

OF RATS, RICE, AND RACE: THE GREAT HANOI RAT MASSACRE, AN EPISODE IN FRENCH COLONIAL HISTORY¹

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Cet article utilise une campagne de dératisation, montée à Hanoi en 1902 par l'administration coloniale, à explorer les limites du pouvoir de l'état dans la ville coloniale. Au début, les égouts municipaux d'Hanoi représentaient le sommet du modernisme et du rationalisme de la "mission civilisatrice" française. Mais les nombreux problèmes de santé, de travail, et de qualité de vie qui se produisaient ont bientôt révélé une crise profonde et surprenante qui confrontait l'administration coloniale. L'arrivée d'armées de rats dans les maisons de la communauté blanche en était la manifestation la plus évidente, la plus dangereuse, et la plus ennuyante, surtout quand la peste se déclarait dans le quartier européen. Quand les investigateurs ont compris que ces visiteurs sans invitation arrivaient par les égouts, l'état engageait des équipes d'indigènes pour les combattre, mais sans effet durable et avec des résultats inattendus. Cet épisode est révélateur des illusions, des hypocrisies, et des paradoxes du pouvoir colonial français.

At the height of the empire, France deployed two generations of administrators, technocrats, and engineers to develop, modernize, and control the seemingly backward societies of West Africa, North Africa, Southeast Asia, and Oceania. True believers in the Third Republic's "mission to civilize," these agents of modernity had nothing but faith in the power of French science, reason, and technology to solve the problems of the tropical world. A corollary of the colonial enterprise was building sym-

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© French Colonial History
Vol. 4, 2003, pp. 191-204
ISSN 1539-3402

bols of modernity and grandeur that would legitimize French rule. Thus, throughout the empire, towns and cities possessed various monuments to the achievements of *la plus grande France*. Indeed, the colonial project turned the colonial city itself into a monument symbolizing the virtues France was supposedly bestowing upon the colonized peoples.² In the Southeast Asian ensemble of colonies, Hanoi—the capital of Indochina—came to be the symbol of the French colonial project.

Governor-General of Indochina (GGI) Paul Doumer, arriving in Vietnam in the last few years of the nineteenth century, consciously chose to make Hanoi the great symbol of his civilizing work in the colonies.³ Unlike the disorderly, venal, and ungovernable Saigon, a city that owed its new status entirely to the colonial introduction of rampant capitalism, Doumer's Hanoi was to be a stately, orderly, and controlled urban space. Also distinguishing Hanoi from Saigon, to the governor-general's delight, was the fact that he did not make a new city, but rather reformed, renovated, and modernized an existing ancient Vietnamese city.⁴ By deploying French rationality, science, and reason to solve Vietnamese urban problems, flaws, and shortcomings, Hanoi was a celebration of the transformative powers of the French colonial intervention. By this logic, France tamed and civilized its retrograde, decadent, and barbaric colonial ward, publicly fulfilling Kipling's "white man's burden." Yet much of Doumer's work only thinly veiled the city's unconquerability.

Many observers held up Doumer's newly created white residential neighborhood as a symbol of his urbanist success. With its wide avenues lined with shady trees, large and luxurious villas with ample rooms, and regular—even stiflingly rigid—grid structure, the white (or European or French) quarter stood as a contrasting example of modernity in the face of the dirty, overcrowded, and backward native quarter, the Vietnamese neighborhood of the Thirty-Six Streets. Despite the impressive transformation of Hanoi and the creation of an urban space devoted to white luxury, however, the normalization of French life in the city was an illusion. The impressive urban structure was merely an attempt to shield the French colonials from the realities of life in Indochina. Under the guise of modernization, French urbanism tried to erase, or at least hide, the unpleasant aspects of colonial life, including the difficult climate, the threat of tropical diseases, and the disconcerting presence of the conquered natives. Ironically, the colonizers' actions frequently provoked unintended consequences and occasionally led to small disasters. The case of the great rat hunt, if I may modify Robert Darnton's title, illustrates these processes at work.

Sewers occupy an obvious place in the modern mind. The removal of filth seems so natural an act to us that it seems odd, and perhaps unnecessary, to remind ourselves of it. The lack of such basic social services appears almost uncivilized and clearly backward to the contemporary post-industrial observer. Yet, as Donald Reid has successfully shown, sewers, serving both as an example and a metaphor, are crucial to our understanding of the process of modernization.⁵ Technocrats celebrated these achievements as triumphs that saved European cities from the threat of disease and created order in the urban system. In the case of Paris, this claim is true. As Reid notes, the frequency and severity of epidemics such as cholera decreased dramatically with the opening of Napoleon III's sewers.

The situation was different in colonial Hanoi. As mentioned above, the colonial sewers were part of a larger urban system in which race dictated access to the blessings of modernism. The urban infrastructure favored whites, while non-whites, despite the intervention in their lives, saw few benefits. The logic of Hanoi's urban apartheid dictated that whites and non-whites would not share modernization equally. To make the matter even more grievous to the Vietnamese, Doumer's expansion of the colonial taxation system placed the financial burden on the pocketbooks of the native population.⁶ Hanoi's sewers were much more elaborate and complex in the *quartier européen* than in the *quartier indigène*, where they were insufficient for the non-white population's needs.⁷ Indeed, the sewers in the native quarter were hardly more than a drainage system that sent waste into the nearby *Petit Lac* (Ho Hoan-Kiem, "The Lake of the Returned Sword") or the Red River. This system was subject to backflow during the annual rainy season, thus filling the picturesque neighborhood of the Thirty-Six Streets with human feces.⁸ Meanwhile, on the other side of the urban color line, the French residential neighborhood enjoyed the benefits of both running water and an efficient waste flushing system. The colonial administration proudly recorded that there were over fifteen kilometers of pipes beneath Doumer's grid of wide boulevards.⁹ Hanoi's white residents did not have to worry about seeing the return of their own filth with the annual arrival of the monsoon rains. As long as the sewer system functioned properly, it was a material benefit enjoyed by the French. However, when things went wrong—as they were wont to do, especially in the colonies—the sewers became the inadvertent source of a health crisis for the French community. This crisis brings to light the hubris of the colonial urbanist and throws the entire enterprise of colonial modernization into question. It also illustrates that French control of the city, the

environment, and the Vietnamese was tenuous at best and illusory at worst.

Household pests were one of the many annoying realities of life in the tropics faced by Europeans. Anyone who has spent extended periods of time below the Tropic of Cancer and above the Tropic of Capricorn is well aware that it is next to impossible to banish insects, spiders, and other small creatures from even the tidiest home. Christiane Fournier, daughter of a colonial administrator, long-time resident of the colony, and one of the few Europeans who could claim to have been raised in Hanoi, jokingly referred to the numerous mosquitoes, cockroaches, and other “persistent household guests” as the “native government.” She advised newly arrived French colonials to give up trying to eradicate such pests, and to come to terms with these unwelcome roommates as quickly as possible. One simply had to learn how to live under the different and often taxing conditions in the colonies.¹⁰ Provided there was no immediate health threat, the presence of such small creatures could even be part of the charm of life in the colonies. Indeed, many individuals raised in the tropics but living in the northern climes often recall the chirp of the gecko with nostalgia.¹¹

Rats were another perennial problem. Yet, unlike many of the other relatively benign pests, rats became a focus of the colonial state’s attention, concern, and anxiety. For years, the city’s administration regularly noted the existence of numerous rodents in the native quarter. While viewing rats with disgust, whites thought little of the matter, dismissing infestation as a concern of *le quartier indigène*. Indeed, it surprised few French administrators that the Vietnamese section of the city, with all its shortcomings as an urban center, should also be home to a large population of pests.¹² Perhaps the existence of rodents in the native quarter confirmed their suspicions and prejudices about the scientific, cultural, and moral failures of the Vietnamese.

In the nineteenth century, rats were merely one of the many troublesome aspects of life in the colony. So long as they were confined to the dirty, crowded, and chaotic Vietnamese neighborhoods, they were of little threat to the white population living in its clean, spacious, and comfortable villas. However, things changed after 1894 when Alexandre “*le Vainqueur de la Peste*” Yersin discovered the role of rats and fleas as vectors in the propagation of the bubonic plague, a disease with a profound cultural legacy in Western Europe.¹³ Suddenly, the colonial state became increasingly concerned about the presence of so many unwanted guests in their cities.¹⁴ Reports singled out living conditions in the native quarter as particularly problematic.

Because of the [Vietnamese] population density, the closeness of the houses in the native quarter, the carelessness of the Annamites in regard to even the most basic rules of hygiene, the capital of Tonkin, as well as the other population centers of the colony, could quickly become a wonderful field test for the plague, if—as certain persons, whose competence in this matter is indisputable, predict—the illness reappears and invades the country.¹⁵

From the French perspective, the Vietnamese lack of modernity was a central factor in the spread of the disease. The plague was a symptom of native backwardness, and thus further proof of the righteousness of the French civilizing mission. Another element associated with the bubonic plague was the Chinese population. Citing the ubiquitous presence of rats in shops and in transported goods, French health experts singled out the Chinese as human vectors in the spread of *la peste* throughout Southeast Asia. Official opinion labeled Chinese neighborhoods as the most dangerous entryways for the plague, paying special attention to Cholon, Saigon's "Chinatown."¹⁶ French experts considered the Tonkin region to be particularly at risk because of its proximity to China and the movements of Hong Kong merchants.¹⁷ Yet, the white population had little to worry about. Rats and the plague were both aspects of the native quarter, part of the Other's urban geography; or so they thought.

Hanoi's white population enjoyed racial privileges in the form of the inequalitarian urban infrastructure. Their homes were equipped with running water and flush toilets, indicating the achievements of modern French technology. These symbols of progress and order assured the colonials of their superiority, even in the most private activities of the water closet. We can only imagine their surprise and shock when, to their horror, they discovered rats using indoor plumbing as a clandestine point of entry. The colonial administration realized that the recently laid underground network of pipes served as an ideal breeding ground for the city's rat population.¹⁸ Dark and sheltered from predators, the sewers allowed the rats to live in relative peace and tranquillity, with ample time for breeding. Indeed, the situation was so ideal that the rodent community quickly grew to unimaginable proportions and began to spill out of its subterranean haven in search of food. The very nature of the French sewers provided the furry marauders with an ideal system of mass transportation and access to the city's poshest addresses. The sewers were exacerbating and, quite literally, bringing home the city's rodent problem. Worse yet, the sewer system, of

which the colonial administration was so proud, was making the traditionally native issue of rat infestation a white issue. The situation became more serious when cases of the bubonic plague began to show up, not just in the city, but in *la ville européenne*.¹⁹ Clearly, something had to be done.

The city responded in force, dispatching teams of rat catchers into the city's sewer system in the spring of 1902. Of course, the French did not send their own people underground.²⁰ The racialized logic of the colonial order of things made that unthinkable. Rather, they relied upon the racially determined colonial labor system to tend to their needs. In the colonial world, whites did not perform manual labor; so as any sewer work, let alone rat-catching, was far too demeaning for colonial whites, the French recruited Vietnamese for the task.²¹ With the rat catchers' wages determined by the number of rats killed, there was a built-in imperative to bring up as many rodents as possible. Fortunately for the native laborers, there was no shortage of rats in the sewers. For those unfamiliar with rodent demographics, the numbers are staggering. In the first week, 26 April to 1 May 1902, the rat catchers turned in 7,985 rats. As the rodent hunters intensified their efforts and perfected their techniques, daily tail counts rose to over 4,000 by the middle of May, only to increase exponentially in the days ahead. On 30 May, the teams eradicated 15,041 rats. Through the middle of June, the reports consistently topped 10,000. There were a few remarkable days such as 12 June, on which the archives bear silent witness to the deaths of 20,114 rats. In late June and July, the daily returns began to waver—but not for lack of victims, as 4 July challenged the 12 June record.²² To the French administrators and their hired Vietnamese killers, the sewers seemed to be an unlimited source of rodent victims.

The great rat hunt must have been an astounding sight. The *quartier européen's* air of order and civility, as embodied in its straight streets and imposing white stone buildings, was shattered by the invasion of teams of native workers descending into and arising from the neighborhood's numerous manholes. It is hard to imagine a more incongruous image than that of the colonial civil servant, dressed in white from head to toe and on his way home to his spacious villa, coming into contact with a native sewer worker, covered in filth and carrying hundreds of bloody rat corpses. Evidently the shock of this public transgression of the colonial order was too much for some. On 9 June, the resident-superior of Tonkin (RST) contacted the office of the GGI. It seems that members of the white community were beginning to complain about the presence, sight, and odor of the native rat catchers in their neighborhoods, provoking the racist analogy of

natives and rats as pests in the white quarter. The RST also raised the question of the threat to public health posed by the workers. On 16 June, a certain Dr. Serez, head of health services for Indochina, defensively responded that the rat catchers were no dirtier than regular sewer workers and he had yet to receive complaints about them.²³ Here we see an unimaginable blend of irony and hypocrisy: the French conquered Hanoi and forced the Vietnamese to build a luxurious city for whites; yet when the French called in the Vietnamese to clean the sewers of pests (a job no white colonial would dream of taking), the white community could not bear the sight of the dirty natives in their streets. That the Vietnamese were there to decrease the threat of bubonic plague in *le quartier européen* makes the injustice even more stunning.

The rat hunt also proved to be a problematic enterprise for the Vietnamese. It would be an understatement to call the job unpleasant. One had to enter the dark and cramped sewer system, make one's way through human waste in various forms of decay, and hunt down a relatively fierce wild animal which could be carrying fleas with the bubonic plague or other contagious diseases. This is not even to mention the probable existence of numerous other dangerous animals, such as snakes, spiders, and other creatures, that make this author's skin crawl with anxiety. Furthermore, as the rats became used to the ritual of the daily hunt, and the element of surprise was lost, the chase must have become increasingly difficult for the workers. In July 1902, Dr. Serez notified his superiors that he was having difficulties with his native rat hunters, and that they were not content with their wages. The Vietnamese sewer workers began to experiment with a form of collective labor action against their French employers. In June and July, faced with work stoppages and slow-downs, he suggested concessions to make the job more lucrative and attractive.²⁴ In response, the administration agreed to raise the commission on each rat from one cent to two cents. This was still not enough to motivate the workers, and by 1904 they were fetching four cents for each dead rodent.²⁵ That the workers could quickly win a four-fold wage hike indicates that they were seriously underpaid at the start of the campaign. Their tactics also show that some thirty years prior to the great waves of strikes of the 1930s, this section of the Vietnamese working class had an early understanding of the potential strength of collective labor organization.²⁶

As the hunt continued, it became clear that the use of state workers in the sewers was failing to make a dent in the ever-growing rat population. The reproductive powers of the furry foes were simply too great for the

colonial state to handle on its own. To fight the infestation citywide, the colonial administration added vigilantes to its team of professional killers. Appealing to both civic duty and to the pocketbook, a one-cent bounty was paid for each rat tail brought to the authorities (it was decided that the handing in of an entire rat corpse would create too much of a burden for the already taxed municipal health authorities). Unfortunately, this scheme backfired. Despite initial apparent success, the authorities soon discovered that the best laid plans of mice and men often go awry. As soon the municipal administrators publicized the reward program, Vietnamese residents began to bring in thousands of tails. While many desk-bound administrators delighted in the numbers of apparently eliminated rats, more alert officials in the field began to notice a disturbing development. There were frequent sightings of rats without tails going about their business in the city streets. After some perplexity, the authorities realized that less-than-honest but quite resourceful characters were catching rats, but merely cutting off the tails and letting the still-living pests go free (perhaps to breed and produce more valuable tails). Later, things became even more serious as health inspectors discovered a disturbing development in the suburbs of Hanoi. These officials found that more enterprising but equally deceptive individuals were actually raising rats to collect the bounty.²⁷ One can only imagine the frustration of the municipal authorities, who realized that their best efforts at *dératisation* had actually increased the rodent population by indirectly encouraging rat-farming. Evidently, this was not what the French had in mind when they encouraged capitalist development and the entrepreneurial spirit in Vietnam.²⁸ Faced with such fraudulent schemes, the colonial regime scrapped the rat bounty program.

In the end, the campaign failed miserably. The colonial administration's main concern, outbreaks of *la peste*, seemed unstoppable in the years before World War I. When the bubonic plague struck Hanoi in 1903, one of the rich ironies that characterize the history of French colonialism came to the surface. Doumer's International Colonial Exposition, with which he wanted to portray Hanoi as a hygienic triumph in the annals of French science, actually created a medical crisis. With the arrival of numerous people and cargo from around the world, it was inevitable that some illness would arrive in Hanoi. Apparently, rats carrying fleas infected with the bubonic plague, perhaps from the British *Raj*, were among some of the uninvited guests. The rats escaped into the newly created sewers of the European quarter, causing a small outbreak of *la peste*, which spread through Hanoi and Tonkin in the following months.²⁹ The vast majority of

the victims were *indigènes*, with 159 reported cases and 110 “official” deaths (the figure was certainly higher, as many Vietnamese families hid deaths to avoid interference from the colonial government). There were also six cases of Europeans falling ill; two of them died.³⁰

In 1906, the *Mairie* reported that a “violent” outbreak of the plague caused an exodus from the city and a serious economic downturn. The flight from Hanoi only spread the disease to the provinces, resulting in disruptions of agricultural production and a backlash of desperate rural immigrants arriving in Hanoi. Numerous poor, beggars, and homeless fleeing famine in the countryside filled the streets of Hanoi.³¹ During four months in 1908, a “*petite épidémie*” took hold of the neighborhood at the intersection of rue des Changeurs and rue du Coton in the native quarter.³² In the end, the 1906–1908 epidemic occasioned some 263 official plague deaths.³³ New municipal health regulations and an intensified monitoring of the native quarter reduced the severity of the outbreaks. However, the disease remained a major concern of the colonial administration throughout French rule.

Dératisation also remained in the minds of colonial officials. Despite the impressive growth of the city and the resources devoted to urban modernization, rats continued to find Hanoi an ideal habitat. Because of the sewer system, they were present in both the older structures of the native quarter and in the new villas, offices, and commercial centers of the white quarter. In the early 1930s the *Mairie* noted the persistent threat of infestation, but claimed that nothing could be done. Memories of the futility of the earlier campaign, and a better understanding of the reproductive capabilities of the furry foes, made them formidable enemies that the colonial state was loath to engage on the battlefield. Furthermore, the failure to mobilize the native population in the anti-rat campaign frustrated the colonial administration to no end. Fraud, such as rat-farming, and native ambivalence about the threats posed by the pests circumvented French efforts.³⁴

Hanoi’s rat problem endures to this day, with the rodents continuing to nibble away at the remaining vestiges of the French presence. In 1997, in the National Library of Vietnam, the former *Bibliothèque Pasquier*, researchers using the neglected French-language pre-1954 card catalog had to be careful when opening the highest drawers, as several of these had been used as nests.³⁵ Next door in the National Archives—the former archives of the French colonial state—rat sightings in the reading room were daily occurrences, attracting the attention of only newly arrived

researchers. Rodents could also be seen in the streets, in restaurants, and even in hotel lobbies. One can only imagine the situation in the antiquated sewers. In 1998, the government of Vietnam, noting an increase in crop losses of nearly one million acres, launched its own *dératisation* campaign. The government closed down restaurants serving the “little tiger dishes,” for fear that people were eating too many of the nation’s domestic cats. One report noted that despite the annual killing of fifty-five million rats, ground was still being lost to the furry foes.³⁶ We should note the obvious irony that the regime of the nationalist Vietnamese Communist Party, who fought such a long and determined effort to rid their nation of the French presence, has inherited some of the former colonial rulers’ problems.

Thus, despite French efforts, rats circumvented every attempt to control them. With hindsight, we may conclude that the colonizers should have taken rodent infestation as a symbol of the limits of their power. While they rebuilt Hanoi to their liking, inscribing racial segregation into the shape of the city and drawing clear lines of distinction between white and non-white, the rats mocked their work. As a sardonic insult, the rats turned the white quarter’s sewer system—a powerful symbol of modernity—into a breeding ground and transportation network. Such frustrations have clear parallels to other obstacles blocking France’s control of this colony. Frequently, the most celebrated aspects of French colonization directly produced the forces and individuals that overthrew French rule. The examples are numerous. The colonial educational system produced the likes of Vo Nguyen Giap who lead the Vietminh to victory at Dien Bien Phu. French economic policies produced a Vietnamese entrepreneurial class that competed with French commercial interests, as well as an increasingly militant working class in the cities of Saigon, Hanoi, and Haiphong. French attempts at crushing the nascent nationalist movement in the 1930s actually displayed the violence inherent in the system of French colonial rule, and turned public sympathy towards the forces of anti-colonialism. Thus, as the example of the great Hanoi rat hunt shows, many of the seeds of the ultimate failure of French rule in Vietnam were planted in the optimistic soil of the civilizing mission.

NOTES

1. With apologies to Hans Zinsser, *Rats, Lice, and History: A Chronicle of Pestilence and Plagues* (New York: Black Dog & Leventhal, 1995 [1935]), and Robert Darnton, *The Great Cat Massacre and Other Episodes of French Cultural History* (New York: Basic Books, 1984).

2. David Harvey, *Consciousness and the Urban Experience: Studies in the History and Theory of Capitalist Urbanization* (Baltimore: Johns Hopkins University Press, 1985); Mike Davis, *City of Quartz: Excavating the Future in Los Angeles* (London: Verso, 1990); Zeynep Çelik, *Urban Forms and Colonial Confrontations: Algiers under French Rule* (Berkeley: University of California Press, 1997); Anthony David King, *Colonial Urban Development: Culture, Social Power, and Environment* (London: Routledge, 1976); Paul Rabinow, *French Modern: Norms and Forms of the Social Environment* (Chicago: University of Chicago Press, 1989); and Gwendolyn Wright, *The Politics of Design in French Colonial Urbanism* (Chicago: University of Chicago Press, 1991) have greatly informed my thinking about cities and urban systems as material displays of cultural power.
3. Marius Borel, *Souvenirs d'un vieux colonialiste* ([n.p.]: Imprimerie Subervie Rodez, 1963), 135–36; Paul Bernard, *Nouveaux Aspects du Problème Économique Indochinois* (Paris: Fernand Sorlot, 1937), 9–10.
4. Philippe Franchini, *Saigon 1925–1945: De la “Belle Colonie” à l’éclosion révolutionnaire ou la fin des dieux blancs* (Paris: Éditions Autrement, 1994); Charles Meyer, *La Vie quotidienne des Français en Indochine, 1860–1910* (Paris: Hachette, 1985). For a literary portrait of the differences between the two cities, see Claude Farrère’s 1905 *Les Civilisés* (Paris: Éditions Kailash, 1993); Christiane Fournier, *Hanoi: Escalé du cœur* (Hanoi: Éditions Nam-Ky, 1937).
5. Donald Reid, *Paris Sewers and Sewermen: Realities and Representations* (Cambridge, Mass.: Harvard University Press, 1991).
6. The former colonial archives in Hanoi contain a nearly intact record of the city’s budgets for this period; see Hanoi National Archives [henceforth HNA], Fonds de Mairie de Hanoi [henceforth MdH], dossier [henceforth doss.] 4822–53, “Ville de Hanoi: Budget de 1889–1923.” These reports demonstrate the taxation scheme that placed the financial burden on the Vietnamese, and the ways in which these funds improved the white residential neighborhood, but not the area in which the taxpayers lived.
7. Le Dr. Grall, *Hygiène coloniale appliquée: Hygiène de l’Indo-Chine* (Paris: J. B. Ballière et Fils, 1908), 110; Gabriel Lambert, “Étude de l’assainissement de la Ville de Hanoi (Tonkin),” *Annales d’Hygiène et de Médecine Coloniale* 14 (1911): 765–82.
8. Neil Sheehan, *After the War was Over: Hanoi and Saigon* (New York: Random House, 1991), 29.
9. “Le Développement de la Ville de Hanoi (Janvier 1897–Janvier 1901),” *La Revue Indo-Chinoise* 126 (March, 1901): 227; L. Fayet, *Avant projet sur les Égouts de Hanoi* (Hanoi: IDEO, 1939).
10. Christiane Fournier, *Perspectives occidentales sur l’Indochine* (Saigon: La Nouvelle Revue Indochinoise: 1935), 96.
11. Raised in Honolulu, Hawaii and now residing in Northern California, I offer myself as partial evidence for this point.
12. Gaide and Bodet, *La Peste en Indochine* (Hanoi: Imprimerie d’Extrême-Orient, 1930), 5.
13. Daniel Defoe, *A Visitation of the Plague* (New York: Penguin Books, 1995); Zinsser, *Rats, Lice, and History*; Wu Lien-Teh, J. W. H. Chun, R. Pollitzer, and C. Y. Wu, *Plague: A*

- Manual for Medical and Public Health Workers* (Shanghai: National Quarantine Service, 1935); R. Pollitzer, *Plague* (Geneva: World Health Organization, 1954).
14. Henri H. Mollaret, *Alexandre Yersin ou le Vainqueur de la Peste* (Paris: Fayard, 1985); Archives Nationales, France, Centre des Archives d'Outre-Mer, Aix-en-Provence [henceforth CAOM], Fonds de l'Agence Économique de la France d'Outre-Mer [henceforth AGEFOM], carton 237, doss. 296, "Les Médecins français en Indochine"; *Tropiques* 308 (March 1948): 16–24.
 15. CAOM, Fonds du Gouverneur Général d'Indochine [henceforth FGGI], doss. 64174, "Tonkin" (1903).
 16. Gaide and Bodet, *La Peste en Indochine*, 5, 27.
 17. M. le Dr. Ortholan, "La Peste en Indo-Chine (Historique)," *Annales d'Hygiène et de Médecine Coloniale* 11 (1908): 633–38.
 18. CAOM, FGGI, doss. 6675, "Destruction des animaux, Hanoi-Ville" (1902).
 19. CAOM, Fonds du Résident Supérieur du Tonkin [henceforth FRST], doss. 34580, "Santé Publique: Mesures à prendre contre la peste et le choléra" (1903); M. le Dr. V. Rouffiandis, "La Peste bubonique au Tonkin," *Annales d'Hygiène et de Médecine Coloniales* 8 (1905): 609–30.
 20. CAOM, FGGI, doss. 6675, "Destruction des animaux, Hanoi-Ville" (1902).
 21. For their research, scope, and theoretical implications, Frederick Cooper, *From Slaves to Squatters: Plantation Labor and Agriculture in Zanzibar and Coastal Kenya, 1890–1925* (New Haven: Yale University Press, 1980); idem, *On the African Waterfront: Urban Disorder and the Transformation of Work in Colonial Mombassa* (New Haven: Yale University Press, 1987); and idem, *Decolonization and African Society: The Labor Question in French and British Africa* (Cambridge: Cambridge University Press, 1996) stand out as the most impressive studies of colonial labor history. Jeanne Marie Penvenne, *African Workers and Colonial Racism: Mozambican Strategies and Struggles in Laurenço Marques, 1877–1962* (Portsmouth, N.H.: Heinemann, 1995) provides a model for scholars seeking to blend political economy and cultural analysis. See also Tran Tu Binh, *The Red Earth: A Vietnamese Memoir of Life on a Colonial Rubber Plantation*, trans. John Spragens Jr. (Athens: Ohio University Press, 1985).
 22. CAOM, FGGI, doss. 6675, "Destruction des animaux, Hanoi-Ville" (1902).
 23. Ibid.
 24. Ibid.
 25. CAOM, FGGI, dossier 6725, "Destruction des rats—Tonkin" (1904).
 26. Ngo Van, *Viêt-nam, 1920–1945: Révolution et contre-révolution sous la domination coloniale* (Paris: L'Infiniaque, 1995), 219–54.
 27. HNA, MdH, doss. 44, Rapport annuel du 1er juillet 1930 au 30 juin 1931 (1931).
 28. Martin J. Murray, *The Development of Capitalism in Colonial Indochine, 1870–1940* (Berkeley: University of California Press, 1980).

29. HNA, MdH, doss. 38, "Note sur le développement de la Ville de Hanoi du 1er janvier 1902 au 30 juin 1907" (1907); CAOM, FRST, doss. 34580, "Santé Publique: Mesures à prendre contre la peste et le choléra" (1903).
30. Rouffiandis, "La Peste bubonique au Tonkin," 613.
31. HNA, MdH, doss. 37, "Note sur le fonctionnement de l'Administration Municipale pendant l'année 1906" (1906).
32. Gaide and Bodet, *La Peste en Indochine*, 27.
33. HNA, MdH, doss. 44, "Rapport annuel du 1er juillet 1930 au 30 juin 1931" (1931).
34. Ibid.
35. The author owes many thanks to David Del Testa, who first warned him of the dangers of using this card catalogue.
36. Steve Newman, "Earth Week: A Weekly Diary of the Planet," *San Francisco Chronicle*, 28 February 1998; Paul Alexander, "Vietnam Overrun With Rats," *San Francisco Chronicle*, 11 March 1998.