

# Armed conflict, disease and death: health in the Caste War (Yucatán, Mexico) in the second half of the nineteenth century

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## Abstract

An analysis of the relationship between health and war in the context of the Caste War in Yucatan, Mexico, during the second half of the nineteenth century. Using qualitative and quantitative sources, this article reconstructs the main critical health events and argues that the health/disease process at the time can necessarily only be explained in relation to variables connected to the conflict, such as arms trafficking, displacements, diasporas and migrations, food shortages, violence and administrative chaos.

Keywords: health; war; epidemics; health/disease; mortality.

*Paola Peniche Moreno*<sup>i</sup>

<sup>i</sup> Professor, Centro de Investigaciones y Estudios Superiores en Antropología Social, Unidad Peninsular.

Mérida – Yucatán – México

[orcid.org/0000-0001-8604-2954](https://orcid.org/0000-0001-8604-2954)

[ppeniche@yahoo.com](mailto:ppeniche@yahoo.com)

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War is above all a human tragedy. Its most visible signs are disease, death, loss and hunger. Today, just as in the past, it disrupts water and food supplies; it causes displacement of people carrying viruses and bacteria, who abandon their homes and sites of production to gather in places where there is less violence but which are dangerous refuges due to the sanitation conditions; and it paralyzes preventive and medical care, or complicates them in the best-case scenario. There is a relationship between war, health and disease: armed conflicts create the conditions for disease to emerge and reproduce and are characterized by their own type of morbidity and mortality.

What were the hallmarks of the relationship between war, disease and death in the Caste War in the Yucatan between 1847 and 1901? What did people die of? How many of those deaths exceeded longstanding tendencies?

In this article, the following two thematic axes are linked: disease-death and war. The Caste War was a campesino (indigenous peasant) rebellion that took place in the Yucatan between 1847 and 1901; it was a violent confrontation between Maya insurgents and different armed groups sent by the Yucatan government, both official (military) and unofficial (guerrillas and hidalgos). It has been called the “Caste” War because the siege and extermination of the white race was a major ideological motive underlying the slogans and actions of the Maya insurgents. However, various different authors have pointed out that the motives for this conflict were much more complex than the binary opposition between Maya and criollos (Mexicans of Spanish or European descent) (Dumond, 2005).

My interest in examining this problem from a historical point of view arose while I was working on a book on yellow fever, in the course of analyzing primary sources and writing about the public health models used in the Yucatan to prevent and eradicate it. When we choose a particular disease as a topic of study, there is a tendency to focus our analysis on that pathology and not others, ignoring the general context of morbidity and the sociohistorical context that led to it. But my initial survey of burial events led me to wonder about the role assigned to yellow fever in the health/disease process and to situate it in the critical context of the war. The historiography on the health/disease process has introduced the variable of “war” in order to explain contexts that have historically influenced the rise of epidemics, and also to trace their dispersal patterns. From the point of view of social history and historical demography, armed conflicts have been approached in terms of their impacts on food supplies, the movement of people and microbes, health conditions and health tests. As regards Mexico, most of the interest has centered on the Spanish conquest and the epidemics brought from overseas. Although in recent decades scholars have examined the War of Independence (Cooper, 1992; Viesca, 2010) and the Mexican Revolution (Cuenya, 2008; Márquez, Molina del Villar, 2010; Molina, 2016), these studies deal with the health question in urban contexts like Mexico City or Puebla. For the Yucatan, specific health issues have been analyzed in the context of the Caste War, such as the cholera epidemic (McCrea, 2010), food shortages (Alcalá, 2019) and the institutionalization of medicine along with the rise of the henequen agave economy in the last decades of the century (Sowell, 2015). However, we still do not know the extent of the demographic impacts of this war, mainly because of the fact that little information has survived from that period. This research paper is a first attempt in that direction.

The methodology used in this article comes from historical anthropology and demography. It performs a detailed reading of qualitative sources chronicling the health effects of the war and its consequences in the health/disease cycle. This approach could be termed social history; however, I argue that the analysis presented here is a historical anthropology because the narrative is constructed on ethnographic methods of non-participatory observation that record small details which might pass unnoticed by an eye not trained in ethnography. As an anthropologist, I also believe that the field of population health is a dynamic process that develops and evolves in a determined space-time, and that it is closely linked to the life of a collective and its cultural practices and ways of perceiving the world. This process, called health/disease/care, operates at a structural level in all societies and social groups; it is where conditions are generated and representations, practices and forms of knowledge are constructed (Menéndez, 1994, p.71-72). As a historian, I recognize that in the nineteenth century new ways of providing public health care and preventing disease emerged that were linked to scientific discourse and knowledge, and the emergence of the nascent nation states (Carrillo, 2002; Peniche, 2016). That is what I call “health” in this article, or “the health issue;” in other words, the processes whereby the health/disease process was produced and reproduced as well as the sociohistorical forms of medical care and epidemic prevention.

The sources analyzed are qualitative and quantitative. The qualitative sources allowed me to reconstruct the two variables underlying this study: health and war. They are made up of a vast trove of archival printed material from 1842 to 1899, mainly reports and official periodicals of the Yucatan government. In their pages I found a large variety of documents with valuable information, including war chronicles; editorial opinions; personal letters (published as “curiosities,” such as the missives from federalist insurgents); literary pieces (poetry and short stories); official documents, including speeches and correspondence between local, state, national, and international authorities, in particular with authorities in Belize; lists of nominations; circulars; minutes; military reports, letters and communiqués; and town council proceedings. I also consulted Merida’s medical and pharmaceutical society journal, *La Emulación*, from 1853 to 1879. Its “Medical Chronicle” section contains detailed descriptions of epidemic outbreaks. To a lesser extent, I also consulted newspapers from Campeche and Mexico City that published chronicles of major events in the war towards the end of the nineteenth century.

The archival information I used was so varied that it allowed me to reconstruct a chronology of the health events in the Caste War, although it did involve some limitations: firstly, it was the most official version possible of events provided by the government, including the military, and the medical profession; secondly, information on the zone occupied by the Maya rebels is virtually nonexistent. This information can be found in sources in British Honduras and in archives in Belize and London, but for this research I decided to carry out an initial analysis based on Mexican sources, where the documentary information is more complete. As a counterbalance, I needed to contrast it with another type of documentation, and for that I chose church records. In local archives such as the Archivo General (General Archive) of the State of Yucatán and the Biblioteca Yucateca (Yucatan Library) there are valuable sources on health topics in the second half of the

nineteenth century, which I have already begun to analyze in other studies (Peniche, 2016). One of the features of those documents is that they deal more with the health measures taken by the state rather than describing historical facts.

For the quantitative analysis I used ten burial registers for the San Sebastian neighborhood in the city of Merida. The parish for that neighborhood included 15 haciendas (farms or estates) and 16 sitios (Razón..., 12 nov. 1836). Although it was listed as a “republic of Indians,” San Sebastian included just as many criollo and mestizo (mixed-race) residents as indigenous ones. I chose to study this parish for three reasons: (1) my interest in understanding the displacements caused by the outbreak of the Caste War led me to select Merida, (2) this parish is particularly rich in socio-ethnic diversity, and (3) the burial registers for the time period I am interested in are (almost) complete.

This study is focused on qualitative information, so I limited myself to getting general figures for the number of monthly/yearly deaths and recording when there was an epidemic outbreak. But it is important to acknowledge that an enormous amount of information is listed in these books, which will eventually allow more detailed analyses of differential mortality by sex, age and cause of death, with seasonal variations in each case.

The record of causes of death is relatively systematic in some books. Since they were burial registers, the parish priests were the ones to note the reason for death, and we can assume that in their experience the epidemic diseases noted in the ten volumes had distinctive symptoms and signs that were well known in Yucatan, which had suffered outbreaks for centuries (smallpox, measles, yellow fever) or decades (cholera). However, I am inclined to believe that the parish priests who filled out the registers I consulted were less clear about respiratory illnesses, because at some points when burials increased, causes such as consumption, pneumonia, fever and tuberculosis were assigned indistinguishably. The rest were listed as “natural” deaths. Yucatan civil registry records began around 1860, but until at least the end of the nineteenth century, deaths were noticeably underreported in the civil death registries compared to the parish ones. That is why I worked with church records.

This article is divided into six sections. The first gives an overview of the context of the armed conflicts in Yucatán during the second half of the nineteenth century. In each of the subsequent four sections, I reconstruct an epidemic event that took place during the war: yellow fever (1842, 1857), displacements (1848), cholera (1855), and smallpox (1875). In the last section, I analyze the frequency and causes of death in the second half of the nineteenth century based on quantitative records. Using the term “epidemic event” in these sections allows me to reconstruct in historical terms the occurrence and distribution of morbimortality, highlighting the variables of time and place inherent to historical epidemiology. Since we are dealing with an ancien régime society, the sizeable transversal increases in mortality along a defined time line allow us to speak of an “epidemic event,” regardless of whether or not its causes have been identified, as in the case of the “displacements” of 1848 (Villa Romero, Moreno Altamirano, García de la Torre, 2011).

## The context of the war

In Yucatan, as in the rest of the country during the first half of the nineteenth century, there were two different and conflicting political projects for creating the nation state: federalism advocated the need to establish a government divided into confederate states, while centralism insisted on a single central government. After the fall of the first empire in 1824, a federalist constitution was proclaimed, and from then on there were decades of armed confrontations between centralists and federalists in different parts of the country.

In Yucatan, these two political projects were driven by the two main cities: Merida was federalist, whereas Campeche was centralist. This exacerbated the animosity that already existed between the two cities, which intensified in 1834 when troops from the center of Mexico dissolved the Yucatan Congress and installed Francisco Paula Toro, a centralist, as state governor. The population had still not recovered from the 1833 cholera epidemic when the new governor passed a series of measures that directly affected the state and its commercial and economic interests (Baqueiro, 1871). In reaction to these measures, there was an uprising in eastern Yucatan in 1839, led by Santiago Imán (Taracena, 2013), which culminated in a declaration of independence by the Republic of Yucatan on October 20, 1841.

After a military coup d'état, General Antonio López de Santa Anna became the interim president of Mexico. Shortly thereafter, he sought to annul Yucatan's declaration of independence and forcibly impose centralist government in the state. This involved sending a contingent of just over three thousand soldiers to Ciudad del Carmen via Veracruz. Their mission was to retake the cities of Campeche and Merida and all points in between. But as soon as they arrived in Veracruz, the centralist troops began to come down with yellow fever. This was endemic throughout the coastal region along the Gulf of Mexico, whose inhabitants were immune thanks to centuries of contact with the yellow fever virus. The same was not true of López de Santa Anna's troops, who were from Mexico City, Oaxaca, and Jalisco. The centralist army was decimated, to such an extent that they could not achieve their objective of besieging Merida (Baqueiro, 1871, cap.1; González Navarro, 1970, p.67, 71-75; Dumond, 2005, p.97-121; Taracena, 2013). Although they lost the battle, the confrontation between federalist and centralist forces continued throughout the century, and mingled with another armed conflict that was no less important in terms of duration and social, demographic and economic impact, namely the Caste War.

This conflict began as an insurrection among groups of Maya who took up arms against the Yucatan government in 1847; the war continued at varying levels of intensity for just over half a century, until in 1901, troops commanded by Ignacio Bravo embarked on the last military campaign and succeeded in conquering the rebels' bastion of Chan Santa Cruz.<sup>1</sup> The whole time, the Maya who took up arms were able to take refuge in the jungles to the south, allowing them to continue the movement; this and the supply of arms from Belize explains why the conflict went on for such a long time.

The first stage of the war lasted for three years, from the outbreak of hostilities in 1847 to the rebels' retreat in 1850. The Maya insurgents advanced through two-thirds of the peninsula and took important towns such as Tihosuco, Valladolid, Peto, Tekax, Ticul and Izamal; the government was only able to retain control of Merida, Campeche, the Camino Real (Royal Road) route and the coastal towns on the north of the peninsula. The initial advance by the Maya led to a diaspora of the non-Maya population (and of Maya who did not support the insurgents) to areas that were somewhat safer, as the rebels spread and took over scattered farmhouses (Dumond, 2005, p.213-222; Paoli, 2017, p.12-16). Most of the displaced ended up in the cities of Merida and Campeche, which lacked the sanitation to handle so many refugees, or enough food supplies. These conditions led to the spread of diseases that caused substantial surges in mortality. At this stage, commerce and agriculture broke down. The sugar industry, which had been an important sector of the state economy since 1825, collapsed, since 90% of the sugar cane was grown in the lands to the south and east, which were under the insurgents' control. The same thing happened with livestock farming, the textile industry, the logwood dye industry, tobacco growing, and other economic activities, the products of which were shipped from the ports of Sisal and Campeche (Peniche, 2016, p.9). Public health agencies such as the "juntas de salud" (health committees) and police commissions, which had functioned since the Cádiz Constitution to prevent epidemics by sanitation and smallpox inoculation, lapsed.

The second stage of the Caste War lasted from 1850 to 1869. During this time, the state of Yucatan received support from the Mexican government to retake some of the rebel-held towns, such as Izamal and Valladolid. The insurgents retreated to the extreme south and east of the peninsula and made Chan Santa Cruz their base of operations. From there they launched attacks and sieges of towns that the government had retaken. On the national level, the federal republic was re-established in 1846, but in 1853 there was another coup by centralist factions and Antonio López de Santa Anna was once again installed as president of Mexico. This reactivated the pro-federalist movements in Yucatan, and armed groups clashed with centralist government troops, causing trouble spots in some parts of the peninsula (Dumond, 2005, p.303-362; Paoli, 2017, p.38).

During this phase of the war, health was impacted by the displacements that took place because of the political context: columns of Maya rebels moved to the north and northeast to besiege towns under government control; in the south, they were in permanent contact with Belize, which sent them arms and food supplies. Groups of dissident federalists marched from the south; the soldiers had to go into the southern jungles to combat the insurgents. This situation created the conditions for the cholera epidemic that spread through Yucatan in 1853. However, during this phase, despite the epidemic and the ongoing armed conflicts, state and municipal governments managed to rebuild their administrative structures, and thus some of their public health capabilities. In the cholera epidemic, for example, health committees and police commissions met various times to implement measures to prevent and mitigate the epidemic, such as quarantines, road closures and publicizing methods of caring for the sick. During this

phase, production and economic activity recovered also. By 1856, the sugar industry had bounced back, achieving greater production levels than before the start of the war, and it remained an important economic activity until 1889. Livestock raising also recovered briefly, but then dropped again due to the rise of henequen agave monoculture, along with salt production, logwood cultivation and other sectors that helped the area recover from the devastation wrought on the land and the economy by the most violent years of the war (Irigoyen, 1980, p.315-336).

The last stage of the Caste War goes from 1869 to the end of the war, in 1901. During this period, the Maya insurgents set up their own government and controlled a broad swath of territory on the southeast of the peninsula; however, armed conflict waned and the rebels' attacks were more sporadic (Dumond, 2005, p.471). During this last quarter-century, the production and export of henequen agave fiber took off considerably, and it eventually became the mainstay of Yucatan's economy. This economic growth led to the maritime customs port being moved from Sisal to Progreso, which was founded in 1872. Progreso became a very important nexus for trade with the Caribbean and the Atlantic (Trujillo Bolio, 2005, p.106; Pérez, 2014).

### **Troop mobilizations and the black vomit, 1842 and 1857**

Once back in power, General López de Santa Anna sought to defeat the federalists in the Yucatan by sending troops to the peninsula to retake central control over the state. Yucatan had refused to recognize the declaration known as the Bases de Tacubaya.<sup>2</sup> It was August of 1842, just when the heat on the coast from Veracruz to Sisal becomes unbearable. The humidity makes breathing feel anything but healthy. For people who were acclimated, because their families had been in the area for many generations, the noxious smells were no longer synonymous with death as they had been for their ancestors, who had lived with endemic yellow fever since 1648, when it first broke out on in urban areas (Pérez, 2016). But for the Mexican troops sent to impose centralism, the climate and its vapors – it was believed at the time – were fatal.

The first action of the military contingent sent by Santa Anna to the Yucatan was to send a brig to Carmen Island to inform the commander that if the island did not submit, war would be declared. Soon, four guard ships stationed themselves offshore and reiterated the threat. However, these demands were tempered a few short weeks later when the news broke that “the Mexican troops had succumbed to the black vomit” (Primera..., 3 sep. 1842). Out of a contingent of five hundred soldiers, 42 died before reaching the port of Veracruz and three hundred more deserted in a panic due to yellow fever, which was also known in the region as “black vomit.” In August, a total of three thousand soldiers were supposed to embark for Tabasco and march from there to Campeche, but a few days later it was reported that along the way “they were dying off like stinking sheep” (Noticias, 27 sep. 1842) (see Figure 1).

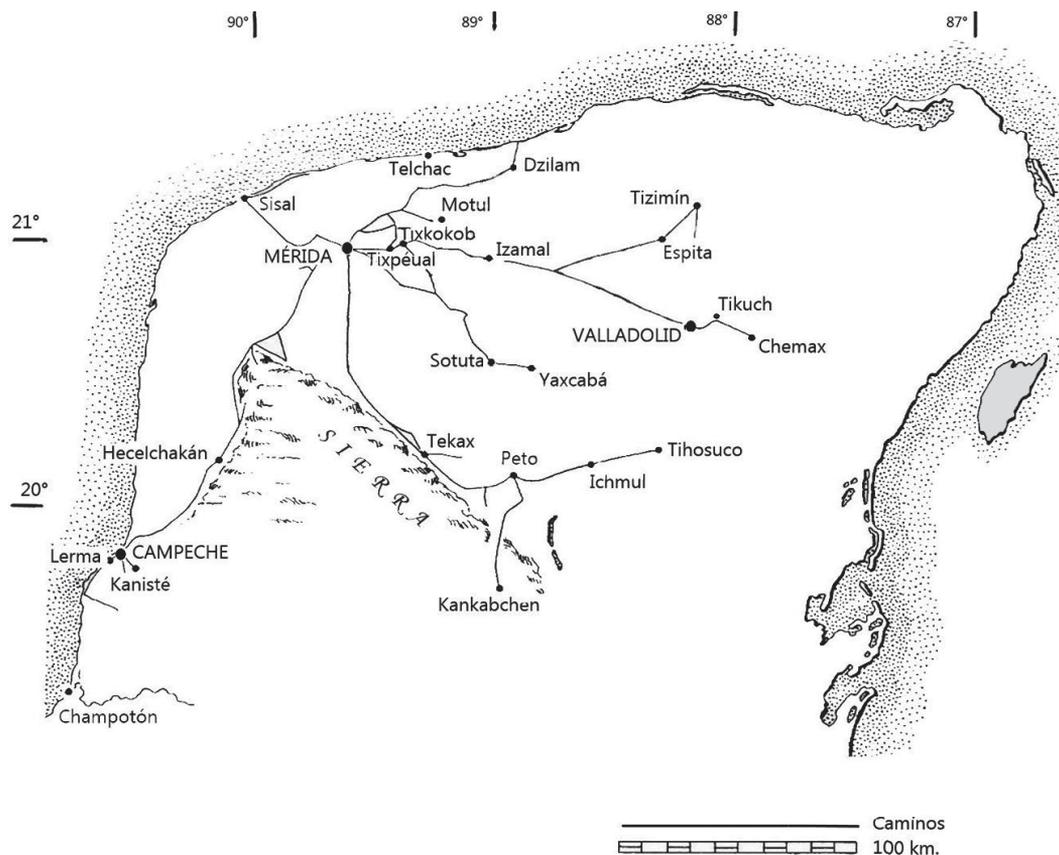


Figure 1: Map showing the location of towns involved in clashes between centralists and federalists, Yucatan, 1842 (based on Dumond, 2005, p.107)

It was not scientifically proven until 1927 that humans who contract yellow fever and survive become immune and will not suffer another attack in their lifetime; it was also discovered that children born to mothers immune to the disease carried antibodies to the virus in their blood at birth (Smithburn, 1957, p.323-325). While this mechanism was not known in terms of antibodies and immunity in 1842, experience showed that some people were susceptible to the dreaded “black vomit” while others were unaffected by epidemic outbreaks. This distinction was expressed as “acclimated” or “not acclimated.” All those born in regions that had historically suffered the disease were acclimated, while those from other areas outside the Yucatan, Campeche, Tabasco, Veracruz, and Chiapas were not, namely soldiers from central Mexico, merchants, agricultural workers from elsewhere, foreign physicians, recently-arrived school teachers etc. This health classification of the immune and the non-immune divided the conflict into two sides: the acclimated federalists and the non-acclimated centralists. For the latter, the climate was their weak spot, since the etiology of yellow fever was ascribed to climate, and the miasmas emanating in the muggy heat for which the whole peninsula was known.

The centralist army soon sent reinforcements to Campeche. Official reports state that they succeeded in taking Ciudad del Carmen and then Campotón. The Indians living on the outskirts of Lerma fled to the mountains to avoid the invasion force; there was pillage and robbery, especially in the corn fields which were ready for harvest (Jueces..., 3 dic. 1842). By December 1842, Lerma and Kanisté were in the invaders' hands; two hundred men were stationed in Lerma, where they commandeered the church as a hospital for the wounded, but above all for the men who were still falling sick from yellow fever (Circular..., 8 dic. 1842). The role of climate as a disadvantage for the invading soldiers was underlined in all accounts of the battles: "If they stay there, a great many of them will probably start stinking and dying, thanks to the climate which is decidedly anti-Mexican and fights like the *huites* (Indians), by ambush, wounding unseen and killing by stealth" (Isla..., 24 sep. 1842).<sup>3</sup>

Unable to retake Campeche, in 1843 the centralist troops marched to Merida, intent on capturing the capital, taking Motul, Tixkokob and Tixpéhuatl along the way (Nueva..., 15 abr. 1843). Under government orders, many towns set up patriotic committees to report on the danger of enemy advance, but also to persuade all residents to take up arms and defend the state (Lista..., 15 nov. 1842). Those who did were promised rifles and permission to keep "war booty," meaning mainly any weapons seized from the centralist troops. Accordingly, large contingents of Maya came to the defense of the state, forcing the centralist army, which was decimated by hunger and yellow fever, to surrender and withdraw (Nota..., 22 abr. 1843).

Yellow fever continued to be a feature of the armed struggles exacerbated by the armed uprising of groups of dissident Maya in 1847. To deal with them, the governor of Yucatan, Santiago Méndez, created the rank of "hidalgo" (gentleman) for Indians who sided with the government and fought the insurgent Maya, in exchange for life exemption from taxes. The *hidalgos*,<sup>4</sup> under the command of Onofre Xuluc, the "cacique" (Indian leader) of Tikuch, pursued Indian rebels in the east, in the area controlled by the Peraza Brigade based in Valladolid. After the rebels attacked his village in 1855 and nailed a challenge to the "talking cross" in church, Onofre Xuluc appeared on the scene, armed and leading a unit of just over fifty men, to defend his village by reinforcing military columns and heading various patrols with no official supervision (Dumond, 2005, p.326-327). From 1855 to 1857, the cacique of Tikuch, at the head of a unit of "brave *hidalgos*," pursued the "enemy's trail" in eastern Yucatan, facing ambush, "penetrating the forest and dispersing the foe" (Informe..., 22 mayo 1855). We know that these *hidalgos* were excellent hunters and had very good shotguns. They had obtained their weapons as war booty, since they fought centralist troops in 1842, when they – unsuccessfully – tried to beat back the federalist forces (Informe..., 22 mayo 1855).

On April 22, 1857, Onofre Xuluc left Tikuch with his "guerrilla *hidalgos*" from the village, to go reinforce the sections commanded by Colonel Lorenzo Vargas, facing rebels in the jungles of Navalám and Sisvicchen. They were looking for ranches that were inhabited and controlled by Maya rebels in the east; Xuluc and his men headed for the San Andrés ranch, hoping to ambush their enemies (Informe..., 6 mayo 1857). Months later, the military commander of the Peraza Brigade gave a new "encomienda" (land grant) to the cacique of Tikuch, assigning him more *hidalgos* from other villages. The goal was to retake control of the entire eastern region and to get the hamlets around the Maven hacienda to surrender.

However, three days after leaving the barracks at Valladolid, some of the hidalgos under Xuluc's command began to come down with yellow fever; a week later, four had died and 17 were sick. Xuluc had no choice but to retreat, since his people "were exhausted from carrying sick men" (Informe..., 4 nov. 1857). Commander Martín Peraza attributed the failure of the campaign to yellow fever; he wrote that, "Had it not been for the unavoidable setback of the epidemic, I am certain that these faithful Indians would have continued to advance until they found the majority of the enemy in their own quarters, and would have done a great service to the country" (Informe..., 4 nov. 1857).

By December there was more news of incursions by Xuluc on farmland in the east, when the government commissioned the physician Manuel Arias to serve with the Peraza brigade. Arias had just been treating patients in the yellow fever epidemic in Ixil, Baca and Valladolid (Nota..., 7 dic. 1857).

### **The displaced in the Caste War and the health crisis of 1848**

A great many mothers, wives and children came running out between the ranks, especially in Valladolid: amid the terror and confusion produced by rifle shots, the cries of the savages, the moans of the wounded, the wailing of children, the horses whinnying, the creaking of carriages splintering as they crashed into one another, the women panicking and the men desperate (Espíritu..., 1849).

The war led inevitably to an exodus. Regardless of their status, people left their homes and all they had for an uncertain future, seeking to escape violence and hunger. It is estimated that in early 1848, less than a year after starting the armed conflict, the Maya insurgents controlled three quarters of the state of Yucatan. War transformed the landscape both gradually and suddenly, leaving ruined cities and villages. The stone houses around the central plazas had been burned down and their roofs had collapsed; the palm-thatched mud huts were reduced to ashes; buildings destroyed; the corn fields completely abandoned; and churches in many cases turned into barracks (Jefatura..., 6 oct. 1849).

There was a widespread diaspora: in towns taken by the rebels, some Maya families joined them, but many others did not and fled to the mountains, as their ancestors had done centuries before. For example, a group of 115 people left Dzonotchel and spent almost a year in the depths of the jungle in the Peto district, hiding and making do as best they could, until their village was retaken by state forces (Emigrados, 10 mar. 1848). 550 families left Pencuyut, Chaksinkin, Tahdziu and Santa María for the mountains, and in December 1848 attempted to settle in Peto (Comandancia..., 7 dic. 1848). The same thing happened with many other families – also Maya – living on the haciendas as servants to the whites, against whom the insurgents had declared war.

Furthermore, mestizos and criollos from farms, towns and small cities like Maní, Tihosuco, Izamal and Valladolid left all their belongings behind to take refuge in Campeche

and even Tabasco; known as “emigrants,” they also went to Isla Arena, Palizada and Laguna (Nota..., 27 mayo 1848). The emigrants used boats to transport provisions, tools and materials for tents to Cozumel, since there was no housing for them and no one there to help them (Nota..., 17 jun. 1848) (see Figure 2).

The majority of the families who emigrated went to Merida. In May 1848, it is estimated that there were approximately ten thousand of them in the capital alone (Nota..., 27 mayo 1848); by December, the figures had risen to thirty thousand families who had moved in different directions, meaning approximately one hundred thousand displaced people (Comunicado..., dic. 1848). According to witnesses, there were three times as many women as men. As to their means, witness accounts say that the majority were poor and unable to fend for themselves (Nota..., 27 mayo 1848). We know that very few of them managed to find places to stay with relatives or people they knew; in general they congregated in the public squares or under city arches, while some luckier ones took shelter in large city buildings designated for emigrants. While those fleeing the interior were arriving in Merida, wealthier families were leaving the city for Veracruz, British Honduras or Havana.

Meanwhile, charity boards were created in Merida and Campeche to care for the displaced, assign lodging and distribute the few free foodstuffs available (Nota..., 17 mayo 1848).<sup>5</sup> A year into the armed conflict, schooners from Veracruz arrived in Sisal and Campeche bringing funds, corn and rolls of cloth for making clothes; New Orleans also sent corn (Nota..., 5 dec. 1848). Both the authorities and the charity boards were hampered by shortages caused by the war and the abandonment of work in the fields, but also by hoarding and corn speculation by the hacienda owners who were still able to harvest in 1848 (Nota..., 9 ago. 1848).

How long could this situation with the emigrants go on? There was concern about the “dire poverty” of their situation, which meant that it would not be possible to provide for very long for this “immense horde of people destitute of all means” (Emigrados, 10 mar. 1848). What could they do? For a while, the women were employed sewing clothes for the soldiers. But the food shortages soon threatened residents and newcomers alike with famine, which neither the efforts of the charity boards nor supplies sent by sea from other ports could alleviate.

Between them, the fighters, troops, rebels, and emigrants soon finished off the available foodstuffs. Because the struggle was still going on and everyone was involved in it (either fleeing, attacking, or counterattacking), there was no time or labor available to replace what had been consumed or devastated. With the haciendas burned down, the fields razed and the livestock consumed, where were people to find food in the country or funds to purchase it from elsewhere? (Informe..., 20 abr. 1849).

In Merida and Campeche, the hospitals were full of wounded, famished men; in the port alone over six hundred were reported in 1849. There were throngs of disabled veterans begging; the emigrant families had no other form of income and there were countless widows and orphans “plaintively crying for bread to eat” (Quintana Roo et al., 5 mayo 1849).

Thus, overcrowding, poor hygiene, food shortages and the general health situation created the conditions for mortality to shoot as high as in the worst epidemics.

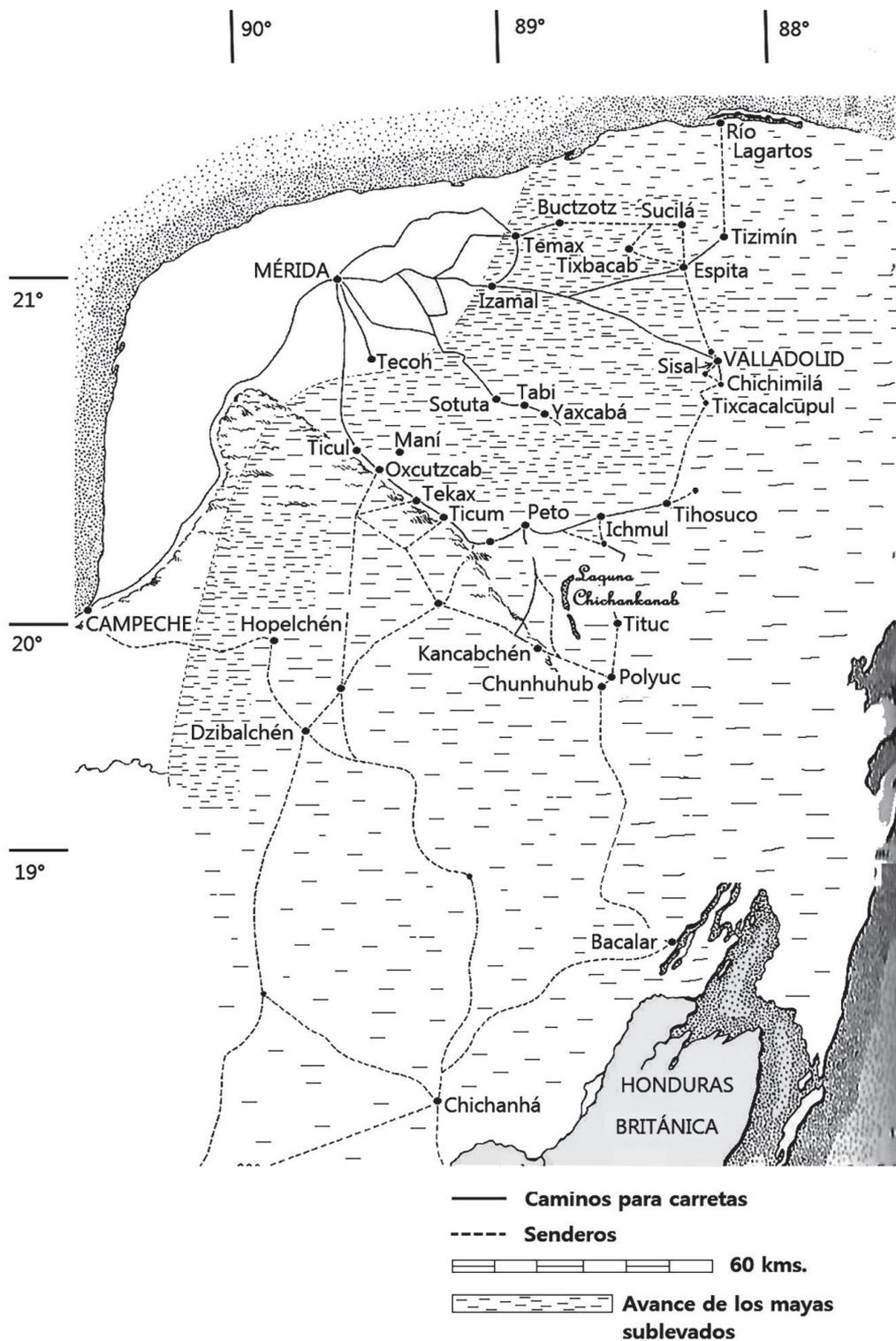


Figure 2: Map of the advance of the Maya rebels, Yucatan, 1848 (Dumond, 2005, p.170, 195)

### Arms and cholera arrive from Belize, 1853

Ever since the war began in the east in 1847, the Yucatan government had been aware that the rebel leaders were buying arms in British Honduras; the English merchants sold them obsolete flintlock muskets from the Napoleonic War, shotguns, percussion muskets and, later, large quantities of rifles, bullets, munitions and gunpowder (Dumond, 2005, p.146, 226, 232, 260, 581, 582).

The Maya rebels soon occupied Balacar in 1848, facilitating these transactions, although its recapture by official forces in 1849 did not prevent the English from continuing to furnish the rebel troops with arms supplies. From British Honduras they sent ships to New Orleans to acquire gunpowder, which was then sold to the rebels. Schooners from Belize transported munitions all along the border between British Honduras and Balacar to Ascension Bay, where they were handed over to representatives of the insurgent leaders (Dumond, 2005, p.194, 226, 233-234). There are reports stating that shipments of gunpowder were being sent directly from British Honduras to Santa Cruz, the headquarters of the Maya rebels (Carta..., 20 mayo 1878). Chichanhá was another of the focal points of this arms trafficking, since it had routes leading both to the Hondo River at one end of the colony and to Guinea Grass on New River in British Honduras (Esparza, 2 ago. 1899). The Yucatan government knew that Belize was supplying the rebels: "During the day the insurgents worked diligently to open and widen the route from Chichanhá, from whence they were already obtaining gunpowder and other war material from the accursed authorities in Belize" (Informe..., 17 jul. 1849).

Thus there were numerous requests to stop the flow of arms; in response, the British colonial authorities imposed some toothless bans. Their refusal to stop the trafficking was due in part to the fact that it was a way to obtain mahogany and logwood, which the rebels used to pay for the arms they got from the English. These arrived in Belize via two routes: either from New Orleans or from Kingston. Steamships left Liverpool, stopping in Port au Prince and then in Jamaica, where they unloaded merchandise (including weapons) and passengers (including slaves). From there, smaller vessels were used to ship different products to Belize, since practically everything consumed there came from England or British colonies in the Caribbean (Mintz, 1996, p.47).

Given this state of affairs, in 1849 the world was hit by a second cholera pandemic. As with the previous one in the 1830s, it emerged in Asia, traveled to Europe and from there to the Americas (Peniche, 2016). Steamships, which shortened the time it took to make transatlantic voyages, facilitated the arrival of *vibro cholerae* in the Antilles, and in late 1850 it broke out in Saint Thomas, Saint Lucia, Nevis, Trinidad, the Bahamas, Saint Vincent, Turks and Caicos, Cuba and Jamaica (Kiple, 1985; Jenson, Szabo, 2011; Pemberton, 2012). It took a devastating toll in Jamaica: some thirty or forty thousand people perished of cholera, between 10% and 12% of the total population (Pemberton, 2012, p.52). From Jamaica it traveled to Belize, and from the shores of Belize it spread through the south of the peninsula towards Bacalar, Chichanhá, Santa Cruz, and other parts of rebel territory, before shifting westwards.

In Yucatan, meanwhile, the old political battles between centralists and federalists flared up again, in addition to the internal war with the Maya. In August 1853, a new proclamation

by López de Santa Anna installed the military officer Rómulo Díaz as state governor, replacing Miguel Barbachano. Shortly thereafter, two officers who were formidable adversaries of centralism, Sebastián Molas and Manuel Cepeda Peraza, called for opposition to the Hospicio Plan<sup>6</sup> in Tizimín, and soon managed to assemble a force of over four thousand men. Their plan was to march to Merida and depose Governor Díaz. While Molas was away in Tihosuco rallying men and support for the federalist cause, Cepeda Peraza stayed in Valladolid to ensure the city government would back the Tizimín uprising (Carta..., 7 oct. 1853). However, in September, two calamities befell the city: an armed uprising led by Cepeda Peraza and the outbreak of the cholera morbus epidemic, which sent a large number of people to early graves every day. While the city councilors were meeting to craft the necessary public health measures to deal with the emergency, Cepeda Peraza had them detained “under armed guard” to force them to endorse the Tizimín uprising. He succeeded (Copia..., 11 oct. 1853).

With backing from Valladolid, Cepeda Peraza’s and Molas’ columns marched on Izamal, from where they hoped to reach the state capital. They did not suspect that even before they left the east, there was cholera among them. They proceeded to leave a wake of disease and death along the way (Peniche, 2016). Decimated, sick and demoralized, the federalists lost the battle. Soon, however, the effects of cholera began to be felt in Merida, and throughout practically the entire state (see Figure 3).

To the south, in the area occupied by Maya dissidents, active rebels (known as *bravos* or fighters) and ex-combatants (*pacíficos* or peace-lovers), the tragedy of cholera became a scourge, consuming and decimating them. There were an estimated 70,000 people living in the rebel region by that point (Dumond, 2005, p.299). While there is no information allowing us to tally the deaths due to the epidemic in this area, the government publication or *Boletín Oficial* carried testimonies by army members who had seen endless people dying of the white diarrhea between the Tihosuco barracks and Chichanhá: “Cholera is wreaking havoc on the Indian rebels, to such an extent that from the edge of the barracks to the enemy side, the roads and fields in the southeast are sown with corpses” (Fajardo, 1 nov. 1853).

As a result of the disease and the deaths, the rebels in Chan Santa Cruz broke into small groups between their capital and Tancah, on the Caribbean coast. Knowing their diminished state, in November 1853, the governor of Yucatan ordered an attack on their headquarters. But at that point, the epidemic was in full force, as well as the rainy season – which made roads impassable – so military operations were suspended. This obligatory suspension of hostilities encouraged the Maya to attack Peto and other points in the south (Comandancia..., 29 nov. 1854). Thus, the military campaign against Chan Santa Cruz was revived in May 1854, before cholera had died out in the region. A contingent of just over three hundred men left Tihosuco and marched on their target. After a bloody battle, the government forces managed to take Santa Cruz, but a few days later they drank from a contaminated well: almost all of them came down with convulsive vomiting and copious diarrhea. Most of them died in less than 24 hours (Relación..., 19 jun. 1854; Dumond, 2005, p.308-309).

Unlike the 1833 cholera epidemic and almost all the other epidemics in Yucatan for the previous three centuries, disease and death did not enter via the port of Campeche and travel overland along the Camino Real to Merida. This time it took another route, following the arms and the battles.



Figure 3: Map tracing the spread of cholera morbus, Yucatan, 1853 (an edited version of Dumond, 2005, p.170, 229)

### **The eternal recurrence of smallpox, 1874-1875**

On October 17, 1874, the city of Merida's Junta Superior de Sanidad (Senior Health Board) held an extraordinary meeting; they had been informed of a case of smallpox in the capital, brought in from Havana by a woman who had disembarked at the recently opened Progreso port. As soon as her symptoms were identified, health board physicians proceeded to isolate her and explained the prevention protocol to her family: her body was covered with a suppurating rash, a high fever was confirmed by touch, and her overall state was "extremely serious." She died on October 21, and five days later another new case was announced in one of her direct contacts (Dos casos..., oct. 1874).

For two years, the authorities had been following the news of outbreaks of epidemic smallpox at various points along the Gulf of Mexico and Caribbean coast: New Orleans, Matamoros, Veracruz, Villahermosa, Palizada, and Havana. They knew that at any moment it could reach the Yucatan,<sup>7</sup> since maritime traffic had increased after the port of Progreso was opened two years before. They also knew that the war had reduced the distribution range of variolation. Entire generations had gone unvaccinated, especially in the interior; obviously, the same was true in the rebel-held area. Even in the capital, smallpox inoculation was only being carried out effectively in city-center residents, who were mainly criollos and their servants. Inhabitants of the shanty towns, barrios, ranches and farms surrounding the city, who were mostly Maya, were highly vulnerable to contagion and hemorrhagic smallpox (Vacuna, 11 sep. 1872). News of smallpox outbreaks in other states caused the local authorities to appeal again and again to citizens to come and receive variolation, at specific places and times (La viruela..., 7 abr. 1873). But there was no response, partly due to obvious distrust of the vaccine, but also because the appointed places were limited to the main cities in the state, such as Merida and Campeche (Rumores..., oct. 1874).

After the case imported from Havana, there were some "mild" outbreaks of smallpox throughout the remainder of October, which lessened alarm, although only for a short while. In November the hemorrhagic form of the virus caused disease and death. The Senior Health Board set up a quarantine facility in the San Sebastian neighborhood to deal with "those unfortunates lacking a home and resources who have been invaded by smallpox;" it was decided not to admit smallpox patients to the General Hospital, "given the danger and evils that would result from contact or proximity to the other patients" (La viruela, nov.-dic. 1874).

Meanwhile, a rumor spread through the shanty towns that the sick would be forcibly taken to the quarantine station. People went there to die, and it was extraordinarily rare for anyone to leave it alive. Since it was not a place where anyone would wish to end their days, many sick people stayed hidden. The Health Board declared that hiding was "truly lamentable, since that type of wariness exposes the whole population to the ravages of an epidemic... by concealing, for personal reasons, the existence of infection foci" (La viruela, nov.-dic. 1874).

In the last two weeks of 1874, hemorrhagic smallpox caused 55 deaths in Merida alone, while in January the epidemic spread through the villages and haciendas near the capital (La viruela, ene.-abr. 1875). February's death-count came to 240, with sixty people dying

a week (La viruela, ene.-abr. 1875). The statistics for February 20-March 5, 1875 show the vulnerability of all age groups under 30 (see Table 1), a phenomenon that points to two important facts: (1) that vaccination and/or booster vaccination was inadequate and unproductive after the war broke out, (2) that it had been a considerable amount of time since the last outbreak (the previous one was in 1855) (Alcalá, 2013).

**Table 1: Smallpox deaths by age range in Merida, 2/20/1875-3/15/1875**

Age ranges	Cases
6 days to 1 year	18
2 to 10	34
11 to 20	36
21 to 30	20
31 to 40	0
41 to 50	5
51 to 60	3
<b>Total</b>	<b>116</b>

Source: La viruela, ene.-abr. 1875.

Indians were the most affected group. As mentioned earlier, this was because the smallpox vaccine was not efficiently distributed to that population. Indeed, physicians on the Health Board noted that cases of death by smallpox were happening in people who had not been vaccinated or only in early childhood. By that point, revaccination was recommended since the variolation method using infected pus only protected people for 10 or 12 years (Vacuna, ene.-abr. 1875). But also, according to witnesses at the time, the difference in infection rates was due to the fact that criollo families' "sanitary conditions were much better than those of the unprotected and disadvantaged working class" (La viruela, ene.-abr. 1875).

**Table 2: Smallpox deaths by neighborhood in Merida 2/20/1875-3/15/1875**

Neighborhood	Cases
Santiago	39
Mejorada	17
Santa Ana	20
San Cristóbal	7
San Sebastián	33
<b>Total</b>	<b>116</b>

Source: La viruela, ene.-abr. 1875.

In late 1875 it was estimated that 1,269 people had died of smallpox in Merida, out of a population of 45,000; in other words, 28 out of every thousand (La viruela, ene.-abr. 1875; Carta..., 8 abr. 1878). But a later estimate done in 1879 (see Table 2), which took into

account underreporting, arrived at a total of eight to ten thousand dead (177 per thousand) (Vacunación..., jul. 1879). It was explained that the difficulty in obtaining exact numbers was due to the lack of oversight over burials: hacienda owners were allowed to bury their servants on their own land; no one was keeping exact records of the deaths in villages; the Civil Registry had only recently begun, and was accused of issuing death certificates too easily, without ascertaining the reason for death; burials were done “pell-mell at different times of night,” leaving no indication that the body of someone who had died of smallpox was interred there (Al C. Jefe..., jul. 1875).

Most of the references to the ravages of smallpox in 1875 come from Merida, but that does not mean that it occurred only in the state capital. Conditions were ripe for it to spread all over the peninsula:

- there had been outbreaks in other states and countries;
- there were displaced people all over the peninsula, thanks to the advance of troops and rebel Maya groups, but also to the revival of the economy after the worst years of the war;
- vaccination coverage was inadequate;
- healthcare conditions were precarious, aggravated by almost 30 years of armed conflict.

In the sources there are brief references to the fact that smallpox did indeed spread throughout the majority of the villages in the interior, but virtually no allusions to the damage it caused in rebel settlements. Dumond (2005) records the 1874-1875 smallpox epidemic in the area occupied by the Maya insurgents and also another in 1891, which affected the west and in northern British Honduras.

### **The numeric relationship between health and war: mortality in the conflict**

How bad was the fateful relationship between war and health? We may never know for certain, because war causes chaos, among other things. The most complete death records come from Merida and Campeche. Church records in rebel-held villages were burned, along with many other objects that symbolized white control and subjugation. The few that were not burned contain gaps, showing the effects of fear and scribes abandoning their posts. But, based on the records that survive, the chronological curve of vital events is clear, both by themselves and in the missing death certificates.

In the introduction, I mentioned that I became interested in examining the relationship between war and health after doing a tally of deaths in the registry of burials for the San Sebastian neighborhood in Merida, which allows us to reconstruct a long-term picture that shows irregular variations related to the state of the war. Yellow fever may not have claimed as many lives as in other neighborhoods inhabited by soldiers from elsewhere, like Mejorada, or large numbers of traveling salesmen, like Campeche; the 1848 diaspora did not mainly congregate in the church, as in El Sagrario; it is possible that cholera caused more fatalities in the south of the state, while the 1875 smallpox outbreak was particularly damaging. However, to a greater or lesser extent, every one of the related catastrophic health events can be identified in the mortality curves in San Sebastian, and there were others that need to be explained:

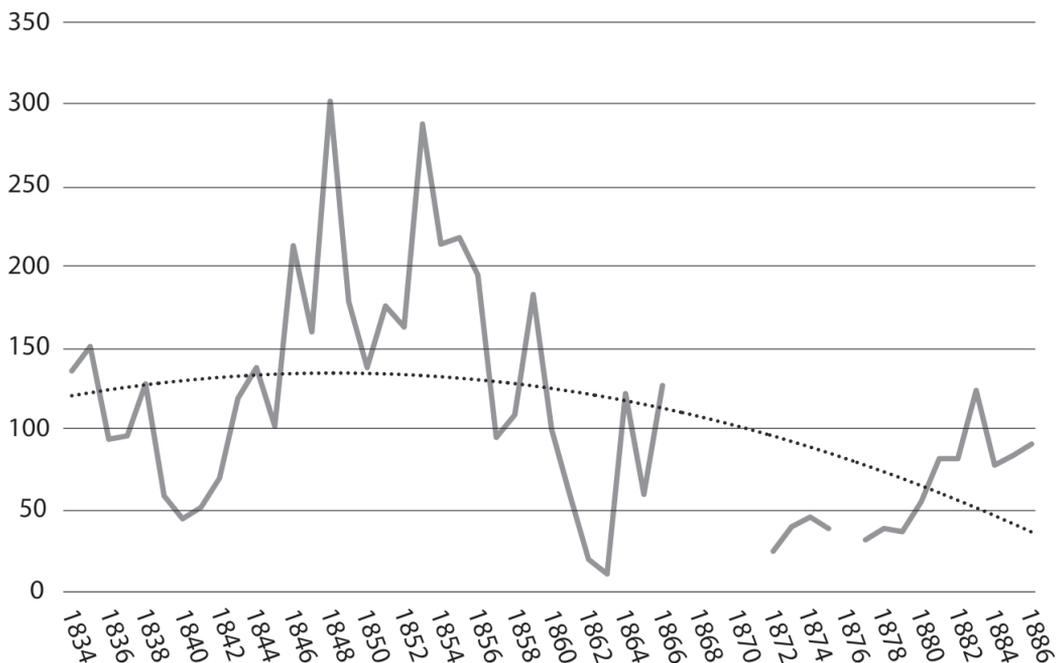


Figure 4: Graphic of deaths in the San Sebastian neighborhood in Merida, 1834-1899 (Libro..., 1834-1899)\*  
 \* A polynomial trend line is included.

In the graphic (Figure 4) we see an initial period that corresponds to the years before the 1847 uprising. While these were tumultuous times in terms of politics and armed conflicts, the effects of those years seem not to have spread to the rest of the population. The drop in burial records between 1838 and 1840 is possibly due to a generation hollowed out by cholera morbus in 1833.<sup>8</sup> Outbreaks of yellow fever were focalized and only affected those without immunity, the soldiers from central Mexico.

The year 1848 is the highest point of the entire series; it corresponds to the most violent phase of the Caste War. This increase in mortality can be explained by two interdependent variables: (1) there were more people present due to the diaspora caused by the war, and thus there were more burial records, and (2) the exodus sparked a widespread health crisis. People became extremely vulnerable, and this led to a crisis of excess mortality. Atypically, 30% of the death certificates for that year are for people from the area taken by the rebels in 1847 and 1848: villages in the south, scattered throughout the Sierra Alta and the Sierra Baja, as well as Izamal, Valladolid, and Calotmul, near Tizimín.

The second highest peak in the series happens in the early years of the second stage of the war, from 1853-1854 when cholera hit. The epidemic began in October 1853, and it was massive and terrifying. In September, eight deaths were recorded, but the following month the figure shot up to 153. People continued to die at a lesser rate until May 1854, but cases of yellow fever appeared between August and October. Almost immediately, smallpox followed in 1855-1856. The most catastrophic months were November and December. Just

when smallpox seemed to be declining, in May 1856 we start to see records for deaths by yellow fever, until August of that year.

At the beginning of the third phase of the war, in 1875, there was a smallpox outbreak. Even though qualitative sources show that the epidemic was deadly in the San Sebastian neighborhood, the death-count does not reflect that fact. March, April and May are the only months when a few cases were recorded. During this stage, towards the end of the war (1881-1883, 1887-1888, 1893), there was a period of deaths due to respiratory illnesses. The seasonal tendency for these years does not show sudden spikes in the number of deaths recorded, as is characteristic of epidemics, but rather sustained growth that pushed up the total figures at the end of the year. As causes of death we systematically see consumption, tuberculosis, pneumonia and “fevers,” which rise at certain months, such as December-January or April-July, due to the seasonal cold temperatures and then the rains.

### **Final considerations**

What were the hallmarks of the relationship between war, disease and death?

Analysis of the case of the Yucatan in the second half of the nineteenth century shows that the outbreaks and spread of epidemic disease were profoundly impacted by the variable of war. The Caste War lasted more than 50 years and took a heavy toll on Yucatan's society and population. The health/disease process was also affected by this conflict, and we do not yet know its real extent in demographic terms. However, this article provides an insight into how it generated the conditions for epidemic diseases to emerge and reproduce.

I described how the mobilization of soldiers, dissidents and rebels across the entire peninsula propagated endemic and epidemic diseases, which became a decisive factor in the battles. Yellow fever, for example, was endemic, so combatants and troops who were not from the region were vulnerable to contagion. Sources show that this disease worked against the soldiers sent by López de Santa Anna and in favor of the Yucatan troops who confronted them. Cholera, on the other hand, was epidemic and its spread throughout the peninsula in 1853, following the route of the armed conflicts. This disease was a decisive factor in the failure of the federalist dissidents, the retreat of the Maya rebels and the defeat of the Yucatan government forces during the Caste War when they attempted to take the rebel capital in 1854.

The armed violence was concentrated in certain places, leading to a diaspora that soon concentrated groups of exiles in places that lacked the capacity to host them. Their living conditions and food supplies became minimal, and they were plagued by hunger, overcrowding and poor hygiene. This context, seen in the cities of Merida and Campeche, increased the prevalence of gastrointestinal and respiratory diseases, as well as child mortality.

From the sixteenth century on, contagious diseases reached Campeche by sea and Merida via the overland route along the Camino Real, from whence they spread to the whole province. Based on that experience, there were isolation protocols (quarantines, health passports etc.) to prevent or mitigate the outbreak of epidemics. However, in the context of the war, these entry routes for epidemic diseases changed. For the first time, an

illness arrived from Belize, carried by a new type of commerce: clandestine arms dealing. Similarly, the economic revival that occurred during the last phase of the war and the opening of the port of Progreso created a new entryway for epidemic diseases from overseas.

Smallpox prevention through vaccination had only been implemented a few decades earlier in Yucatan, but the war rendered the vaccination campaign inefficient and inadequate, increasing the vulnerability of the most disadvantaged.

## NOTES

<sup>1</sup> On this last military campaign against the Maya, see the doctoral thesis by Badillo Sánchez (2019).

<sup>2</sup> On September 28, 1841, two declarations known as the “Bases de Tacubaya” (Tacubaya Principles) and the “Convenios de la Estanzuela” (Estanzuela Agreements) were issued. These deposed President Bustamante and unified the insurgent groups led by Mariano Paredes Arrillaga and Antonio López de Santa Anna. Santa Anna assumed power on October 10 of that year ([www.memoriapoliticademexico.org](http://www.memoriapoliticademexico.org)).

<sup>3</sup> The Maya who took up arms with the Yucatan federalists against the centralists in the 1840s were known as *huites* (Taracena, 2013).

<sup>4</sup> This rank was subsequently honored by Barbachano; according to Dumond (2005, p.201), just six months after the offer, some nine thousand *hidalgo* titles had been issued.

<sup>5</sup> On Campeche, see Alcalá (2019, p.11-13).

<sup>6</sup> On October 20, 1852, the Hospicio Plan (a call to political rebellion) was issued in Guadalajara, Jalisco. It reiterated various previous plans and launched the uprising in various states against President Mariano Arista, in order to return Antonio López de Santa Anna to power ([www.memoriapoliticademexico.org](http://www.memoriapoliticademexico.org)).

<sup>7</sup> In México and Veracruz: (Vacuna..., 11 sep. 1872); in Tabasco: (Circular..., 7 abr. 1872); in Palizada: (Junta..., 28 nov. 1873).

<sup>8</sup> The normal infant death rate was fifty out of a hundred. Since there were fewer births, mortality dropped almost immediately.

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