

¹⁰⁸ *GDN*, March 20, 1908. The Commissioners had also adopted an ordinance that required all homeowners and proprietors to provide a covered receptacle for trash and garbage. However, Trueheart noted that the "good people of Galveston" were "very tardy" in honoring this ordinance. (*GDN*, November 27, 1906, July 18, 1908).

¹⁰⁹ For a photo and more details, see *GDN*, October 15, 1911.

¹¹⁰ *GDN*, February 22 and March 9 and 21, 1913.

¹¹¹ *GDN*, March 11, 1913.

¹¹² J.P. Simonds, "Report of a Sanitary Survey of the City of Galveston, Texas," April 1913. A copy is in folder 8, box 10 of the Jean S. Morgan Papers in the Galveston and Texas History Center of the Rosenberg Library in Galveston. The report is cited hereafter as "Survey".

¹¹³ "Survey," 19.

¹¹⁴ "Survey," 14-15.

¹¹⁵ "Survey," 20. For some details about the sequence of pipe placement, see Minutes GCC, November 25, 1902; June 23, 1903; April 5, 1904; July 25, 1907; June 10, 1909; August 5, 1910; October 26, 1911; February 15 and June 13, 1912.

¹¹⁶ "Survey," 17.

¹¹⁷ "Survey," 30.

¹¹⁸ *GDN*, April 7 and 19, 1913.

¹¹⁹ Minutes, GCC, May 8, 1913 and December 13, 1913; and *GDN*, February 24, 1914.

A Sickly City: Health and Disease in Antebellum Galveston, Texas

Larry Wygant

The healthfulness of the coastal area of Texas concerned early immigrants from the United States. Stephen F. Austin noted that the coastal areas seemed less healthy than those inland.¹ A visitor to Texas in 1837 echoed Austin's observation and said "that the lower country, from the Trinity to the Colorado, is as sickly as the most unhealthful portions of Louisiana, . . . The country becomes healthier at any point as you recede from [the] gulf."²

Early Anglo residents of Galveston were more optimistic concerning the healthfulness of the island city. Lucy Shaw, writing from Galveston in 1839 stated, Galveston "is the most healthy place in Texas, except for back in the mountains. . . ."³

Physicians too praised the healthfulness of Galveston. A pioneer and the most prominent nineteenth-century physician in Texas, Dr. Ashbel Smith, believed the fresh sea breezes and bathing in the Gulf made Galveston an ideal health resort. Smith advised his patient, Republic of Texas President Mirabeau B. Lamar, to recuperate in Galveston following an attack of "billious fever."⁴ Smith also wrote the following in 1839 to a friend,

If you have any invalids send them among us. An abundance of seafood—an atmosphere unrivalled for balminess and salubrity—and novelty of scenes and the excitement of a virgin country are at the command of the dyspeptic. For rheumatics and consumptives the climate is particularly genial.⁵

A British diplomatic officer, writing in 1841, reinforced Smith's observations and stated that the

Larry Wygant, Ph.D., is the Associate Director of Library Services at the Moody Medical Library, The University of Texas Medical Branch.



Photo Courtesy of The Rosenberg Library

Dr. Ashbel Smith (1805-1886) Texas' most prominent 19th-century physician known as the father of the University of Texas and also known as the father of Texas medicine. In 1839 he was the only physician to treat yellow fever victims in Galveston.

salubrity [of the Galveston climate] is proverbial all over America . . . [P]estential [*sic*] diseases, . . . so common in the West Indies, [are] here unknown. . . . In a word the mildness and salubrity of the climate of this region has no equal in America.⁶

However, as the Galveston citizenry gained more experience with life on the island a note of caution replaced their initial optimistic views. Lucy Shaw wrote, "The mosquitoes are a very serious annoyance. It is impossible to rest without mosquito bars, . . ."⁷

She continued,

This is a very healthy place and it is only necessary to avoid the night dews and exposure during the heat of the day. . . . But if you wish to know what will thrive best in a climate like this, I can tell you that I know of nothing quite equal to the fleas and mosquitoes.⁸

Another Galvestonian, O. M. Addison, wrote in 1845,

You sometimes think you are troubled with fleas, but you have no cause for complaint, and were you to spend a few nights in Galveston you would be presented with the fact in a most demonstrable light. . . . The musquitoes [*sic*] however are more formidable, and the poor fellow who has to sleep without a "bar" is indeed in a "bad fix" & realy [*sic*] is entitled to sympathy.⁹

By 1845 the British diplomat had changed his opinion and described Galveston as "one of the most unhealthy situations of which I have any knowledge in my 30 years experience of the bad climates of the world. . . ."¹⁰

Indeed, Galveston was not the Mecca of health. Mosquitoes, poor sanitation, and childhood diseases combined to extract a terrible toll in sickness and death from the island residents. It was one disease in particular that focused both public health efforts of the city and medical therapeutics during the nineteenth century. That disease was yellow fever.

Yellow fever, "yellow jack," or the "vomit noir" caused the greatest fear among the city's residents. Yellow fever visited Galveston during most years of the antebellum period but in the seven years that it was epidemic prior to 1860, it claimed more than 2,300 and severely disrupted commercial activity.

In Galveston, the first recorded yellow fever death occurred in 1837. Two years later, yellow fever appeared in epidemic form. Newspapers reported the epidemic throughout the new Republic and advised citizens to stay away from Galveston until the sickness had abated. Galveston merchants, whose economic survival depended upon trade with the interior towns,

were not pleased with that advice. The *Colorado Gazette* reported almost two hundred deaths in Galveston up to October 26, 1839. Describing conditions in the city, the editor noted, "Business was completely paralyzed [*sic*], the stores were generally closed, and the sexton's cart was in constant motion." The editor noted that the publication of these facts caused "the displeasure of certain persons . . . who were heartless enough to desire its concealment." The editor, however, felt obligated to report the conditions in Galveston and to caution "all who value their lives against running unnecessary risks [by traveling to Galveston]."¹¹

By the time the yellow fever had run its course, Galveston recorded two hundred fifty deaths in a population of fewer than fifteen hundred. The suffering is best illustrated by the personal tragedy of a Galveston doctor who helped fight the epidemic. In a letter to a friend, Dr. Nicholas Labadie writes,

I was rejoiced to hear from you both, but could not but shed a tear on the little presents your kind wife sent to Mrs. Labadie: Alas! they are yet on my shelves and I feel not courage enough to taste or eat them as she is no more to this world and has gone to the land of spirits. The epidemic which visited our infant city in October and November became a scourge to me, all my household became attacked at one time; my two little daughters recovered, my carpenter died on Sunday night, my clerk of the black vomit expired on Monday night, and my wife breathed her last about two hours after Nov. 5th of the congestive fever [after] only six days of sickness.¹²

With the retreat of yellow fever, life in the city quickly returned to normal. By December Galveston presented an image described as "full of life, energy and zeal." The harbor sheltered ten ships carrying immigrants, building materials, and merchandise. On December 28, the British barque *Agnes* arrived with a group of English emigrants.¹³ Yellow fever already seemed but a distant memory.

"Yellow Jack" again struck the city in 1844 and 1847. As its reputation as a sickly city grew, Galveston merchants, city officials, and physicians became more and more reluctant to admit the presence of yellow fever. In October of 1847 the *Telegraph and Texas Register* informed its readers that "[t]here have been several cases of yellow fever in [Galveston], but we believe it is not yet admitted by the physicians there that this disease is prevailing as an epidemic."¹⁴

The Galveston newspapers consistently underestimated the number of deaths caused by yellow fever. In late September 1853 the *Galveston News* reported only 180 total fatalities caused by yellow fever since the last week of August.¹⁵ Later estimates by medical authorities placed the total at about

535 deaths, or an average of roughly 14 deaths per day from yellow fever during the approximately thirty-seven day duration of the epidemic. "Yellow Jack" reappeared in 1854, 1858, and 1864. However, it was the epidemic of 1867 that overwhelmed the city. In a population of approximately sixteen thousand who remained in the city during the epidemic, there were probably ten to twelve thousand cases of yellow fever. Between July and October approximately 1,150 citizens succumbed.¹⁶

Though more than thirty years elapsed before the cause of yellow fever became known, 1867 marked the last year the disease would visit Galveston in epidemic form. Terrible epidemics continued to occur elsewhere along the Gulf Coast and the Mississippi Valley, but Galveston escaped further serious epidemics either through good fortune, vigorous enforcement of quarantine measures, or increased attention to sanitation activities. The absence of yellow fever probably resulted from a combination of all three.

Most antebellum physicians and their patients shared a medical belief system concerning disease and treatment based on Hippocratic teachings. These teachings hold that individual health depends upon the maintenance of a bodily equilibrium requiring balanced intake of air and food coupled with balanced expulsion of energy and waste. Illness results from an upset of this delicate balance.

When illness struck, the patient attempted to restore the disturbed bodily balance either through self-medication or with the help of a physician. This usually involved bleeding the patient and the use of drugs promoting defecation, perspiration, and urination. While physicians might disagree on proper drug dosages or the amount of blood to remove from a patient, they essentially relied on the same therapeutic arsenal.

In the treatment of yellow fever, Ashbel Smith first bled the patient until faintness was noted. While guarding the patient against any exposure to cool air, he then applied a mustard bath to the feet followed by an infusion of senna and rhubarb to promote movement of the bowels. If nausea occurred, Smith administered a dose of an opium preparation resulting in what he termed "a rather *languid* pulse."¹⁷

In an age of "heroic medicine" characterized by a therapeutics that encouraged "purging, puking, and bleeding," Smith's treatment was actually fairly conservative. Although Smith was not reluctant to use the lancet, he did not repeat bleedings. Additionally, he rejected the use of emetics and abandoned the use of mercury early in the course of the epidemic. Smith also acknowledged the importance of nursing to the outcome of a case which is illustrated by his stating, "When the bleeding, senna infusion, mustard bath and mild beverages have been seconded by *attentive* nursing, I have found nothing else required, in the majority of cases."¹⁸

Of course, some Galveston physicians disagreed with a conservative course of treatment. One such physician, Dr. Thomas Stanwood, argued that the greatest abuse of the lancet is its neglect. Stanwood called "a case of lancets . . . as indispensable a part of furniture for housekeeping, as knives and forks, . . ." In addition to repeated bleeding, Stanwood called for the use of mercury and opium.¹⁹

Newspapers regularly advertised cures for yellow fever and other diseases. An advertisement for Seat's Fluid, headlined "YELLOW FEVER CURED," related the experience of Jacob L. Briggs, a Galveston merchant, who administered the medicine to a patient given up as hopeless by a physician. Within four hours the patient was convalescent. The advertisement noted that "Mr. Briggs is a merchant of high standing, and one whose word is his bond. The incredulous can consult him by letter."²⁰

Many in the community believed the best course of action was to avoid the disease altogether rather than risk their lives with uncertain treatments. Experienced residents viewed temperance, cleanliness, and avoiding exposure to the midday sun as key to evading illness. Yet another way to avoid the contagion was to flee the city. An unknown number of Galvestonians either routinely left the city during the "fever season" or waited to leave only until confirmation of the first cases.²¹

Yellow fever was sometimes called the "strangers disease" and the newspapers also warned strangers to stay away from the city during fever epidemics and tried to reassure the community that yellow fever was confined to that group. The *News* noted the following in 1854:

[The weather is] not favorable to the health of strangers
These remarks are intended solely for strangers now coming in,
as, with the exception of that class, our city appears to enjoy its
average good health.²²

Later the same year the newspaper reported a few yellow fever cases in the city but commented they "were wholly confined to unacclimated seamen." When one of the city's founders, Samuel May Williams, died during an epidemic, the newspaper editor reported that "of course his is no case of yellow fever."²³

Before the identification of the yellow fever virus and its means of transportation in 1902, the majority of physicians were either contagionists or anticontagionists in their beliefs about the origin and transmission of the disease. Contagionists believed that diseases spread directly or indirectly from one individual to another and traveled over great distances. Anticontagionists theorized that epidemic disease followed from atmospheric conditions resulting from a combination of factors such as climate and decaying vegetable and animal matter. The anticontagionist theory was influ-

ential until the late nineteenth century discovery of the microbial transmission of disease.

In Galveston, as elsewhere, there was no agreement on the origin or method of transmission of yellow fever. Ashbel Smith based his belief in the noncontagious nature of the disease upon observations during the 1839 yellow fever epidemic in Galveston.

In addition to daily attendance at the bedside of the sick, Smith conducted a number of postmortem examinations during which he handled "every organ without squeamishness; immersing hands freely in the black vomit and other fluids; smelling and viewing them closely; . . ." and yet he remained healthy. His most convincing argument, however, was that he "repeatedly tasted black vomit, when fresh ejected from the stomachs of the living," and experienced no effect other than fatigue.²⁴

The editor of the *Galveston News* supported the anticontagionist argument and, as the following excerpt demonstrates, added electrical storms to the list of local causes,

"Who shall say that the prevailing sickness may not be owing in a great measure to the prevalence of electricity in the atmosphere—to the lightning and thunder storms so frequent in this region for some time past?"²⁵

The business community, in general, also supported the anticontagionist arguments. Essentially, they based their position on economics rather than medical science. The promotion of quarantine by the contagionists as the best method of preventing yellow fever was also the response most disruptive to trade and commerce upon which the Galveston economy depended. Anticontagionists, on the other hand, advocated local sanitation and, though costly, sanitation efforts did not bring commercial activity to a standstill.

When faced with convincing arguments from prestigious men of medicine, the newspapers, and businessmen, who then supported the contagion theory? A large number of average citizens saw that when a ship arrived in port with yellow fever on board often only a matter of days passed before the first cases of the disease began to appear in the city. The connection was an easy one to make and to the public there appeared a direct relationship.

The debate over contagion was of vital importance to the elected city officials of Galveston. Under the city charter, responsibility rested with the mayor and aldermen to pass ordinances designed to promote the health and well being of the city's residents. What form those ordinances would take depended upon whether the aldermen accepted the argument of the contagionists or that of the anticontagionists.

Belief that yellow fever was contagious would call for a strictly enforced quarantine. A belief that yellow fever originated from "lo-

cal causes” would indicate the passage and enforcement of sanitary ordinances designed to regulate the cleanliness of the city. The Board of Aldermen, seeing that neither side of the debate possessed overwhelming evidence or scientific proof for their assertions, chose to follow a middle course and sought to enact laws and ordinances that promoted both quarantine and sanitation.

After the end of each epidemic the city quickly abandoned efforts to prevent and control yellow fever. Boards of Health were dismissed. Sanitary and quarantine regulations were enacted but enforced only when faced with the threat of yellow fever or the complaints of concerned citizens.

Sanitary efforts and maritime quarantine did little to control the diseases that caused the most mortality in the city. While yellow fever held a fearsome grip on the citizens of Galveston, it was the endemic diseases that caused the most sickness and death and led to the high child mortality rate.

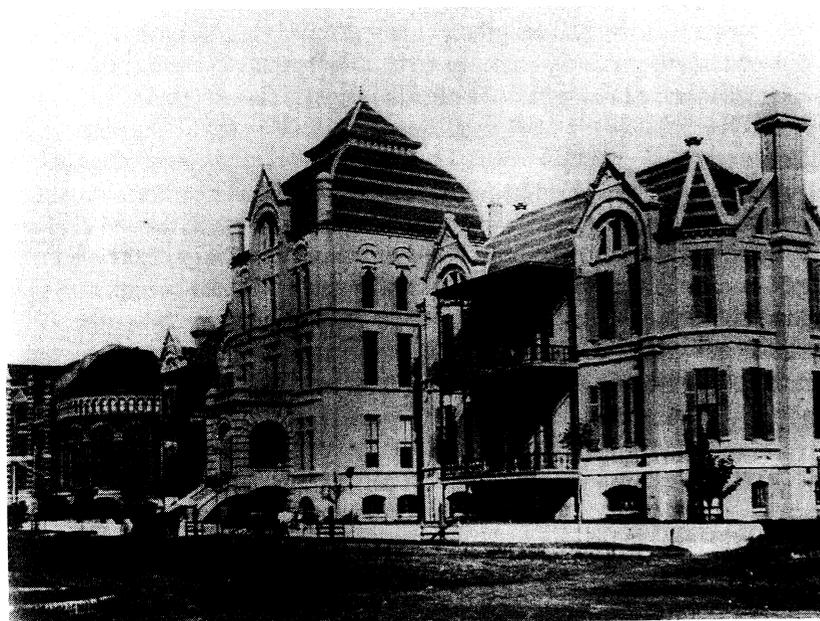
Lucy Shaw’s experience was probably typical of many Galveston mothers. After the stillbirth of a child in 1839, Shaw endured the death of her nine-month-old son less than two years later. In 1850, Shaw noted that her daughter Emily was recovering from scarlet fever and that “Scarlet fever, measles, and whooping cough one or the other are in almost every family in town and there have been a good many deaths among children.”²⁶

Like Lucy Shaw, the experience of Galveston jurist William P. Ballinger during the Civil War reflected the toll that sickness and disease placed upon infants and children. In February 1862, Ballinger recorded in his diary the unsuccessful efforts of three physicians to treat his young daughter Hally, possibly for pneumonia. Ballinger wrote that Hally was buried “by the side of her two little sisters who have gone before.”

Eight months later he recorded the death of his son Willy. The next year yet another daughter died and in July 1864 his sixth child died. His grief was almost unbearable as he wrote, “Death seems to seek our little ones for its own: one by one they have [been] taken from us—six now gone, . . .”²⁷

The terrible impact of child mortality can be seen in a typical summer mortality list published in the *Galveston News* in 1859. Thirteen deaths are recorded for the first twenty-five days of July. Nine (seventy percent) of the deaths were under the age of two years. Causes of death included diarrhea (four), whooping cough (one), teething (two), consumption (one), and convulsion (one).²⁸

Galveston escaped the great pandemics of cholera that swept the United States in the first half of the nineteenth century. The most serious threat to the city came in 1849 when a serious epidemic of cholera broke out in New Orleans and spread to Texas cities as far inland as San Antonio.²⁹



John Sealy Hospital, the first public hospital, was established in 1890 through the generosity of the Sealy estate.

Photo courtesy of The Rosenberg Library

The bacillus that causes cholera lives in the human intestine and is most often transmitted through ground water supplies that have been contaminated with human fecal matter. Galveston avoided cholera because its citizens depended upon rainwater collected in mortar-lined cisterns sunk in the ground or aboveground wooden cisterns for drinking water.³⁰

The Island residents were not as fortunate with smallpox. Although smallpox was a highly infectious disease, the technique for its control had been widely known since the late eighteenth-century experiments with vaccination. While it provided immunity from smallpox, many people feared and resisted vaccination as a routine measure. In Galveston and throughout the United States during the nineteenth century, large segments of the population remained unvaccinated. Local newspapers often called for vaccination of citizens and complained that many people neglected to have their children and slaves vaccinated.³¹ Galveston authorities encouraged vaccination but stopped short of trying to force vaccination upon residents of the city.

Yet another disease to affect Galveston during the antebellum period was dengue or "breakbone" fever. Like yellow fever, dengue is a virus-caused disease spread by mosquitoes. It is rarely fatal, but its symptoms of high fever and aching joints are often intensely painful. Dengue probably arrived in Galveston in 1843 and cases occurred throughout the nineteenth century.³²

In addition to medical therapeutics and public health efforts, the citizens of Galveston responded to the challenges posed by illness and disease by building hospitals. In July 1839, slightly more than four months after the incorporation of the city, the aldermen adopted an ordinance requiring the payment of a one-dollar hospital tax for each passenger arriving at the port. The money was to build a hospital for the care of indigent sick. Later that fall, during the yellow fever epidemic, the city constructed a hospital of sorts. A standing committee of three aldermen, called the Hospital Committee, administered the facility.³³

The presence of contagious disease in Galveston added to the port city's already difficult task of providing hospital care for many of the immigrants who arrived during the 1840s and 1850s on their way to claim rich interior Texas farmlands. One medical historian estimates that at least nine percent of immigrants crossing the Atlantic in 1853 died before reaching shore or soon after. The remaining immigrants, many of whom were poor and without friends and family, suffered from such conditions as pneumonia, diarrhea, smallpox, and depression.³⁴

The city was expected to provide hospital care to the sick from its resident poor population and increasing numbers of ill immigrants. The provision of a hospital to care for the indigent sick was an unusual act for a young city, and by anticipating the need for a hospital, Galveston set itself apart from most cities of the new West. "Philanthropic or city-run hospitals came after a Western city had acquired its almshouse, pesthouse, quarantine station, one or more private hospitals, clinics, asylums, and dispensaries."³⁵ Galveston had none of these in 1839. However, during the nineteenth century the Galveston City Hospital would often be called upon to fulfill functions more appropriate to an almshouse, a pesthouse, or an asylum.

Charles Hooton, a visitor to Galveston in 1841, located the hospital "a mile and a half from any human habitation, it stood alone in the desert dead, silent, and seemingly aloof from all living and active Christian sympathy."³⁶ The illustration that accompanied Hooton's description of the hospital featured a wood frame building, perhaps large enough for two small wards, set among sand dunes and marshes on the bay shore of the island. The so-called hospital was little more than a shack. It remained so until 1845.

In November 1845 Galveston Mayor John M. Allen proposed that a new hospital be erected. Work began almost immediately under supervision of the Hospital Committee.³⁷ The city constructed the hospital facing south on block 668 at 9th and Strand streets on the far east end of the city.

Between 1845 and 1860 the two original wards grew to five containing a total of 40 to 60 beds. Other additions housed rooms for the resident physician and nurses. In the winter of 1851 a pesthouse for smallpox victims was constructed on the hospital grounds.³⁸

During the antebellum period disease posed a serious threat to Galvestonians and their city's business growth. Galveston citizens, physicians, and municipal officials responded to illness and disease with therapeutics (including self-medication), ineffectual public health programs of sanitation and quarantine, and the introduction of crude hospitals that eventually would have a significant impact on the lives of residents. Unfortunately, medical science had few answers to the terrible epidemics and illnesses that wracked Galveston periodically with devastating effect. Citizens and immigrants were more or less left to the mercy of luck or the strength of their immune systems. Frequently, business interests unintentionally worsened the situation by ignoring or downplaying the severity of disease outbreaks.

Despite the lack of scientific knowledge to fight the epidemics and illnesses plaguing the city, Galveston physicians, nurses, and a number of dedicated municipal officials continued to struggle to make Galveston a healthier city for its citizens. Their contributions were important and as medical knowledge matured in the late nineteenth century, Galveston could indeed look forward to a new century of sanitation improvements and modern hospitals that stand today as a hallmark of Galveston's role in advancing modern medical knowledge.

NOTES

¹ Quoted in Eugene C. Barker, *Readings in Texas History* (Dallas: Southwest, 1929), 143.

² Andrew Forest Muir, ed. *Texas in 1837: An Anonymous Contemporary Narrative* (Austin: University of Texas Press, 1958), 132.

³ Lucy P. Shaw to Jane N. Weston, January 13, March 22, 1839, Lucy P. Shaw Papers, Rosenberg Library, Galveston.

⁴ Elizabeth Silverthorne, *Ashbel Smith of Texas: Pioneer, Patriot, Statesman, 1805-1886* (College Station: Texas A&M University Press, 1982), 52.

⁵ Ashbel Smith to Dr. Casper W. Pennock, October 21, 1839, Ashbel Smith Papers, Center for American History, The University of Texas at Austin.

⁶ Quoted in James Brooks Speer, "Contagion and the Constitution: Public Health in the Texas Coastal Region, 1836 - 1909" (Ph.D. dissertation, Rice University, 1974), 25.

⁷ Lucy P. Shaw to Jane N. Weston, March 31, 1839, Lucy P. Shaw Papers.

- ⁸ Lucy P. Shaw to Jane N. Weston, April 21, 1839, Lucy P. Shaw Papers.
- ⁹ Oscar M. Addison to Mrs. I. S. Addison, April 2, 1845, Oscar M. Addison and Family Papers, Center for American History, The University of Texas at Austin.
- ¹⁰ Quoted in Speer, "Contagion", 25.
- ¹¹ *Colorado Gazette, Advertiser* (Matagorda, TX), November 9, 1939.
- ¹² Nicholas Labadie to Anthony Lagrave, December 27, 1839, Nicholas Descomps Labadie Papers, Rosenberg Library, Galveston.
- ¹³ Charles W. Hayes, *Galveston: History of the Island and City*, (Austin: Jenkins Garrett Press, 1974), 390.
- ¹⁴ *Telegraph and Texas Register* (Houston), October 21, 1847.
- ¹⁵ *Galveston News*, September 27, 1853.
- ¹⁶ *Galveston News*, October 16, 1867; War Department, *Report on Epidemic . . . 1867*, xix, 83; Thomas J. Heard, "Report on Medical Topography, Meteorology, and Epidemic Diseases of Texas," *Galveston Medical Journal* 3 (October 1868): 465; J. M. Toner, "The Distribution and Natural History of Yellow Fever as It Has Occurred at Different Times in the United States," *Public Health: Reports and Papers* 3 (1875): 359; George Augustin, *History of Yellow Fever* (New Orleans: Searcy and Pfaff, 1909), 1011–2.
- ¹⁷ Ashbel Smith, *Yellow Fever in Galveston, Republic of Texas, 1839* (Austin: The University of Texas Press, 1951), 34–5; *Galveston News*, September 27, 1853; *Weekly Telegraph* (Houston), October 13, 1858.
- ¹⁸ Smith, *Yellow Fever in Galveston*, 33, 35, 38–40. Typically, physicians administered calomel [chlorid of mercury used as a purgative. – ed.] until the patient began to copiously salivate and sometimes repeated the treatment until the patient's teeth began to fall out.
- ¹⁹ *Galveston News*, May 8, 15, and October 9, 1855.
- ²⁰ *Texas Christian Advocate* (Galveston), July 4, 1857.
- ²¹ *Galveston Civilian*, August 17, 1858; William Pitt Ballinger Diary, September 25 and 27, 1859, Rosenberg Library, Galveston.
- ²² Lucy P. Shaw to Jane N. Weston, December 3, 1839, Lucy P. Shaw Papers; Galveston City Council Minutes, October 7, 1853, City Secretary's Office, Galveston City Hall; *Galveston News*, September 28, 1858; October 31, 1854.
- ²³ *Galveston News*, November 7, 1854; September 9, 1858.
- ²⁴ Smith, *Yellow Fever in Galveston*, 42.
- ²⁵ *Galveston News*, September 5, 1854.
- ²⁶ Lucy P. Shaw to Jane N. Weston, December 3, 1839; July 24, 1841; May 10, 1850; Lucy P. Shaw Papers.
- ²⁷ Ballinger Diary, February 3, August 27, September 5, October 17 and 22, 1862; June 11, 1863; July 11, 1864.
- ²⁸ *Galveston News*, July 25, 1859.
- ²⁹ *Galveston News*, January 5, 12, 26; March 14; May 28, 1849.
- ³⁰ John Henry Brown, *History of Texas, 1685–1892* (St. Louis: L. E. Daniell, 1892), 349–50; David G. McComb, *Galveston: A History* (Austin: The University of Texas Press, 1986), 102; *Colorado Tribune* (Matagorda, TX), July 16, 1853; *Galveston News*, May 5, 1857.
- ³¹ *Colorado Tribune* (Matagorda, TX), March 15, 1851, quoting the *Galveston Civilian, Telegraph and Texas Register* (Houston), March 21, 1851.
- ³² Phillip Crosby Tucker, Jr., "History of Galveston, 1543–1869," Phillip Crosby Tucker, Jr., Papers, Center for American History, The University of Texas at Austin; *Galveston News*, September 18, 1855.
- ³³ Hayes, *Galveston*, 351.
- ³⁴ James H. Cassidy, *Medicine and American Growth, 1800–1860* (Madison: University of Wisconsin Press, 1986), 155, 159.
- ³⁵ *Ibid.*, 63, 65.
- ³⁶ Charles Hooton, *St. Louis Isle, or Texiana: With Additional Observations Made in the United States and in Canada* (London: Simmonds & Ward, 1847), 38.
- ³⁷ Galveston, TX., *Charter, Amendments, and Revised Ordinances of the City of Galveston* (Galveston: Civilian Book Office, 1855); Hayes, *Galveston*, 436–7.
- ³⁸ Willard Richardson, et al., eds., *Galveston City Directory, 1859–1860* (Galveston: Galveston News Book and Job Office, 1859), 76.