The business of night soil collection

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Until the end of the 19th century, Hong Kong was known for its insanitary conditions, especially in the Tai Ping Shan area, the Chinatown of Hong Kong. Only the houses of wealthy Europeans had water closets. Those of wealthy Chinese and some Europeans had dry latrines but these were only for men. Women and children of all classes used pots, generally kept under the bed. For private houses, night soil (human waste) was collected by female coolies at night into buckets and the contents emptied into junks that came alongside the waterfront at specified points in the early hours of the morning. The occupants of private houses paid a small sum for the service, depending on the frequency of removal. For daily removal (usually only for Europeans and wealthy Chinese), the charge was HK$0.5 to $1 per month; for removal every second day, the cost for each family was HK$0.3 to 0.4 per month.

Working class men used public dry latrines. Built and run by private persons as a business venture, these latrines were invariably crowded and unhygienic. The owner derived his profit from the sale of the manure collected and from fees paid by the users while the government obtained a share of the profit by levying a tax of HK$0.60 per seat per annum. The night soil from these latrines was removed daily, in covered tubs, by the government scavenging contractor, who provided collecting junks for all night soil from public latrines, government buildings, jails, and prisons as well as from private houses. The boats carried the night soil to Guangzhou or somewhere in China where it was sold as fertiliser. The government contractor also supplied the crew for street sweeping. This rubbish was carried by boats to Lap Sap Wan (Gin Drinkers Bay), and simply thrown onto the beach.[1]

The contractor received nothing from the government. The people in the City of Victoria paid nothing out of public funds for scavenging—the value of the night soil collected was considerably higher than the cost of performing this duty. Human excreta were highly prized by the Chinese farmers as manure. They were composted by mixing with ashes or refuse, but often diluted with water according to the nature of the crop to which they were applied. The chief demand was for mulberry trees in the silk-producing districts north of Guangzhou.[1]

This system of night soil collection persisted during the Japanese occupation. The Second World War disrupted transportation between Hong Kong and the mainland and also farming in southern China. Initially the collected night soil was dumped into the harbour but later the Japanese built a system of tanks at Castle Peak and smaller ones at Tsuen Wan and Tai Po for the collected night soil to 'mature' (a process to reduce the risk of infection) before selling on to farmers in the New Territories.[2]

The receipt issued by the night soil collection company to an occupant of a flat in Wan Chai Road shows that night soil disposal for private houses was more expensive than before the War (Fig 1).

Water was a rare commodity during the latter part of the 19th century and early 20th century, and had to be carried from public hydrants to the house. The manual disposal of human excreta and the lack of water and proper sewage disposal in Chinese tenement houses led to the high prevalence of food- and water-borne diseases such as cholera, dysentery, and infective diarrhoeas and the ease with which

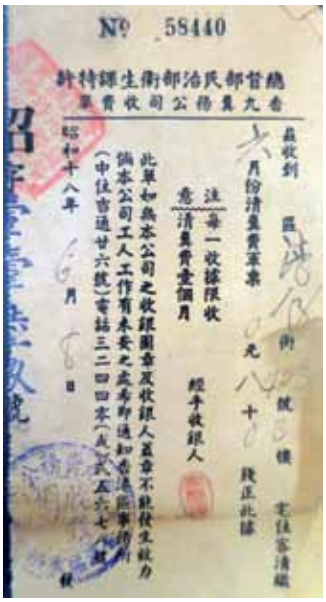

FIG 1. Receipt issued by the Hong Kong Kowloon Night Soil Collection Company (Authorised by the Hygiene Department, Civil Affairs Bureau, Governor's Office) This receipt was issued to the occupant of B floor, No. 103, Wan Chai Road for a sum of 80 cents (0.8 Japanese military yen, one Japanese military yen being equivalent to four Hong Kong dollars at that time) being the fees for the service of night soil collection for the month of June in the 18th year of the Emperor Showa's reign (1943) during the Japanese occupation of Hong Kong. This item was donated to the Hong Kong Museum of Medical Sciences on 24 May 2002 by Mr Po-hung Cheng (鄭寶鴻先生), an expert in Hong Kong history and Honorary Advisor to the Hong Kong Museum of History, Hong Kong Heritage Museum, and University Museum and Art Gallery of University of Hong Kong

they could become epidemic.

Even before the Second World War, newly built houses were required to have water closets. With the replacement of old houses by new ones after the War, fewer houses required night soil collection. The process of modernisation was nonetheless slow; in 1996 there remained some areas that required a night soil collection service, although this was free of charge.[3]

Interestingly this method of night soil removal was useful during the 1961 to 1963 cholera outbreaks as it enabled tracing of the source of infection and contacts.[4] By this time, night soil disposal was 'modernised' and more mechanised. The collected night soil was emptied into special vehicles (清糞車) designed for this purpose and in a hygienic manner at fixed points along a number of set routes every night. These vehicles discharged the night soil into barges that either took the contents to storage tanks for maturation, or dumped it if not required. Each vehicle had a huge tank with two compartments, one for night soil and one for water. At the back of the vehicle were three hoppers: the first for the receipt of night soil, the second for water and the third for disinfecting fluid. The pails of night soil were emptied into the first hopper, rinsed in the second, and disinfected in the third (Fig 2).[4]

FIG 2. Vehicle designed for night soil collection
(a) A large cylindrical tank with two compartments inside and (b) three hoppers at its rear. Reproduced from projection slides donated to the Hong Kong Museum of Medical Sciences Society by Prof SH Lee following his address entitled "The History of Public Health in Hong Kong" to the Society's Medical History Interest Group on 6 February 2010

In January 1962, the Department of Health began taking samples from the night soil vehicles while they were discharging into the barges. Three to four random samples were taken each week from each vehicle. After a positive sample was first reported, the vehicle was investigated with the object of tracing the infection back to its source. Thus when a sample from a vehicle was positive, each of the loads collected by the vehicle was sampled; when one load was positive, each pail forming that load was sampled. When a pail was found to be positive, the Health Officer took rectal swabs from all the residents in the house or flat in which the latrine was situated. The results of this study enabled the Medical and Health Department to conclude that the 1962 epidemic originated from several sources and that there was a large number of symptomless carriers among the population. Suitable preventive measures were then instituted.[5] Using night soil surveillance, the Department was able to forecast when and in what area a future outbreak of cholera was likely to occur, to determine when the outbreak was over and the colony was free from infection, to trace the infection to its source, and to study its spread within Hong Kong.[6] Ironically, if the entire population had had access to a water closet, this valuable information would not have been available and it would have been much more difficult to make any accurate forecast of such an epidemic.

References

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