (U1/16/10).

—: Minutes, 1933 (U1/16/26).

—: Minutes, 1934 (U1/16/27).

—: Minutes, 1943 (U1/16/36).

Lectures by Dr. J.H. Jordan (U1/16/212).

Leprosy (U1/16/2858).

— (U1/4/763).

Leprosy Clinic (U1/16/762).

—: General Data (U1/16/2618).

—: Miscellaneous Data (U1/16/2619).

—: Surveys & Reports to the Council (U1/16/2620).

—: Transport of Cases to Hangchow (U1/16/2621).

Malaria. Miscellaneous (U1/16/2623).

—: Miscellaneous Cases (U1/16/2626).

—: Miscellaneous Data (U1/16/2624).

—: Outbreak in Minghong (U1/16/2625).

Method of Control – Mosquitoes (U1/16/2746).

— in Other Municipalities: Mosquitoes (U1/16/2754).

Monthly Report: August 1930 (U1/16/4473).

—: Malaria Prevention Unit (U1/16/4607).

Mosquito Fish – Supply & Transport Charges (U1/4/704).

Mosquito Nuisances (U1/16/2760).

Mosquito Reduction Measures (U1/4/593).

Municipal Properties: Health – Mosquito Prevention (U1/14/2349).

National Leprosarium of Shanghai, Miscellaneous (U1/16/752).

—: Admission of Cases (U1/16/754).

—: Emergency Matters & Temporary Quarters (U1/16/761).

—: Individual Cases (101-150) (U1/16/757).

—: Individual Cases (151-200) (U1/16/758).

—: Individual Cases (51-100) (U1/16/756).

—: Statement of Accounts & Verification of Residential Qualifications (U1/16/759(1)).

—: Statement of Accounts & Verification of Residential Qualifications (U1/16/759(2)).

National Leprosarium. Accounts (U1/16/760).

—: Individual Cases (16-50) (U1/16/755).

Other Data: Mosquitoes – Species and Technics (U1/16/2739).

Publicity: Posters (U1/16/247).

Russian Orthodox Confrat. Hospital: Miscellaneous (U1/16/834).
 Shanghai Greater. Organisation – The Appointment of Drs. Hou-Ki Hu & Li Ting-An
 (U1/16/290).
 Shanghai Leprosarium (Ex-National Leprosarium of Shanghai) Grant-In-Aid (U1/16/753(1)).
 — (U1/16/753(2)).
 Surveys – Mosquitoes (U1/16/2736).
The Acknowledgement of the Building Campaign of the National Leprosarium of China,
January, 1934 – January, 1935 (U1/16/4840).
 The Flying Column (U1/16/2701).

Wellcome Library, London

Cantlie, James. "Six cases of leprosy treated with Koch's tuberculin," *ca.* 1899-94 (MS 1468).
 —. "Two leper settlements in China: Canton & Macao," *ca.* 1891 (MS 1477).
 —. "Is leprosy a variety of tuberculosis," *ca.* 1895 (MS 1486).
 —. "Lecture on Hong Kong," *ca.* 1898 (MS 1488).
 —. "Enquiry into the life-history of Eurasians," *ca.* 1888 (MS 1499).

Archival Sources – Online Portals

Hong Kong Government Records Online, <http://www.lib.hku.hk/database/>

Sessional Papers

Administrative Reports

Hong Kong Hansard

The Hong Kong Government Gazette

Parliamentary Papers, <http://parlipapers.chadwyck.co.uk/home.do>

Hong Kong. Copies of 'Report on Hong Kong,' 'Report on Chusan,' and Minute on the British Position and Prospects in China,' by Mr. R. Montgomery Martin, when Treasurer to The Queen at Hong Kong, and a Member of Her Majesty's Legislative Council in China. Session 1 (148) 1857

Primary Sources

Newspapers

The China Mail

The Hongkong Daily Press

The Hongkong Sunday Herald

The Hongkong Telegraph

The Hongkong Weekly Press & China Overland Trade Report

The North-China Daily News

The North-China Herald and Supreme Court & Consular Gazette

Journal Articles

"The Stegomyia Survey in Hong Kong." *Bulletin of Entomological Research* 6 no. 1 (1915): 67-68.

Atkinson, J. Mitford. "The Malarial Fevers of Hong-Kong." *Lancet*, Apr. 28, 1894, 1054-1060.

Cadbury, William W. "The Treatment of Lepers as Out-Patients." *China Medical Journal* 32, no. 3 (1918): 226-233.

Cantlie, James. "On the Physical and Ethnological Conditions under which Leprosy Occurs In China, The Malay Peninsula, The East Indian Archipelago, And The Islands of The Pacific." *Transactions of the Epidemiological Society of London*, no. 17 (1898): 15-40.

Chen, F. K., and W. Y. Chen. "A Study of Cases of Leprosy as Observed in the Hongkew Clinic for Skin Diseases." *Leper Quarterly* 6, no. 4 (1932): 59-62.

———. "Report of the Hongkew Clinic for Skin Diseases." *Leper Quarterly* 7, no. 1 (1933): 41-48.

Chen, W. Y. "Annual Report of the Hongkew Clinic for Skin Diseases, for the Year 1934-1935." *Leper Quarterly*, 9, no. 2 (1935): 233-236.

Davis, C. Noel. "Leprosy." *China Medical Journal* 39, no. 7 (1925): 632-634.

Durand-Fardel, Max. "La Lèpre en Chine; note pour servir à l'histoire de la lèpre." Pts. 1-5. *Gazette médicale de Paris* 26 (1877): 318-319; 28 (1877): 341-343; 30 (1877): 367-368; 33 (1877): 402-404; 34 (1877): 414-415.

Edward Henderson, "Heat Apoplexy." *British Medical Journal*, Sept. 2, 1902, 854.

Edwards, F. W. "A Synopsis of Adult Oriental Culicine (Including Megarhinine And Sabethine) Mosquitoes." *Indian Journal of Medical Research* 10 (1922): 249-293.

———. "Mosquito Notes – XII," *Bulletin of Entomological Research* 26, no. 2 (1935): 127-136.

———. "New Culicidae from Borneo and Hong Kong." *Bulletin of Entomological Research* 5, no. 2 (1914): 125-128, 126-127.

———. "New Species of Culicidae in the British Museum, with Notes on the Genitalia of Some African Culex," *Bulletin of Entomological Research* 5, no. 1 (1914): 63-81.

Faulder, H. Crozier. "Malaria Prevention with Special Reference to Shanghai." *China Journal* 30, no. 5 (1939): 305-312.

- Feng, Lan-Chou. "Anopheles hyrcanus var. sinensis Wied., Transmitter of Wuchereria (Filaria) bancrofti in Woosung District, Shanghai, China." *American Journal of Epidemiology* 14, no. 2 (1931): 502-14.
- Fowler, Henry. "A Survey of Leprosy in China." *China Medical Journal* 39, no. 7 (1925): 584-590.
- Fraser, N. D. "The Systematic Treatment of Leprosy – Out-Patients: An Account of an Out-Patient Clinic for Patients Suffering from Leprosy. Attached to a General Hospital." *China Medical Journal* 45, no. 9 (1931): 890-895.
- . "Out-Patient Leprosy Work." *Chinese Medical Journal* 48, no. 3 (1933): 257-262.
- Groce, Ethel R. "Brothering the Leper." *Leper Quarterly* 15, no. 3 (1941): 101-109.
- Haddow, Phyllis, and Sydney D. Sturton. "Hangchow." *Chinese Medical Journal* 44, no. 8 (1930): 789-792.
- Hobson, Benjamin. "Leprosy in China and the East. A Brief Account of the Leprosy of China and the East." *Transactions of the China Branch of the Royal Asiatic Society*, no.3 (1851-52): 17-27.
- Hu, Stephen M. K., and Chia-hsien Yen. "Studies on the Susceptibility of *Culex pipiens* Linnaeus var. *pallens* Coquillett to Experimental Infection with *Wuchereria bancrofti* Cobbold in Shanghai Area." *Chinese Medical Journal* 47, no. 11 (1933): 1359-1366.
- Hu, Stephen M. K., and Teh-Ling Chang. "Observations on Natural Infection of *Culex pipiens* Linnaeus var. *pallens* Coquillett with *Wuchereria bancrofti* Cobbold in Woosung District, Shanghai, China." *Chinese Medical Journal* 47, no. 11 (1933): 1367-1372.
- Huizenga, L. S. "Shanghai Leprosarium Ordered to Move for Fourth Time." *Leper Quarterly* 15, no. 2 (1941): 54.
- Jackson, R. B. "A Brief Account of Mosquitoes. Their Life History, and the Diseases which they carry, with Special Reference to Hong Kong." *Hong Kong Naturalist: a quarterly illustrated journal principally for Hong Kong and South China* 3 nos. 3&4 (1932), 207-215.
- . "A Guide to the Identification of the Anopheline Larvae of the Colony of Hong Kong." Pts. 1 and 2. *Chinese Med Journal* 53, no. 2 (1938): 259-270; 53, no. 6 (1938): 563-576.
- . "Investigations into the Habits and Pathogenicity of the Anophelines met with in Two Localities in Hong Kong During 1931-1935." *Chinese Medical Journal* 50 (1936): 1098-1113.
- . "Mosquitoes" *Caduceus* 11, no. 2 (1932): 83-91.
- . "Notes on *AE. (F) Togoi* Yamada as met with in the Colony of Hongkong." *Chinese Medical Journal* 54, no. 6 (1938): 559-562.
- . "Some Observations on the Occurrence of Filarial Infection in Mosquito and Man in the Colony of Hong Kong." *Chinese Medical Journal* 50 (1936): 1767-1772.
- Jamieson, Alexander. "Dr Alexander Jamieson's Report on the Health of Shanghai for the half year ended 30th September, 1871." *Customs Gazette, Medical Reports* 11, no. 6 (Sept. 1871): 33-43.
- . "Dr. Alexander Jamieson's Report on the Health of Shanghai for the Half-year ended 30th September 1880', *Imperial Maritime Customs, Medical* 2, no. 20 (1881): 32-39.

- Jordan, J. H. "Mosquito Larvicidal Measures." *Chinese Medical Journal* 51 (1937): 927-936.
- Jordan, J. H., and W. J. Silvey. "The Comparative Value of Penothiazine, Paradichlorbenzene, Tetralin, Trichlorethylene and Pyrethrum Extracts as Mosquito Larvicides." *Chinese Medical Journal* 60, no. 1 (1941): 66-72.
- Lai, Daniel G. "Chinese Leprosy Cases in the U.S. National Leprosarium: A Clinical and Laboratory Study of 36 Patients with 7 Autopsy Reports." *Chinese Medical Journal* 47, no. 8 (1933): 772-784.
- . "The First Annual Report of the National Leprosarium of Shanghai for the Year 1936." *Leper Quarterly* 11, no. 2 (1937): 81-94.
- . "What the National Leprosarium of China May Serve." *Leper Quarterly* 8, nos. 1&2 (1934): 3-7.
- Lai, Daniel G. and Suchen Wang Lai. "The Kahn Reaction in Leprosy: A Study of 167 Lepers in Swatow District." *China Medical Journal* 42, no. 12 (1928): 880-883.
- Lai, Daniel G., Yu-Jen Li, and Wei Chang. "A Malaria Survey in Kao-Chiao, Shanghai." *Chinese Medical Journal* 49 (1935): 462-69.
- Lake, John. "Life on Tai-Kam Island." *Leper Quarterly* 3 (1927): 12-18.
- . "Tai-Kam Leper Island, Kwangtung." *Leper Quarterly* 2, no. 4 (1928): 29.
- . "The Leper World: With Lepers and Pirates." *Leper Quarterly* 6, no. 2 (1932): 35-38.
- Lamborn, W. A. "The Mosquitos of some Ports of China and Japan." *Bulletin of Entomological Research* 12, no. 4 (1922): 401-409.
- Laum, Jimmy. "Wanted: A Change of Attitude Towards Leprosy." *Leper Quarterly* 9, no. 4 (1935): 340-346.
- Lee, J. A. "Hongkong and the Leper War." *Leper Quarterly* 2, no. 1 (1928): 17-23.
- Lee, W. Yinson. "Hongkong Plans to Care for Lepers." *Leper Quarterly* 9, no. 2 (1935): 238-240.
- Leung, George Kin. "Tai-Kam, A Paradise For Lepers." *Leper Quarterly* 2, no. 1 (1928), 11-16.
- MacArthur, W. P. "The adult mosquitoes of Shanghai." *Journal of the Royal Army Medical Corps* 52, no. 4 (1929): 241-247.
- Main, Duncan. "The Hangchow Leper Hospital." *Leper Quarterly* 1 (1927): 31-32.
- Manson, Patrick. "Notes on Some Skin Diseases." *Imperial Maritime Customs, Medical Reports* 2, no. 21 (Mar. 1881): 27-36.
- Mattingly, P. F. "*Ficalbia (Ficalbia) Jacksoni* SP. N., A New Species of Mosquito (Diptera, Culicidae) from Hong-Kong." *Proceedings of the Royal Entomological Society of London Series B. Taxonomy* 19, nos. 1-2 (1949): 9-11.
- Maxwell, James L. "The Menace of Leprosy in Manchuria." *Leprosy Review* 2, no. 1 (1931): 5-7.
- McWade, Robert M., Review of *Treatment and cure of leprosy in south China*, by Dr. Adolph Razlag. *Public Health Reports* 18, no. 5 (1903): 142-150.
- Meleny, Henry E. "China's Past and Present Opportunities in Tropical Medicine," *China Medical Journal* 11, no. 12 (1926): 1189-1203.
- Mora, A. Damas and J. C. Soares. "Leprosy in Macao: Some Comments by the Portuguese Doctors in Macao." *Chinese Medical Journal* 50 (1936): 721-725.

- Ong, Ih-dao. "For Sale: Paintings by Ong Ih-dao, an inmate of the Shanghai Leprosarium." *Leper Quarterly* 14, no. 4 (1940): 170.
- Pan, F. Y. "Shanghai: Hongkew General Dispensary." *Chinese Medical Journal* 44, no. 8 (1930): 793-794.
- Reiss, F. "A New Immunologic Reaction for the Diagnosis of Lymphogranuloma Inguinale." *Archives of Dermatology* 31, no. 2 (1935): 215-216.
- . "Acht bemerkenswerte Krankheitsbilder." *Dermatologica* 18, no. 1 (1940): 12-13.
- . "Leprosy And Its Relationship To Shanghai." *Leper Quarterly* 5, no. 1 (1931): 2-7.
- . "Leprosy." *China Medical Journal* 43, no.5 (1929): 479-484.
- . "Some Notes on Leprosy." *Leper Quarterly* 3, no. 1 (1929): 11-17.
- . "The Present Conditions of Leprosy in Shanghai and the Future Outlook." *Leper Quarterly* 5, no. 4 (1931): 2-7.
- Robertson, R. C., Stephen M. K. Hu, and R. V. Dent. "Mosquito Control: An Entomological Field Research Station in the Shanghai District." *China Journal* 20, no. 6 (1934): 344-56.
- Rogers, Leonard. "The Spread, Probable Mode of Infection, and Prophylaxis of Leprosy." *China Medical Journal* 36, no. 6 (1922): 474-486.
- Severn, A. G. Millott. "Malaria, and Malaria Prophylaxis in Formosa." *Caduceus* 5, no. 3 (1926): 219-226.
- . "The Mosquitoes of Hongkong." *Caduceus* 5, no. 1 (1926): 5-9.
- Shapleigh, Elizabeth. "Leprosy Prevalent in Shanghai." *Leper Quarterly* 2, no. 4 (1928): 30.
- Skertchly, Sydney B. "The Ethnography of Leprosy in the Far East', *Proceedings of the Royal Society of Queensland*, no.13 (1898): 1-22.
- Sturton, S. D. "The Problem of Leprosy in Hangchow." *Chinese Medical Journal* 47, no. 3 (1933): 263-269.
- Su, T. L., and T. F. Huang. "Malaria as a Rural Social Problem in the South-Western Suburbs of Shanghai." *Chinese Medical Journal* 51 (1937): 963-70.
- Thin, George. "A Note on Species of Anopheles Found amongst Mosquitos sent from Shanghai and Java." *British Medical Journal*, Feb. 10, 1900, 307-308.
- Thomson, J. C. "The Prevalence of Mosquitoes and Malaria in Hongkong." *Journal of Tropical Medicine* 1901-01-15, 23-25.
- Thomson, J. C. and T. M. Young, "Mosquitoes and Malarial Parasites in Hong Kong.", *Journal of Tropical Medicine*, Feb. 1, 1901, 38-40.
- Tyau, E. S. "The History of Leprosy in Shanghai." *Leper Quarterly* 6, no. 4 (1932): 45-51.
- Wang, Eu-Kam. "Dr. Wu Ting-Fang and the Tai-Kam Leper Colony." *Leper Quarterly* 2 (1927): 22-25.
- Wang, Keiz. "A Report of the National Leprosarium of Shanghai since its evacuation from Tazang in last September." *Leper Quarterly* 12, no. 1 (1938): 32-34.
- Wang, Lin-Zei. "A Brief History of the Hangchow Leper Hospital." *Leper Quarterly* 2 (1927): 20-22.
- Wellington, A. R. "Malaria in its relation to Man and Mosquito." *Caduceus* 8, no. 3 (1929): 117-129.

- Wong, Charles L. "Report of the National Leprosarium of Shanghai for 1937-1938." *Leper Quarterly* 13, no. 1 (1939): 31-43.
- Wong, F. "Memorandum on Leprosy." *Customs Gazette, Medical Reports*, no. 6 (Sept. 1873): 41-47.
- Wu, T. C. "A Record Year of the Mission: The Annual Report of the General Secretary for 1935." *Leper Quarterly* 10, no. 1 (1936): 17-23.
- . "A Report of My Trip to South China." *Leper Quarterly* 1 (1927): 13-28.
- . "A Review of the Year's Work." *Leper Quarterly* 8, nos. 1&2 (1934): 56-61.
- . "Annual Report for 1939 of the Chinese Mission to Lepers." *Leper Quarterly* 14, no. 1 (1940): 37-45.
- . "Editorial." *Leper Quarterly* 1, no. 1 (1927): 1-4.
- . "Leprosy in South China: A Report." *Leper Quarterly* 6, no. 3 (1932): 10-22.
- . "Leprosy Situation in War-Torn China." *Leper Quarterly* 13, no. 4 (1939): 142-154.
- Yen, F. C. "Plans and Objectives for the Proposed Leprosarium for Shanghai." *Leper Quarterly* 8, nos. 1&2 (1934): 25-30.
- . "President's Opening Address." *Leper Quarterly* 9, no. 4 (1935): 299-300.
- Young, T. M. "The Prevention of Malaria in Hong Kong." *British Medical Journal*, Sept. 14, 1901, 683-686.

Monographs

- A Guide to Hongkong, with a short account of Canton and Macao, and embracing many chapters on Interest Relating to the Far East.* Hong Kong: W. Brewer, 1883.
- Atkinson, J. Mitford. "Presidential Address: The Progress of Tropical Medicine during the past Twenty-five Years." In *Transactions of the Second Biennial Congress held at Hongkong 1912*, edited by Francis Clark, 5-17. Hong Kong: Noronha & Co., 1913.
- Cantlie, James. *Leprosy in Hongkong*. Hong Kong: Kelly & Walsh, 1890.
- . *Report On The Conditions Under Which Leprosy Occurs in China, Indo-China, Malaya, The Archipelago, and Oceania. Compiled Chiefly During 1894.* London: MacMillan and Co., 1897.
- Clark, Francis William. *The Prevention of Malaria in Hongkong (An Address)*. Hong Kong: Naronha & Co. 1906.
- . "Public Health Literature." in *Transactions of the Second Biennial Congress held at Hongkong 1912*, edited by Francis Clark, 388-392. Hong Kong: Noronha & Co., 1913.
- Dennys, N. B., ed. *The Treaty Ports of China and Japan. A Complete Guide to the Open Ports of those Countries, together with Peking, Yedo, Hongkong and Macao. Forming a Guide Book & Vade Mecum for Travellers, Merchants, and Residents in General. With 29 Maps and Plans.* London: Trübner and Co., 1867.
- Deswazières, G. *With the Chinese Lepers at Shek-lung, Kwangtung, China.* Hong Kong: Nazareth Printing Press, 1925.
- Dolly [pseud.]. *Tales of Hongkong in Verse and Story.* Hong Kong: Kelly & Walsh, 1902.
- Durand-Fardel, Max. *La Chine et les Conditions Sanitaires des Ports ouvert au commerce étranger.* Paris: Librairie J.B. Baillière & Fils, 1877.

- Eyre, George Edward, and William Spottiswoode, eds. *Report on Leprosy by the Royal College of Physicians prepared for, and published by her Majesty's Secretary of State for the Colonies, with an appendix*. London: 1867.
- Given, D. H. C. *Report No.1 on "Malaria in Hong Kong"*. Hong Kong: South China Morning Post, 1928.
- . *Report No.2 on "The Summer Mosquito Pest in Hong Kong"*. Hong Kong: South China Morning Post, 1928.
- Gordon, C. A., ed. *An Epitome of the Reports of the Medical Officers to the Chinese Imperial Maritime Customs Service, from 1871 to 1882*. London: Ballière, Tindall, and Cox 1884.
- . *China from a Medical Point of View in 1860 and 1861, to which is added a chapter on Nagasaki as a Sanatorium*. London: John Churchill, 1863.
- Grantham, Alexander. *Via Ports: From Hong Kong to Hong Kong*. 1965. Reprint, Hong Kong: Hong Kong University Press, 2012.
- Henderson, James. *Memorials of James Henderson, M.D., medical missionary to China*. London: James Nisbet and Co., 1867.
- . *Shanghai Hygiene; or, Hints for the Preservation of Health in China*. Shanghai: Presbyterian Mission Press, 1863.
- Henry Lester Institute of Medical Research. *Annual Report, 1934*. Shanghai, 1935.
- . *Annual Report, 1935*. Shanghai, 1936.
- . *Annual Report, 1936*. Shanghai, 1937.
- . *Annual Report, 1937-1938*. Shanghai, 1939.
- . *Annual Report, 1939*. Shanghai, 1940.
- . *Annual Report, 1940*. Shanghai, 1941.
- . *Report, 1941-1945*. Shanghai, 1946.
- . *Untitled annual report*. (Shanghai, 1934).
- Hong Kong Sanitary Board. *Advice concerning Mosquitoes and Malaria*. Hong Kong: Victoria Gaol, 1910.
- Jackson, R. B. "The Anophelines of the Colony of Hongkong. Some Observations on their Species, their Habits, and on the Results obtained from Dissections of Catches made on the Island and Mainland." in *Transactions of the Ninth Congress, held in Nanking, China, October 2-8, 1934*, Vol. 2, edited by Wu Lien-teh, and Chang Yao, 27-36. Nanjing: The National Health Administration, 1935.
- Joint Conference of the China Medical Missionary Association and the British Medical Association (Hong Kong and China Branch). Also the Seventeenth Biennial Conference of the China Medical Missionary Association. Hong Kong University, January 20th to January 28th, 1925*. Hong Kong: South China Morning Post, 1925.
- Knollys, Henry. *English Life in China*. London: Smith, Elder, & Co., 1885.
- Koch, W.V.M. *Report on Leprosy and the Trinidad Leper Asylum for the year 1891*. Port of Spain: The Government Printing Office, 1892.
- Manson, Patrick. "The President's Address." In *Transactions of the Hongkong Medical Society. Papers and Cases Read during the First Two Years of the Society's existence*,

- Vol. 1, edited by G. P. Jordan, P. Manson, and J. C. Thomson, 1-25. Hong Kong: Kelly & Walsh, 1889.
- Peiping Union Medical College. *Addresses & Papers: Dedication Ceremonies and Medical Conferences, Peking Union Medical College, September 15 -22, 1921*. Peking, 1922.
- Pike, W. Watson. "The Malarial Fevers of Hongkong." In *Transactions of the Hongkong Medical Society. Papers and Cases Read during the First Two Years of the Society's existence*, Vol. 1, edited by G. P. Jordan, P. Manson, and J. C. Thomson, 26-38. Hong Kong: Kelly & Walsh, 1889.
- Preston, T. J. "The Telluric Causation of Disease." In *Transactions of the Hongkong Medical Society. Papers and Cases Read during the First Two Years of the Society's existence*, Vol. 1, edited by G. P. Jordan, P. Manson, and J. C. Thomson, 39-56. Hong Kong: Kelly & Walsh, 1889.
- Selwyn-Clarke, P. S. *Report on Medical and Health Conditions in Hong Kong. For the period 1st January, 1942 – 31st August, 1945*. London: His Majesty's Stationary Office, 1946.
- Skertchly, Sydney B. J. "On the Physical and Ethnological Conditions under which Leprosy Occurs in China, The East Indian Archipelago, and Oceania. Prepared for Mr. Cantlie's Report on Leprosy" in *Report On The Conditions Under Which Leprosy Occurs in China, Indo-China, Malaya, The Archipelago, and Oceania. Compiled Chiefly During 1894*, edited by James Cantlie, 157-167. London: MacMillan and Co., 1897.
- The Mission to Lepers Hong Kong Auxiliary. *Annual Report, 1952*. Hong Kong, 1953.
- . *Annual Report, 1953*. Hong Kong, 1954.
- . *Annual Report, 1954*. Hong Kong, 1955.
- . *Annual Report, 1954*. Hong Kong, 1955.
- . *Annual Report, 1955*. Hong Kong, 1956.
- . *Annual Report, 1956*. Hong Kong, 1957.
- . *Annual Report, 1957*. Hong Kong, 1958.
- . *First Annual Report, 1951*. Hong Kong, 1952.
- Theobald, Fred V. *A Monograph of the Culicidae of the World*. Vol.2. London: British Museum, 1901.
- . *Report on the Collections of Mosquitoes (Culicidæ) received at The British Museum (Natural History) From Various Parts Of The World in connection with the Investigation Into The Causes Of Malaria*. London: British Museum, 1900.
- Thin, George. *Leprosy*. London: Percival and Co., 1891.
- Thomson, J. C. *Malaria Prevention in Hongkong: Reports and Minutes, 1900-1903*. Hong Kong: Victoria Gaol, 1903.
- Thomson, J. *The Straits of Malacca, Indo-China and China; or, Ten Years' Travel, Adventures and Residence Abroad*. London: Sampson Low, Maston, Low, & Searle, 1875.
- Wilson, Erasmus. *On Diseases of the Skin. A System of Cutaneous Medicine*. 6th ed. London: John Churchill & Sons, 1867.
- Wilson, John. *Medical Notes on China*. London: John Churchill, 1846.
- Wu Lien-teh, and Chang Yao, eds. *Transactions of the Ninth Congress, held in Nanking, China, October 2-8, 1934*. 2 vols. Nanjing: National Health Administration, 1935.

SECONDARY SOURCES

Journal Articles

- Anderson, Warwick. "Leprosy and Citizenship." *positions: east asia cultures critique* 6, no. 3 (1998): 707-730.
- . "Postcolonial Technoscience." *Social Studies of Science* 32, nos. 5/6 (2002): 643-658.
- Benchimol, Jaime L., and Magali Romero. "Adolpho Lutz and controversies over the transmission of leprosy by mosquitoes." *História, Ciências, Saúde – Manguinhos* 10, no. S1 (2003): 49-93. <http://www.scielo.br/pdf/hcsm/v10s1/a04v10s1.pdf>.
- Bernabeu-Mestre, Josep, and Teresa Ballester-Artigues. "Disease as a Metaphorical Resource: The Fontilles Philanthropic Initiative in the Fight Against Leprosy, 1901-1932." *Social History of Medicine* 17, no. 3 (2004): 409-421.
- Bradley, D. J. "Watson, Swellengrebel and species sanitation: environmental and ecological aspects." *Parassitologia* 36, nos.1-2 (1994): 137-147.
- Bynum, W. F. " 'Reasons for contentment': malaria in India, 1900-1920." *Parassitologia* 40, nos.1-2 (1998): 19-27.
- Cell, John W. "Anglo-Indian Medical Theory and the Origins of Segregation in West Africa." *American Historical Review* 91, no. 2 (1986): 307-335.
- Chambers, David Wade, and Richard Gillespie. "Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge." *Osiris*, 2nd ser., 15 (2000): 221-240.
- Chong, L. Y., and N. R. Honey. "Leprosy control programme in Hong Kong." *Journal of The Hong Kong Medical Association* 45, no. 1 (1993): 70-73.
- Curtin, Philip D. "Medical Knowledge and Urban Planning in Tropical Africa." *American Historical Review* 90, no. 3 (1985), 594-613.
- Eckart, W.U. "Malaria and colonialism in the German colonies New Guinea and the Cameroons. Research, control, thoughts of eradication." *Parassitologia* 40, nos. 1-2 (1998): 83-90.
- Frenkel, Stephen, and John Western. "Pretext or Prophylaxis? Racial Segregation and Malarial Mosquitos in a British Tropical Colony: Sierra Leone." *Annals of the Association of American Geographers* 78, no. 2 (1988): 211-228.
- Gussow, Zachary, and George S. Tracy. "Status, Ideology, and Adaptation to Stigmatized Illness: A Study of Leprosy." *Human Organization* 27, no.4 (1968): 316-325.
- . "Stigma and the Leprosy Phenomenon: The Social History of a Disease in the Nineteenth and Twentieth Centuries." *Bulletin of the History of Medicine* 44, no. 5 (1970): 425-450.
- . "The Use of Archival Materials in the Analysis and Interpretation of Field Data: A Case Study in the Institutionalization of the Myth of Leprosy as 'Leper'." *American Anthropologist* 73, no. 3 (1971): 695-709.
- Harrison, H. " 'Hot beds of disease': malaria and civilization in nineteenth-century British India." *Parassitologia* 40, nos.1-2 (1998): 11-18.

- Hastings, Robert C. "Olaf K. Skinsnes, M.D., Ph.D. – An Appreciation." *International Journal of Leprosy* 47, no. 1 (1979): 59-60.
- Henriot, Christian. "Shanghai and the Experience of War. The Fate of Refugees." *European Journal of East Asian Studies* 5, no. 2 (2006): 215-245. http://iao.ish-lyon.cnrs.fr/documents/Pub_enligne/Henriot/Refugees_Ejeas.pdf.
- Herman, R.D.K. "Out of sight, out of power: leprosy, race and colonization in Hawa'i." *Journal of Historical Geography* 27, no.3 (2001): 319-337.
- Ho, C. K., and K.K. Lo. "Epidemiology of leprosy and response to treatment in Hong Kong." *Hong Kong Medical Journal* 12, no. 3 (2006): 174-179.
- Honey, N. R. "Leprosy in Hong Kong, Past, Present and Future." *"The Bulletin" Journal of Society of Community Medicine Hong Kong* 9, no. 1 (1978): 22-28.
- Honey, N. R., and M. Y. Ho. "Leprosy in Hong Kong." *Public Health & Epidemiology Bulletin* 5, no. 1 (1996): 1-8.
- Horwitz, Simone. "Leprosy in South Africa: A Case Study of Westfort Leper Institution, 1898-1948." *African Studies* 65, no. 2 (2006): 271-295.
- Johnny, Leanne and Claudia Mitchell. "'Live and Let Live': An Analysis of HIV/AIDS-Related Stigma and Discrimination in International Campaign Posters." *Journal of Health Communication*, no. 11 (2006): 755-767.
- Kipp, Rita Smith. "The Evangelical Uses of Leprosy." *Social Science & Medicine* 39, no. 2 (1994): 165-178.
- Labisch, Alfons. "Species sanitation of malaria in the Netherlands East Indies (1913 – 1942) – an example of applied medical history." *Michael Quarterly*, no. 7 (2010): 296-306.
- Lau, K. H. "Leprosy in Hong Kong: From Hay Ling Chau to Cheun Sha Wan." *Hong Kong Journal of Dermatology and Venereology* 10, no. 3 (2002): 107.
- Li, Shang-Jen. "Shijiu shiji houqi Yingguo yixue jie dui Zhongguo mafeng bing qing di diaocha yanjiu." [British Medical Research on Leprosy in Late Nineteenth-Century China], *Bulletin of the Institute of History and Philology, Academic Sinica* 74, no. 3 (2003): 445-506.
- Marks, Shula. "What is Colonial about Colonial Medicine? And What has Happened to Imperialism and Health." *Social History of Medicine* 10 no.2 (1997): 205-219.
- Mawani, Renisa. "'The Island of the Unclean': Race, Colonialism and 'Chinese Leprosy' in British Columbia, 1891-1924." *Law, Social Justice & Global Development (LGD)*, no. 1 (2003): 1-21. http://www2.warwick.ac.uk/fac/soc/law/elj/lgd/2003_1/mawani/.
- Monteiro, Yara Nogueira. "Prophylaxis and exclusion: compulsory isolation of Hansen's disease patients in São Paulo." *História, Ciências, Saúde –Manguinhos* 10, no. S1 (2003): 95-121. <http://www.scielo.br/pdf/hcsm/v10s1/a05v10s1.pdf>.
- Morse, Howard N. "The Changed Attitude Toward Hansen's Disease." *Journal of the American Medical Association* 199, no. 2 (1967): 253-254.
- Muraleedharan, V. R., and D. Veerarghavan "Anti-Malaria Policy in the Madras Presidency: An Overview of the Early Decades of the Twentieth Century." *Medical History* 36, no.3 (1992): 290-305.
- Palladino, Paolo, and Michael Worboys. "Science and Imperialism." *Isis* 84, no.1 (1993): 91-102.

- Pandya, S. S. "The First International Leprosy Conference, Berlin, 1897: the politics of segregation." *História, Ciências, Saúde –Manguinhos* 10, no. S1 (2003): 161-77. <http://www.scielo.br/pdf/hcsm/v10s1/a08v10s1.pdf>.
- Parascandola, John. "The Gillis W. Long Hansen's Disease Center at Carville." *Public Health Reports* 109, no.6 (1994): 728-730.
- Parry, Suzanne, " 'Of Vital Importance to the Community': The Control of Leprosy in the Northern territory." *Health and History* 5, no. 1 (2003): 1-21.
- Robertson, Jo, and A. Colin McDougall. "Leprosy work and research in Oxford, UK: four decades in the pursuit of new knowledge about an arcane disease." *International Journal of Dermatology* 44, no. 8 (2005): 695-698.
- Robertson, Jo. "Leprosy and the elusive M. leprae: colonial and Imperial medical exchanges in the nineteenth century." *História, Ciências, Saúde –Manguinhos* 10, no. S 1 (2003), 13-40. <http://www.scielo.br/pdf/hcsm/v10s1/a02v10s1.pdf>.
- . "The Leprosy Asylum in India: 1886-1947." *Journal of the History of Medicine and Allied Sciences* 64, no. 4 (2009): 474-517.
- Secord, J. A. "Knowledge in Transit." *Isis* 95, no. 4 (2004): 654-672.
- Silva, K. T. "Malaria eradication as a legacy of colonial discourse: the case of Sri Lanka." *Parassitologia* 36, nos.1-2 (1994): 149-163.
- Skinsnes, Olaf K. "Leprosy in Society I. 'Leprosy Has Appeared on the Face'." *Leprosy Review* 35, no. 1 (1964): 21-35.
- . "Leprosy in Society II. The Pattern of Concept and Reaction to Leprosy in Oriental Antiquity." *Leprosy Review* 35 no. 3 (1964): 106-122.
- . "Leprosy in Society III. The Relationship of the Social to the Medical Pathology of Leprosy." *Leprosy Review* 35, no. 4 (1964): 175-181.
- Skinsnes, Olaf K. "Leprosy in Society IV. The Genesis of Lepra-Angst." *Leprosy Review* 39, no. 4 (1968): 223-228.
- . "Leprosy Sketches from a Chinese Brush." *International Journal of Leprosy And Other Mycobacterial Diseases* 40, no. 3 (1972): 309-313.
- . "Notes from the History of Leprosy", *International Journal of Leprosy And Other Mycobacterial Diseases* 41, no. 2 (1973): 220-248.
- Skinsnes, Olaf K., and Neil D. Fraser. "The Design of a Leprosarium (Hay Ling Chau, Hong Kong)." *International Journal of Leprosy And Other Mycobacterial Diseases* 37, no. 2 (1969): 183-193.
- Skinsnes, Olaf K., and R. M. Elvove. "Leprosy in Society V. 'Leprosy' In Occidental Literatyre." *International Journal of Leprosy And Other Mycobacterial Diseases* 38, no. 3 (1970): 294-307.
- Trauner, Joan B. "The Chinese as medical scapegoats in San Francisco, 1870-1905." *California History* 57, no. 1 (1978): 70-87.
- Wang, Wen-Ji. " 'Laying out a Model Village': George Gushue-Taylor and Missionary Leprosy Work in Colonial Taiwan." *East Asian Science, Technology and Society: an International Journal* 1, no. 1 (2007): 111-133.
- Warren, A. Grace, "A Preliminary Report on the Use of B663 in the Treatment of Chinese Leprosy Patients with Chronic Reaction," *Leprosy Review* 39, no. 4 (1968), 61-66.

- , “Are Deformities Stigmatizing? A Surgeon’s Approach,” *Leprosy Review*, no. 43 (1972), 74-82.
- Worboys, Michael. “From Miasmas to Germs: Malaria 1850-1879.” *Parassitologia* 36, nos. 1-2 (1994): 61-68.
- Yip, Ka-che. “Antimalarial work in China: a historical perspective.” *Parassitologia* 40, nos. 1-2 (1998): 29-38.
- . “Malaria eradication: the Taiwan experience.” *Parassitologia* 42, nos. 1-2 (2000): 117-126.
- . “Segregation, Isolation, and Quarantine: Protecting Hong Kong from Diseases in the Pre-war Period.” *Journal of Comparative Asian Development* 11, no. 1 (2012): 1-24. <http://www.tandfonline.com/doi/pdf/10.1080/15339114.2012.668110>.

Publications

- Archer, Bernice. *The Internment of Western Civilians Under the Japanese, 1941 – 1945: A Patchwork of Internment*. London: Routledge Curzon, 2005.
- Bashford, Alison, and Maria Nugent. “Leprosy and the management of race, sexuality and nation in tropical Australia.” In *Contagion: Historical and cultural studies*, edited by Alison Bashford, and Claire Hooker, 106-128. London: Routledge, 2001.
- Bashford, Alison. *Imperial Hygiene: A Critical History of Colonialism, Nationalism and Public Health*. Basingstoke: Palgrave Macmillan, 2004.
- Bickers, Robert, and Christian Henriot. *New frontiers: Imperialism’s New Communities in East Asia, 1842-1953*. Manchester: Manchester University Press, 2000.
- Bickers, Robert. “ ‘Good work for China in every possible direction’: The Foreign Inspectorate of the Chinese Maritime Customs, 1854-1950.” In Goodman and Goodman, *Twentieth-century Colonialism in China*, 25-36.
- . “Settlers and Diplomats: The End of British Hegemony in the International Settlement, 1937-1945.” In *In the Shadows of the Rising Sun: Shanghai under Japanese Occupation*, edited by Christian Henriot, and Wen-Hsin Yeh, 229-256. Cambridge: Cambridge University Press, 2004.
- Bristow, Roger. *Land-use Planning in Hong Kong: History, Policies and Procedures*. Hong Kong: Oxford University Press, 1984.
- Buckingham, Jane. *Leprosy in Colonial South India: Medicine and Confinement*. Chippenham: Palgrave, 2002.
- Bynum, W. F., and Caroline Overy, eds. *The Beast in the Mosquito: the Correspondence of Ronald Ross and Patrick Manson*. Amsterdam: Rodopi B. V., 1998.
- Cantlie, Neil, and George Seaver. *Sir James Cantlie: A Romance in Medicine*. London: John Murray, 1939.
- Carroll, John M. “The Peak: residential segregation in colonial Hong Kong.” In Goodman and Goodman, *Twentieth-century Colonialism in China*, 81-91.
- . *A Concise History of Hong Kong*. Lanham, MD: Rowman & Littlefield, 2007.
- Chan, Wai Kwan. *The Making of Hong Kong Society: Three Studies of Class Formation in Early Hong Kong*. Oxford: Clarendon Press, 1991.

- Criswell, Colin N., and Mike Watson. *The Royal Hong Kong Police Force (1841-1945)*. Hong Kong: Macmillan, 1982.
- Deacon, Harriet. "Leprosy and racism at Robben Island." In *Studies in the History of Cape Town*, vol. 7 edited by Elizabeth van Heyningen, 45-83. Rondebosch: UCT Press, 1994.
- Edmond, Rod. "Returning Fears: Tropical Disease and the Metropolis." In *Tropical Visions in an Age of Empire*, edited by Felix Driver, and Luciana Martins, 175-194. Chicago: University of Chicago Press, 2005.
- . *Leprosy and Empire: A Medical and Cultural History*. Cambridge: Cambridge University Press, 2006.
- Elyazar, Iqbal R. F., Simon Hay, and J. Kevin Baird. "Malaria Distribution, Prevalence, Drug Resistance and Control in Indonesia." In *Advances in Parasitology*, Vol.74, edited by D. Rollinson, and S.I. Hay, 41-176. London: Elsevier, 2011.
- Emerson, Geoffrey Charles. *Hong Kong Internment, 1942-1945: Life in the Japanese Civilian Camp at Stanley*. Hong Kong: Hong Kong University Press, 2008.
- Endacott, G. B. *A History of Hong Kong*. Hong Kong: Oxford University Press, 1973.
- Feuerwerker, Albert. *The Foreign Establishment in China in the Early Twentieth Century*. Ann Arbor: Center for Chinese Studies, University of Michigan, 1976.
- Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. Translated by Allen Lane. London: Penguin Books, 1977.
- French, Paul. *The Old Shanghai A-Z*. Hong Kong: Hong Kong University Press, 2010.
- Gittins, Jean. *Stanley: Behind Barbed Wire*. Hong Kong: Hong Kong University Press, 1982.
- Goffman, Erving. *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates*. Chicago: Aldine, 1962.
- Goodman, Bryna, and David S. G. Goodman. *Twentieth-century Colonialism in China: Localities, the everyday, and the world*. Abingdon: Routledge, 2012.
- Gussow, Zachary. *Leprosy, Racism and Public Health: Social policy in chronic disease control*. Boulder: Westview Press, 1989.
- Harrison, Mark. *Public health in British India: Anglo-Indian preventive medicine 1859-1914*. Cambridge: Cambridge University Press, 1994.
- Haydon, Anthony P. *Sir Matthew Nathan: British Colonial Governor and Civil Servant*. St. Lucia, Queensland, 1976.
- Haynes, Douglas Melvin. "Social Status and Imperial Service: Tropical Medicine and the British Medical Profession in the Nineteenth Century." In *Warm Climates and Western Medicine: The Emergence of Tropical Medicine, 1500-1900*, edited by David Arnold, 208-227. Amsterdam: Rodopi, 1996.
- Henriot, Christian, and Zheng Zu'an. "Les divisions de la ville à Shanghai (XIX^e – XX^e siècles)." In *Les divisions de la ville*, edited by Christian Topalov, 157-190. UNESCO Editions MSH, 2002.
- Ho, Faith C. S. *The Silent Protector: A Short Centennial History of Hong Kong's Bacteriological Institute*. Hong Kong: Hong Kong Museum of Medical Sciences, 2006.

- Kakar, Sanjiv. "Medical Developments and Patient Unrest in the Leprosy Asylum, 1860-1940." In *Health, Medicine and Empire: Perspectives on Colonial India*, edited by Biswamoy Pati, and Mark Harrison, 188-216. Hyderabad: Orient Longman, 2001.
- Lamberts, L. J. *The Life Story of Dr. Lee S. Huizenga*. Grand Rapids: Eerdman, 1950.
- Lau, Y. W. *A History of the Municipal Councils of Hong Kong 1883-1999: From the Sanitary Board to the Urban Council and the Regional Council*, Hong Kong: Leisure and Cultural Services Department, 2002.
- Lethbridge, Henry, *Hong Kong: Stability and Change*, Hong Kong: Oxford University Press, 1978.
- Leung, Angela Ki Che, and Charlotte Furth, eds. *Health and Hygiene in Chinese East Asia*. Duke: Duke University Press, 2010.
- Leung, Angela Ki Che. *Leprosy in China: A History*. New York: Columbia University Press, 2009.
- Lin, Yi-ping, and Liu Shiyung. "A Forgotten War: Malaria Eradication in Taiwan, 1905-65." In *Health and Hygiene in Chinese East Asia*, edited by Angela Ki Che Leung, and Charlotte Furth, 183-203. Duke: Duke University Press, 2010.
- MacPherson, Kerrie L. "Invisible borders: Hong Kong, China and the imperatives of public health." In *Public Health in Asia and the Pacific: Historical and comparative perspectives*, edited by Milton J. Lewis, and Kerrie L. MacPherson, 10-54. Abingdon: Routledge, 2008.
- . *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893*. Hong Kong: Oxford University Press, 1987.
- Maguire, John. "The Fantome Island Leprosarium." In *Health and Healing in Tropical Australia and Papua New Guinea*, edited by Roy MacLeod, and Donald Denoon, 142-148. Townsville: James Cook University, 1991.
- Manson-Bahr, Philip. *Patrick Manson, The Father of Tropical Medicine*, London: Thomas Nelson and Sons Ltd., 1962.
- McGinnis, Janice Dickin. "'Unclean, Unclean': Canadian Reactions to Lepers and Leprosy." In *Health, Disease and Medicine: Essays in Canadian History*, edited by Charles G. Roland, 250-275. Hannah Institute for the History of Medicine, 1984.
- Osterhammel, Jürgen. "Semi-Colonialism and Informal Empire in Twentieth-Century China: Towards a Framework of Analysis." In *Imperialism and After: Continuities and Discontinuities*, edited by Wolfgang J. Mommsen, and Jürgen Osterhammel, 290-314. London: Allen & Unwin, 1986.
- Robertson, Jo. "Culion, the 'Island of the Living Dead': or Another Look at Leprosy and Citizenship." In *Politics of Prevention, Health Propaganda, and the Organisation of Hospitals 1800-2000: Conference Proceedings*, edited by Astri Andresen, Kari Tove Elvabakken, and Tore Grønlie, 81-91. Bergen: Rokkansenteret, 2005.
- . "In Search of M. Leprae: Medicine, Public Debate, Politics and the Leprosy Commission to India." In *Economies of Representation, 1790-2000: Colonialism and Commerce*, edited by Leigh Dale, and Helen Gilbert, 41-57. Aldershot: Ashgate, 2007.
- Rogasaki, Ruth. *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China*. Berkeley: University of California Press, 2004.

- Skinsnes, Olaf K. *Leprosy Rationale*. Second edition, third reprint. New York: American Leprosy Missions, 1971.
- Starling, Arthur, Faith C.S. Ho, Lilian Luke, Tso Shiu-chiu, and Edwing C.L.Yu. *Plague, SARS and the Story of Medicine in Hong Kong*. Hong Kong: Hong Kong Museum of Medical Sciences Society, 2006.
- Stewart, Jean Cantlie. *The Quality of Mercy: The Lives of Sir James and Lady Cantlie*. London: George Allen & Unwin, 1983.
- Vaughan, Megan. *Curing their Ills: Colonial Power and African Illness*. Cambridge: Polity, 1991.
- Wakeman, Frederic Jr. *Policing Shanghai, 1927-1937*. Berkeley: University of California Press, 1996).
- . *The Shanghai Badlands: Wartime terrorism and urban crime, 1937-1941*. Cambridge: Cambridge University Press, 1996.
- Welsh, Frank. *A History of Hong Kong*. London: Harper Collins Publishers, 1997.
- Wesley-Smith, Peter. "Anti-Chinese Legislation in Hong Kong." In *Precarious Balance: Hong Kong Between China and Britain 1842-1992*, edited by Ming K. Chan, 91-106. Armonk: M. E. Sharpe, 1994.
- Yip, Ka-che, ed. *Disease, Colonialism, and the State: Malaria in Modern East Asian History*. Hong Kong: Hong Kong University Press, 2009.
- . "Colonialism, Disease and Public Health: Malaria in the History of Hong Kong." In Yip, *Disease, Colonialism, and the State*, 11-29.
- . "Disease and the Fighting Men: Nationalist Anti-Epidemic Efforts in Wartime China, 1937-1945." In *China in the Anti-Japanese War, 1937-1945*, edited by David P. Barrett, and Larry N. Shyu, 171-188. New York: Peter Lang, 2001.
- . "Disease, Society, and the State: Malaria and Health Care in Mainland China." In Yip, *Disease, Colonialism, and the State*, 103-120.
- . "Health, Disease, and the Nationalist State: Perspectives on Malaria Eradication In Taiwan." in Yip, *Disease, Colonialism, and the State*, 85-101.
- . *Health and National Reconstruction in Nationalist China: The Development of Modern Health Services, 1928-1937*. Ann Arbor: Association for Asian Studies, 1995.

UNPUBLISHED THESES

- Cowlie, C. A. "Form follows fever malaria and the making of Hong Kong, 1841-1848." MPhil diss., University of Hong Kong, 2009.
- Ham, Daniel. "Malarial Hygiene and Colonial Society in Hong Kong, c.18800 – c.1910." MPhil diss., University of Cambridge, 2009.
- Robertson, Jo. "In a State of Corruption: Loathsome Disease and the Body Politic." PhD diss., University of Queensland, 1999. <http://espace.library.uq.edu.au/view/UQ:193252>.