CHAPTER 1

Introduction: Imposing the empire

The expansion of British colonial jurisdiction facilitated, from the mid-nineteenth century, the development of extractive industries and plantations on the Malay Peninsula and its offshore islands. This expansion required increased control over both people and resources, resulting first in the enumeration and registration of land, goods and people. From 1857, with the transfer of government of the Straits Settlements from the East India Company to the Colonial Office, and from 1874 with the extension of direct rule over the Malay States, the bureaucracy extended its surveillance. By the end of the century, it had established the mechanisms to maintain and extend demographic and epidemiological surveillance, as well as economic and political control, of British Malaya (see Figure 1.1).[1]

The data gathered on migration, births, deaths, and morbidity were without doubt underestimates and therefore disguised the burden of sickness on select populations, even of those whose lives were most closely tied to the workings of colonial capitalism and who were subject to its closest scrutiny. Even so, the statistics expressed summarily in terms of hospital beds and inpatient days, stools examined, parasites counted, injections administered, and cases recorded, treated, cured or lost, provide some account of illness, suffering and death under colonialism.

The human experiences that lie behind these numbers – beliefs and perceptions of health and illness, patterns of diagnosis, treatment and care, and the nature of suffering, for example – are captured only occasionally in fragmentary allusive notes on the margins of the departmental files of colonial officials. Memoranda, reports and scientific papers often provide such bare accounts of the experiences of sickness and death, however, that any mention of social, cultural or personal context captures our attention, forcing us to look beyond the text for a

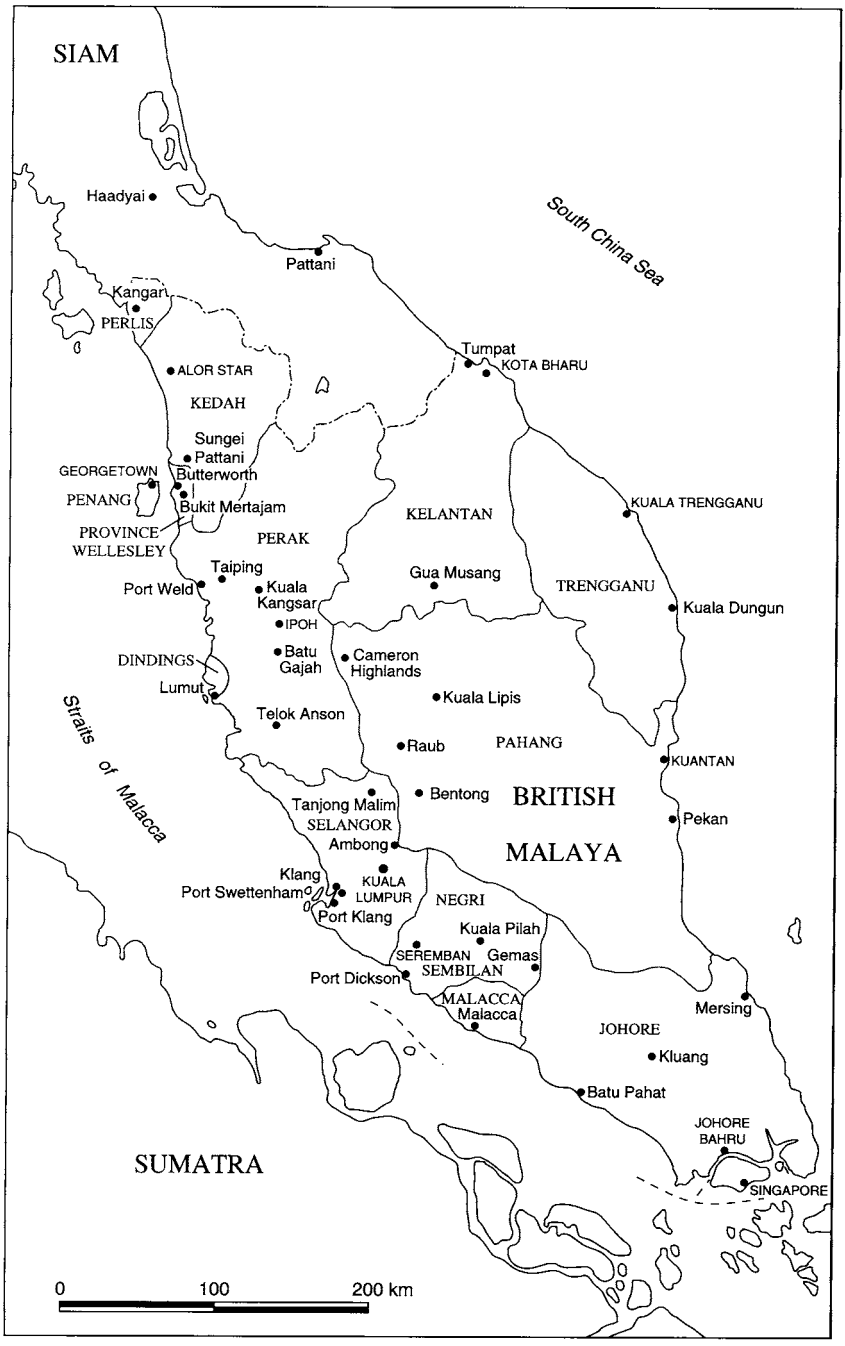

Figure 1.1 Map of British Malaya, 1920.

more complete account. On the other hand, organisational aspects of colonial health services, including the establishment, maintenance and activities of hospitals, clinics and dispensaries, the public health measures taken to reduce transmission of infection and disease, and the work of medical departments, councils, boards and committees, are well documented and give the historian a substantial body of information from which to work. Similarly data on population trends, morbidity and mortality, with anecdotal commentaries on sickness and death, provide the building blocks to reconstruct a social and epidemiological past. Births, deaths, outbreaks of infection, injuries and accidents are all ways of characterising the patterns of health and illness and finding meaning in apparently singular experiences. Behind these figures we must imagine the lived experience: picture a funeral and a family locked in grief; a mother fleeing to a dispensary or a traditional healer with a sick child in arms; a labourer lying, shaking and sweating on a sleeping platform in a labourers' lines; a young and frightened woman, emprisoned in a brothel and alone in childbirth.

The task of reconstructing the social history of sickness is not entirely a task of the imagination, for both contemporary descriptions of material life and the official epidemiological record allow us to conjure up these events.[2] The empirical data available for colonial Malaya is rich and varied. As already noted, routine reports of government departments, agencies, committees and councils; reports of and submissions presented to enquiries and commissions; unpublished papers of medical officers, district officers, sanitary inspectors and civil engineers; police and coroner's reports;[3] parliamentary papers; unpublished institutional records; journal articles on colonial and tropical medical matters; and newspaper accounts, memoirs, travel diaries and other papers contribute to an extraordinarily eclectic archive.

From these records, despite their omissions and biases, we can begin to reconstruct life and death in British Malaya. Since the collection of statistics and other information was part of a broader colonial project, the data inevitably privileges the accounts and views of the colonial authors, who, through their particular reading of social distance, argue for the logic of European penetration and its subsequent policies and practices.[4] Colonial subjects had least chance to speak for themselves in any context, including any in which to document their experiences. Malays living beyond colonial boundaries, in spaces and economies of little interest to settlers and the state, were largely invisible or treated as such, incorporeal spectators of imperial endeavours. Others, co-opted as labourers, producers or service providers, even so were rendered silent, as if children, under the paternalism of colonialism, and their experience entered into social knowledge largely as it was mediated by others.

Despite this, the written accounts offer the basis for a continuing project, one that might turn to a more diverse range of written and oral sources of individuals and groups subject to colonialism as well as those who enforced it. This book is a beginning.

British Malaya was a benevolent regime, and blatant oppression was unusual. Still, illness and deaths occurred which for many were shaped by the inequities, powerlessness and poverty produced by the structures of colonialism, resulting in small resistances, labour strikes, and insurgency.[5] Dramatic acts, whilst present prior to the establishment of colonial rule, sometimes took on new meaning – and were certainly managed in different ways – with the extension of state control; theft, murder, rape, suicide, and alcohol and opium abuse were all part of the underside of and (partly) were produced by colonialism.[6] Committees of inquiry were established in response to such resistance. In documenting the conditions of labour and living, they revealed the extensiveness of emiseration and poverty among the Malay peasantry as well as immigrant labourers, the hardship endured by those employed on tin mines and rubber estates, and the crowded squalor of urban slums. In the conditions that prevailed in both urban and rural Malaya, the corporeal costs of colonial rule included those of nutritional deficiency diseases, such as beri-beri, increased transmission of endemic diseases such as malaria, and the spread of communicable and often fatal infections including tuberculosis, pneumonia, and venereal and diarrhoeal diseases.

Framing the period

In writing of the 'Age of Empire', Eric Hobsbawm draws the empire to a close in 1914, as major changes in economy and society were foreshadowed by the outbreak of the First World War.[7] Although war was played out in a colonial as well as European theatre, its staging was primarily Africa. In Malaya, the war did not result in disjuncture, and here the natural 'end of empire' is with the Pacific War, when Japanese occupation disrupted colonial rule and gave a small group of reformists and revolutionaries a new language of resistance.

By concluding at around 1940, the periodisation of this book is conventional, employing the same chronological frame as many other histories of Malaya. It follows a chronology not dissimilar to other histories of colonial medicine, too. The notion of empire, governing a period that extends to the outbreak of the Second World War, has proved heuristically useful as well as historiographically convenient for a number of writers. MacLeod, for instance, characterises the period from 1815 to the Second World War as 'the "classic" period of nineteenth century colonialism'.[8] The history of medicine during this period enables a

focused exploration of 'the twinned relations of political and professional power'. Medicine is exposed as participating in the expansion and consolidation of political rule through its service to political, commercial and military arms of empire, leading to campaigns to conquer diseases that threatened the integrity and economic potentiality of the state, and to the systematic delivery of sanitary, health care and medical services.[9] In MacLeod's account, medicine is clearly an arm of empire. This was the perspective of Fanon too, when he drew attention to the symbolic and structural role of the doctor, 'always ... belonging to the dominant society ... a link in the colonialist network'.[10] The mix of metaphor of medicine and the military in imperial contexts, given this, is an appropriate one, for medicine served and sustained the troops that coerced imperial rule, while it waged its own campaigns against new, tropical biospheres – landscapes, insects, and microbes.

The time frame of this book – from the nineteenth century to the outbreak of the Pacific War – has its own logic. In the late nineteenth century, the population of British Malaya expanded rapidly to meet demands for labour. Population needs were met through immigration rather than natural increase, since the need for workers was immediate as new land was opened up, as the economy expanded, and as each new cohort of immigrants was culled by parasitic infection and death. Conflicting and paradoxical understandings of the processes of colonialism and the role of the colonists shaped the institutions of the state, including its medical and health services. The late nineteenth century was a period marked by conflicting sentiments of racism and humanitarianism, reflected in the contradictory yet complimentary exploitation of labour and establishment of a colonial welfare state.[11]

At the outbreak of the Pacific War, this story had moved into a time of self-reflection and change, as officials of the Colonial Office in London and their representatives in the colonies expressed increasing concern that the price of colonialism – for those subject to colonial rule – had been too high. In consequence, the days of the empire were numbered. The impact of plantation agriculture and mining on the lives and life chances of its workers, and the relations of authority and control determined by colonialism, were in question, and staff in the Cabinet Office in the intrawar years spent considerable effort developing appropriate mechanisms for post-war independence. By the end of the period covered by this book, therefore, the empire was all but over.

The creation of tropical medicine

Late nineteenth-century thought was influenced, Said has argued, by utilitarian philosophy which legitimised imperial domination and

governance.[12] At the same time, the evolutionary ideas of Herbert Spencer and Charles Darwin, among others, were influential in providing the footings of a (loosely articulated) philosophy of colonisation which legitimised relations of power and authority. Darwinian ideas were sometimes crudely translated into naive misunderstandings of race, biology, social development and social organisation. They provided legitimacy to the institutions and structures that enabled the systems of extraction and appropriation, however, while they rationalised colonisation in terms of its 'civilising' functions, including those in relation to health, medicine, sanitation and hygiene.[13] Recast in terms of moral obligation and social and economic development, evolutionary theory provided the explanatory model for (the excesses of) colonial capitalism. According to this account, Malays, Chinese, Indians and 'others' were subject to a beneficent paternalist regime and fared differentially under it because they were lazy, indolent, stupid, ignorant, dirty or greedy. Even those contemporary accounts most sensitive to the oppressions of colonialism replicated these views. At worst, colonial subjects were likened to beasts of burden, 'draught bullock ... equally helpless among (their) new environment',[14] worthy only of the labour that they might contribute to build up the wealth of the empire. At best, they were represented as children, waiting for patronage and tutelage. The texts show little sympathy for the lives of their subjects, although many are sensitive, in terms of nineteenth-century economic rationalism and Taylorism, to the human costs of colonial development. This was consistently so, hence C. A. Wiggins' justification of public health expenditure in 1919, that 'apart from the humanitarian aspect of the question, there can be no doubt that money, judiciously and carefully spent on sanitary measures would, ere long, bring its reward in the shape of revenue'.[15]

It would be inappropriate to judge too harshly the participants in this system, certainly those who sought to temper the effects of colonisation and to mediate the differences between colonists and colonised. The majority of European officials and others working in British Malaya were products of their own time, unquestioning of their superiority and moral rights, and impressed by their obligations and the broader ethical responsibilities of colonialism. The time, as already noted, was that of social Darwinism; it was a time of Victorian confidence, of innocent enthusiasm for science, technology and the products of expanding manufacturing industry.[16]

Prior to the industrial revolution, biomedicine was in its infancy and little was known of the cause of many of the 'tropical' diseases that limited European expansion. Then, medical care was a task practised by a variety of professionals, midwives, apothecaries, barbers and surgeons.

As Headrick points out, certain technologies were available and used to prevent or treat disease; the prophylactic and therapeutic use of quinine, originally in the form of cinchona bark but commercially manufactured from 1827, is a case in point.[17] But by the 1890s, major advances in science had occurred, and biomedicine had gained strength. Medical claims to power and authority were bolstered by scientific discoveries and the development of new knowledge and skills, doctors enjoyed increased professional standing, and their authority over individuals and medical services expanded.[18] Major advances in microbiology, parasitology, and vaccine development occurred. Considerable advances were made in understanding the transmission and distribution of malaria, cholera, leprosy, plague, yellow fever, and dysentery. The scientific endeavour that resulted in these discoveries was intensely competitive and nationalistic, and in this context health research and 'tropical medicine', and its institutionalisation, took on a particular edge; the relationship between science and the state – as represented by tropical medicine and empire – was made clear.[19]

The successes of science, too, were a nice example of evolution, fitting well with the broader colonial project; this is wonderfully captured by three tableaux in the entrance hall of the Wellcome Bureau of Scientific Research in London, intended to portray medical progress: an African medicine-man at work, a mediaeval alchemist in his cell, and a modern laboratory bench.[20]

Influenced by general theories of evolution and race and by notions of the superiority of British political organisation, technology, industry and science, British attitudes towards colonised peoples were consistently paternalistic and often racist. This extended to discussions of medical conditions, the etiology and epidemiology of disease, and sickness behaviour within the colonies. During the period of early colonialism, most doctors had little understanding of disease causation, and they were as likely as their patients to subscribe to a variation of miasmic theory, whereby the environment was considered to be a critical factor in the incidence and transmission of disease. This understanding was tempered somewhat by ideas of immunity, not as an acquired resistance following exposure to pathogens (although this idea was circulating by the late nineteenth century), but as an artefact of race and heredity. Accordingly, as Harrison and Anderson both document, people were best suited to the environment of their ancestral realm, as reflected by the 'natural' resistance of 'natives' (or immigrants from similar climates) to 'tropical diseases', and particularly the vulnerability of white men in the tropics.[21] This belief was modified somewhat by other behavioralist theories: leprosy and diseases of the skin, for example, were linked to frequent bathing, believed to weaken the skin.[22] Episodes of illness

including fevers were treated by purging, blood letting and salivation to rid the body of invading and accumulated 'poison'; European patients were sent to hill stations for a change of air and the completion of the cure.[23] These views were revised with advances in bacteriology, and notions of native innate immunity subtly shifted to notions of acquired immunity and the role of native as carrier. In the early twentieth century, the appropriate measures to be taken to reduce the toll of the tropics on Europeans, as described later in this volume, were to moderate native behaviours and habits, with an emphasis on sanitation, hygiene and diet: excretion, ingestion, pure water, fresh air. Hence, poor health – now construed as the result of 'native ignorance', lack of hygiene and sanitation, 'superstition' and 'primitiveness' – led to the development of public health programs as well as hospital-based curative services.[24] At the same time, the continuing high morbidity rates and the risk of disease and death to British settlers and immigrant workers and soldiers, whose continuing health was essential for the consolidation of the empire, led to the development of a research program directed specifically to the health problems of the colonies.

The empire's interest in tropical medicine dates from the late nineteenth century, when scientific discovery and a nascent new confidence that science, or rather biomedicine, could control illness coincided with the high point of imperial expansion. Such confidence was fueled, as outlined above, by a number of significant advances in the biology and epidemiology of disease. Jenner's work in virology, and the development of a vaccine against smallpox, occurred relatively early – in the 1790s – but thereafter scientific research gained momentum, encouraged by the successful work by Koch on tuberculosis and Pasteur on rabies, the development of other live vaccines, and the discovery in 1880 by Alphonse Laveran that the *Plasmodium* parasite, invading the blood stream, caused malaria. The subsequent identification by Patrick Manson of *Plasmodium falciparum* which caused the heaviest toll on life, and in 1897, the discovery by Ronald Ross, Giovanni Grassi and Amico Bignami that the *Anopheles* mosquito was the vector, encouraged further interest in tropical medical research, as the collision of interests between science on the one hand and nation–empire on the other was clear to the major players on the scene: France, Belgium, the Netherlands, Italy and the United Kingdom.[25]

In the United Kingdom, Joseph Chamberlain, Secretary of State for the Colonies from 1895, was particularly interested in the implications of new developments in parasitology and bacteriology for the colonies, given that the incidence and toll of disease was a major impediment to continued economic expansion. His concern with health status, as it affected colonial pecuniary success, led to the appointment of Manson

as the first medical adviser to the Colonial Office in 1897. From 1899 until his retirement in 1912, Manson was founding director of the London School of Hygiene and Tropical Medicine, established to provide appropriate training for colonial medical officers, to undertake basic and applied research, and to provide the Colonial Office with technical advice and services, which included the anthropology as well as the biology of tropical disease.[26] Informed by belief that the future of imperialism lay with the microscope,[27] the school was run as a research institute, influenced by developments in biological sciences. It exemplified in many respects the privileging of laboratory science over field research, and biomedicine over public health.[28]

Ross was appointed also in 1899 as founding lecturer of the Liverpool School of Tropical Medicine.[29] This school maintained close ties with the professional and business community that had been instrumental in its establishment, promoting itself as 'an investment in colonial trade' and economic development. Hence Ross' commitment to vector control and the practical application of his research, and his bitterness, although not in the Malayan case, that environmental procedures such as vector control strategies were applied 'in a patchy and piecemeal way amidst much vacillation and discord'.[30] Industrial and mercantile interests maintained the impetus to continue the London and Liverpool schools, and later to establish the Ross Institute to 'keep industry in touch with science, to make the tropics healthy and to expand the markets of the world'.[31]

In 1901, on the recommendation of Swettenham, then High Commissioner of the Federated Malay States (FMS), the Pathology Institute opened in Kuala Lumpur, as death and disease from tropical infections appeared to be increasing throughout the empire.[32] This was not the first research and training institute established in the colonies: a Pasteur Institute had opened in Saigon in 1891, and a number of other institutes and smaller laboratories had been established with support from Paris in Tunisia, Senegal, Turkey, Brazil and Algeria.[33] Dutch interests in tropical medicine developed along parallel lines.[34] In each case the establishment of a research institute offered national scientists a field station to pursue their interests in diseases directly affecting the colonial enterprise, and to carry laboratory developments into the field. Through the involvement of local staff, other than in a menial capacity, they also shaped colonial science,[35] although even where institutes were concerned with local recruitment, training and technology transfer, a fundamental divide pertained that reinforced the function of the institution: applied research in the colonial peripheries, pure science at the centre.[36]

The opening of the Pathology Institute in Kuala Lumpur, which was renamed the Institute of Medical Research the following year, occurred in the context of scientific imperialism and international scientific

competitiveness. Locally it was precipitated by high mortality rates from malaria and beri-beri and, according to Chai,[37] by a change in colonial rule from a policy of laissez-faire to one of welfare and efficiency. Its achievements included establishing the etiology of beri-beri. Its malaria control program was the first to implement Ross' proposals for broad-based environmental controls and the extension of these measures throughout the country was hailed as 'the greatest sanitary achievement ever accomplished in the British Empire'[38] and 'an epic in the history of modern preventive sanitation'.[39]

A number of public health measures occurred at around the same time, including the development of maternal and infant health services and primary health care. These early initiatives in medical research, hospital and auxiliary clinical services reflected nascent state concern regarding the political and economic effects of ill health. For example, Chamberlain, Medical Adviser to the Colonial Office in the late 1890s, noted that 'malaria, black-water fever, yellow fever, and other afflictions brought death, sickness and debility, at an appalling rate, to the Empire's officials and traders, as to the hapless natives. Sudden burials, repeated invalidings, and chronic enfeeblement made regular administration difficult and continuous policy impossible'.[40] Tropical medicine, born of the collusion of science and colonialism, developed as a speciality to reduce the incidence of these afflictions.

Tropical medicine was a cultural construct, the scientific stepchild of colonial domination and control.[41] Recognition of the political economy of disease was not unique to late twentieth-century discourse, however, and the doyens of tropical medicine were in no way deluded that pathogens were uniquely transformed by geography. Hence Sir Andrew Balfour argued in 1928 that most diseases, including malaria, beri-beri, dengue fever, plague, leprosy and schistosomiasis, were 'not strictly diseases of the tropics although, partly on account of their etiology, partly because of their association with unhygienic conditions, they now-a-days prevail to a much greater extent in hot countries than elsewhere'.[42]

The political economy of colonial medicine

The above discussion suggests the utility of a conventional political economic account of health and illness to capture the logic of the provision of medical services and health care for those whose welfare was essential to sustaining the colonial enterprise, neatly tying the centre and periphery – tin mine and canning factory, rubber estate and car. But such an account needs to note too that in British Malaya class, gender, race and geography patterned the nature of illness, the kinds of care that were available, and the access to such care. The effect of ill health