

This issue of *The Houston Review* illustrates the variety and type of articles to be included in future issues of the journal. The lead article by James B. Speer, Jr. discusses a common problem—health and sanitation—faced by urban areas during the nineteenth century and then describes the steps taken by the cities of Houston and Galveston to alleviate some of the more apparent health-related problems. Houston was not always the center of medical education and sophisticated health delivery systems as Dr. Speer so vividly shows in his well-written and thought-provoking article. Although that dreaded nineteenth-century scourge—yellow fever—might strike wherever people lived, the outbreak of disease was more likely to reach epidemic proportions in cities and larger towns with their heavier concentration of population.

Dr. Speer's study provides additional proof that people seldom profit from history. The story of yellow fever in Houston went through predictable cycles. Public officials at first either ignored or denied rumors of the outbreak of yellow fever until it reached an epidemic stage when it was too late to save many lives. In the end, the contrite and aggrieved citizens, most of whom had lost a relative or a close friend to the disease, denounced public officials for allowing the epidemic to occur in the first place. Several years later the same pattern would repeat itself. Fortunately, the cycle was broken in the early twentieth century when medical researchers discovered the cause of these periodic outbreaks.

The other principal article in this issue is an interview with a prominent and unforgettable Houstonian, Glenn H. McCarthy, who became a legend in his own time. In this particular interview, McCarthy describes his role in the early oil industry and in the development of Houston. In the process, he also reveals much about himself as a person—his ambitions, his political predilections, his dreams for Houston, and his feelings about his place in the city he loves so much. It is a fascinating interview of a remarkable and controversial figure.

This article is preceded by an interesting photographic essay on Houston's early oil industry. A few of the photographs illustrate developments with which Glenn McCarthy was personally associated; together they give a graphic picture of early oil operations and of the men who were largely responsible for the remarkable growth of the region in and around the city of Houston. The emergence of Houston as the largest city in the South is intricately linked with the discovery and development of oil and with the allied industries which rose up around it. Oil quickly replaced cotton and lumber as the mainspring of Houston's economy.

With the fall issue, we introduce a feature which we plan to continue when appropriate—a review essay of an important book on Houston's history. Mary Schiflett, who teaches at the University of Houston, provides an interesting review of Howard Barnstone's book on *The Architecture of John F. Staub*. Through these reviews, we can keep our readers informed about new studies of Houston and advertise the achievements of our local authors.

PESTILENCE AND PROGRESS: HEALTH REFORM IN GALVESTON AND HOUSTON DURING THE NINETEENTH CENTURY

BY JAMES B. SPEER, JR.

On April 6, 1878, Father Ramon DeCordova, a Catholic priest accompanying a trading expedition in the upper basin of the Amazon River, recorded in his journal a peculiar occurrence. "I am deeply disturbed," he wrote, "by the eerie stillness that has come over the forest. For the last many days our company has made its way up the great river amidst the clamor of large bands of monkeys. . . . I have noticed since yesterday, however, a diminution of them. Now they seem all to be dead, victims of some fiendish malady that has strewn the river banks with their lifeless bodies. Their shrieks and cries are heard no more by us. . . . The heavy air of perpetual summer remains undisturbed . . . save for the ceaseless drone of swarms of mosquitoes. A profound melancholy has settled over the crew and I think it well that we are leaving this day such a place and its death-like silence." Ten days later, DeCordova and members of the trading party reached their base at the mouth of the Amazon and departed immediately for Caribbean ports. DeCordova's last journal entry, made aboard ship, contains repeated and somewhat hysterical references to the mysterious disappearance of the howler monkeys. Legible portions of the last sentences he wrote before dying of yellow fever cry out that ". . . [it] is those monkeys. . . . [I]t is those wretched beasts who have sent this curse of pestilence to me. . . . [T]hose creatures have caused it all!"¹

¹Mading Collection, Jesse H. Jones Library (Texas Medical Center, Houston, Texas), DeCordova MS, uncataloged diary and journal of observations, personal financial accounts, weather reports and parish registers [February 12, 1869?-April 20, 1878], unpaginated. The quotes are my translation of the French in the original.

DeCordova's indictment, though fifty years in advance of discoveries from modern epidemiological research, was essentially correct. See Johannes H. Bauer and N. Paul Hudson, "The Incubation Period of Yellow Fever in the Mosquito," *Journal of Experimental Medicine*, vol. XLVIII (July, 1928), pp. 147-153; J.C. Bugher, "Epidemiology of Jungle Yellow Fever in Eastern Columbia," *American Journal of Hygiene*, vol. XXXIX (1944), pp. 16-21; Simon Harcourt-Smith, "Yellow Jack," *History Today*, Vol. 23 (September 1973), pp. 618-624; and H.W. Kumm and H.W. Laemmert, "The Geographical Distribution of Immunity to Yellow Fever Among the Primates of Brazil," and "A Study of the Concentration of Yellow Fever Virus Which Will Infect Certain Species of Aedes Mosquitoes," *American Journal of Tropical Medicine*, vol. XXX (1950), pp. 933-948 and 949-962. For other information consult A.J. Rhodes and C.E. van Rooyen, *Textbook of Virology* (Baltimore, 1958), pp. 295-318; George K. Strode, ed., *Yellow Fever* (New York, 1951), pp. 17-41, 66-69, and 521; George Augustin, *History of Yellow Fever* (New Orleans, 1909), pp. 102-111; and Greer Williams, *Virus Hunters* (New York, 1969), pp. 86-92.

Accurate though DeCordova's accusations were as to the indirect source of his affliction, he could not have known the terrible consequences his travel and that of his companions would have. For by feeding on the infected passengers, mosquitoes bred from the ship's water casks became infected themselves. Members of the ship's crew subsequently infected by these mosquitoes served as carriers of the virus to ports of call, triggering an epidemic that swept the western hemisphere from Quebec to Tierra del Fuego. Striking in trip-hammer succession at an ever-widening circle of ports and island cities, the infection spread along trade routes through the Caribbean and Gulf of Mexico. Within weeks tentacles of contagion were reaching up the watercourses on two continents. Father DeCordova was the first victim of Yellow Jack's last great campaign of the nineteenth century. After eight months had passed the priest would be joined by nearly 500,000 more.²

Miraculously by account of some contemporaries, Texas was spared in 1878. Over the preceding four decades, cities and towns of the state's coastal region had learned from terrible experience how fortunate was their deliverance. Ships from Havana, Vera Cruz, Tampico, and New Orleans calling regularly at Texas ports brought goods vital to an expanding economy. In thirteen of the years from 1839 to 1879, these vessels brought an unwelcome, though not entirely unexpected guest.³

Rumors of yellow fever spread panic and disrupted commerce in the Texas coastal plain throughout the nineteenth century. The disease itself claimed thousands of lives and blighted many thousands more. Of greater long-term significance than the number of lives lost or the immediate personal suffering was the disease's yearly threat to the coast—a threat which affected the course of the area's economic expansion, influenced the pattern of urban growth in the region, and dictated to a great extent the character and evolution of ordinances, laws, and institutions designed to protect the public health. Unfortunately, since the role of mosquitoes as the transmitting vectors for the disease was not recognized, the real effect of health policies on the incidence of yellow fever was often slight and always indirect. Although their efforts at

²Figures given for the number of probable deaths vary from 500,000 to 800,000; the lower figure is more convincingly documented. For an excellent introduction to the concept of pan-epidemics, methods used to compute their impact, and various estimates of fatalities in 1878, see C.R. White, "Yellow Fever. History of the Disease in the Eighteenth and Nineteenth Century," *Journal of the Kansas Medical Society*, vol. LX (1959), pp. 298-302, 329. There were over one million recorded cases of infection from the 1878 epidemic. In the United States alone there were over one hundred thousand cases and nearly twenty thousand deaths. See Howard D. Kramer, "Agitation for Public Health Reform in the 1870's," *Journal of History of Medicine and Allied Sciences*, vol. III (1948), pp. 473-488, vol. IV (1949), pp. 75-89; Thomas H. Baker, "Yellowjack: The Yellow Fever Epidemic of 1878 in Memphis, Tennessee," *Bulletin of the History of Medicine*, vol. XLII (May-June, 1968), pp. 241-264; and Marshall Scott Legan, "Mississippi and the Yellow Fever Epidemic of 1878-1879," *Journal of Mississippi History*, vol. XXXIII (August, 1971), pp. 199-217.

³R.M. Taylor and M. Thailer, "The Epidemiology of Yellow Fever," *Proceedings of the Fourth International Congress on Tropical Medicine and Malaria* (Washington, D.C., May 8-10, 1948), vol. 1, pp. 506-572; Galveston *Daily News*, November 10, 1878.

sanitation and quarantine may seem futile or even ludicrous in retrospect, contemporaries undertook them with the high seriousness of men whose lives were at stake. By the time of the 1878 scare, citizens of urban communities of the Texas coastal region had long since come to think of public health measures in just those terms. Policy commitments initially sustained by the crisis atmosphere of that epidemic in nearby states were ultimately vindicated and given further encouragement. By the 1880s, municipal governments of the region's largest cities, Galveston and Houston, could boast to constituents of significant progress towards cleanliness and health reform. Many of the major streets were paved with crushed shell; rudimentary systems of garbage collection removed most of the filth and refuse from sidewalks and gutters, city hospitals tended the destitute sick, and active boards of health monitored the strict enforcement of sanitary ordinances.⁴

Impetus for this progress in the development of health programs and agencies was derived from the rigors of the climate, muddy streets, and uncollected garbage but only as it related to fears of epidemic yellow fever. As Richard Shyrock, C.E.A. Winslow, and several other historians of medicine have observed in regard to Yellow Jack's life-saving role, nothing excited the minds of the people so much as an epidemic or stirred their municipal governments into action more quickly.⁵ Yet whether in cities or in the country, in town or on the frontier, nineteenth-century Americans could know with terrible intimacy the blighting effects of poverty, filth, and disease. Public health was never simply an urban problem. But it was in the burgeoning cities, where threats to life and health seemed to increase in geometrical ratio to population density, that the desperate need for sanitary reform and public hygiene first compelled local and state governments to respond with positive measures. It was there that recruits for the battles of sanitary reform were enlisted, strategies of public hygiene mapped, and campaigns of preventive medicine waged. And it was there, in a steadily deteriorating urban environment, that reforms were first secured and victories won.⁶

⁴J.B. Speer, Jr., "Contagion and the Constitution—Public Health in the Texas Coastal Region, 1876-1909" (Unpublished Ph.D. dissertation, Rice University, 1974), pp. 59-80. For appraisals from another perspective compare David G. McComb, *Houston: the Bayou City* (Austin, 1969), pp. 3-4, 11-12.

⁵C.E.A. Winslow, *The Life of Herman M. Biggs; Physician and Statesman of Public Health* (Philadelphia, 1929), p. 91; R.H. Shyrock, "The Significance of Medicine in American History," *Mississippi Valley Historical Review*, vol. LXII (1956), p. 84; Howard D. Kramer, "Agitation for Public Health Reform in the 1870's," *Journal of the History of Medicine and Allied Sciences*, vol. IV (1949), p. 75.

⁶Kramer, "Beginnings of the Public Health Movement in the United States," *Bulletin of the History of Medicine*, vol. XXI (1947), pp. 352-353.

Most early public health programs in large American cities were modeled after English reforms dating from the late-eighteenth century. Effective legislation to eliminate the gin drinking menace, improved care of parish children, and extension of medical practice among the poor, accompanied street paving, better drainage and scavenging, and increased water supplies to help lower London's death rate dramatically. Also important were investigations conducted during the 1830s by Edwin Chadwick, Robert Owen, Southwood Smith, Lord Ashley, and others on the connections of poverty and disease, culminating in the famous *General Report on the Sanitary Conditions of the Labouring Population of Great Britain* in 1842. Blaming high mortality rates among the poor on "atmospheric impurities produced by decomposing animal and vegetable substances, by damp and filth, and close and overcrowded dwellings," Chadwick argued when such conditions were removed "by drainage, proper cleansing, better ventilation, and other means of diminishing atmospheric impurity," epidemic and endemic diseases were abated or disappeared. Emphasizing the economic and moral value of good health, Chadwick recommended sewerage, refuse removal, and better water supplies. This report led to a series of Parliamentary investigations and acts which gave England by 1848 a public health administration superior to anything developed in the United States for the next forty years.⁷

Some Americans who had watched with complete approbation the crusade of Chadwick and others against poverty, misery, and disease in England's teeming cities offered fervent thanks that manufacturing classes of the New World had escaped Europe's poverty and degradation. As Howard Kramer has noted, "Here and there some doubt was cast on the permanence of this escape—some worry lest the United States in another twenty-five years might not 'exhibit some of the dreadful scenes which now sicken us when we look abroad.' It was not necessary to wait so long."⁸ By mid-century the larger American cities could duplicate many of the scenes described in Chadwick's *General Report*. In 1847 the *North American Review* complained that the poor of Boston were "now worse lodged than their brethren in the foulest and most crowded districts of the large cities of Europe." By 1850 the average span of life in New York, Boston, Philadelphia, and other American cities was less than in London—a metropolis criticized only a few years before by American journals of opinion for its "sickening" scenes of misery and depravity.⁹

As the similarities of urban conditions on both sides of the Atlantic became more evident, British public health achievements did much to encourage attention to American problems that had long been neglected. Successes in dealing with epidemics, especially the 1866 cholera threat, consolidated public support for health agencies of the nation's largest cities. Acting upon Chadwick's etiological theory, large American cities sought to equip houses with good ventilation, to clean up streets and alleys, to remove trash, to construct sewerage, and to provide a pure and plentiful water supply.¹⁰

⁷John B. Blake, "Origins of Public Health in the United States." *American Journal of Public Health*, vol. XXXVII (1948), pp. 1539-1541.

⁸Kramer, "Beginnings," p. 354.

⁹*North American Review*, vol. LXIV (1847), p. 266.

¹⁰Blake, "Origins," p. 1539.

Against diseases such as cholera, typhus and typhoid, these measures were helpful, etiological theories were reinforced, and demonstrable results and lower mortality rates attracted increasing public support. Against yellow fever, however, such measures for environmental sanitation had little or no effect.¹¹

For reasons as yet little understood, yellow fever epidemics, which had regularly devastated northern and eastern cities during the late seventeenth and eighteenth centuries, moved south after 1800.¹² Thus during the nineteenth century, the most serious epidemiological threats to the United States were concentrated on Southern cities that usually lacked even the most rudimentary of institutional machineries for public health protection. Efforts to improve sanitation, water supplies, sewerage, and housing in New York, Boston, and Philadelphia lowered mortality rates and seemed to prove the value of effective health administration. In Southern cities during the same period, such measures, even when applied, failed to produce comparable results. Environmental sanitation offered no protection from increasingly severe yellow fever attacks. In the Texas coastal region municipal corporations looked to their own resources for relief from the "saffron scourge."¹³

Before 1880, since the only concern which translated itself into concrete governmental policies of sanitation stemmed from the fear of epidemic disease, the institutional development of public health machineries in places like Galveston and Houston assumed a spasmodic, seasonal rhythm. In addition to this irregular, crisis-to-crisis approach to public health programs, other formidable obstacles blocked progress toward an improved sanitary condition. The unstructured, individualistic nature of these communities' frontier society militated against programs of concerned, collective actions. Tolerant during emergencies, citizens of Galveston and Houston were highly suspicious of long-term governmental interference in private affairs and accepted grudgingly the notion that the public welfare justified infringements on their freedom to do what they wished on and with their property. Support for public health in the abstract was unanimous. But city authorities presuming to tell the citizens what they could and could not do with their backyard privy, stable grounds, and personal garbage was another matter. It was fine that one's neighbors should be made to keep their property clean and their trash off the streets. But when sanitation ordinances meant inconvenience and expense, and when violations of these ordinances resulted in heavy fines, there were grumblings about the city needing to mind its own business.¹⁴

¹¹George Rosen, "Public Health Problems in New York City During the Nineteenth Century," *New York State Journal of Medicine*, vol. L (1950), pp. 73-78.

¹²Phillip D. Curtin, "Epidemiology and the Slave Trade," *Political Science Quarterly*, vol. LXVI (1969), pp. 190-216; Andre Siegfried, *Routes of Contagion*, Translated by Jean Henderson and M. Charaso, (New York, 1965), pp. 88-94.

¹³Ashbel Smith, *Yellow Fever in Galveston, Texas* (Austin: 1951), pp. 15-16.

¹⁴*Houston Weekly Telegraph*, September 3, 1867.

The public's indifference to unsanitary conditions during most of the year and its steady reluctance to comply with the spirit if not the letter of health ordinances were made more serious by the confusion of physicians as to just what would make Texas coastal cities less prone to epidemic disease. That feuding factions of the medical fraternity offered contradictory advice on what constituted necessary sanitary steps was all too often the encouragement officials needed to take the simple course and do nothing at all—nothing, that is, until it was too late. Moreover, the fact that yellow fever attacked only every four or five years meant that energetic practices adopted at the height of an epidemic would have time to fall into disuse before they were needed again. Despite warnings from regular physicians and despite editorial jeremiads, the years when yellow fever failed to appear lulled these cities' growing populations into dangerous complacency.¹⁵

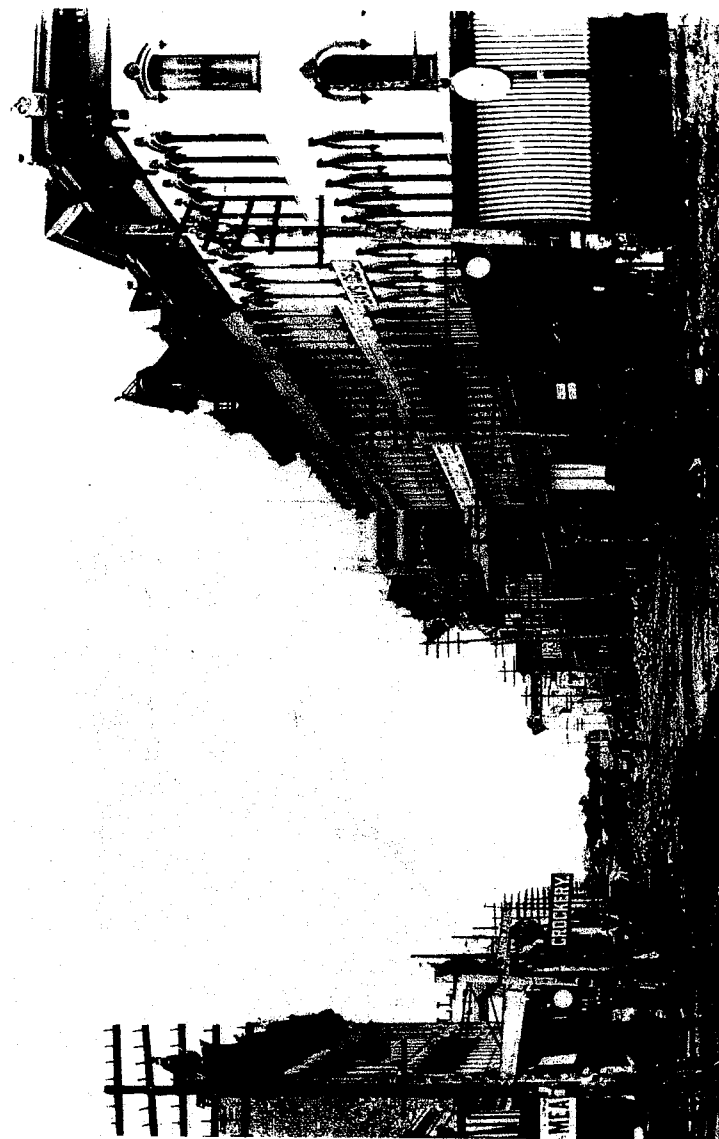
Another obstacle to the development of effective programs of public health was the city government itself. Especially in the early decades, municipal officers in Galveston and Houston professed desires to be left as much as possible free from the demands of citizens and special interest groups. In the lexicon of city administrators, a public nuisance was anyone who goaded them into troublesome, expensive programs. Be it drains and sewers, a hospital for the indigent, or ordinances regulating backyard privies, city aldermen had no desire to seize the initiative for action. People expected little from their government, and the leading citizens who once a week wore the hats of municipal officers met these expectations fully. Certain enough, in as much as commercial enterprises or railroad speculations were concerned, the officers of the government labored untiringly to ferret out possibilities for profitable investment. But the dividends from public health schemes came in slowly and were usually intangible. During most of the year, citizens and the governments of Houston and Galveston were quite happy to let each fend for themselves. The less government interfered with private citizens and the less those citizens petitioned the City Council for bothersome, expensive measures, the better.¹⁶

Even when municipal administrators were unanimous in strong wishes to protect the public health, as they were during yellow fever epidemics, there was no tradition of powerful institutions to enforce by specific and consistent policies the police powers granted the city in its charter. And even when the machinery for such institutions was suddenly and imperfectly created, city officials lacked the experience, and expertise and the money to make them work.

Eventually, these obstacles would be overcome. Over the decades, Galveston and Houston would lose much of their frontier roughness, and their citizens would come to expect and demand that municipal authorities make the city healthy, clean, and livable. The opposition of the business community changed gradually into a role of strong support for policies that would protect the public health as they promoted public wealth, and the city governments

¹⁵Appearances of yellow fever in Galveston and Houston varied greatly in their severity. For comparative study, consult Speer, "Contagion," pp. 39-44; see also John Duffy, "Social Impact of Disease in the Late 19th Century," *Bulletin of the New York Academy of Medicine*, vol. XLII (1971), pp. 797-811.

¹⁶David R. Goldfield, "The Business of Health Planning: Disease Prevention in the Old South," *Journal of Southern History*, vol. XLII (1976), pp. 557-570.



As late as the 1890s, Houston streets still reflected the unsanitary conditions of two decades earlier.

acquired through practice greater skill in administering sanitary policies. Even the medicine men, long since put to rout by Yellow Jack, would regroup and assume active leadership responsibilities on city, regional, and state levels. But the effective and smoothly functioning public health programs of 1880 were not achieved until after profound changes in contemporaries' estimations of the powers of their municipal governments were reached and acted upon.

Because of the fragmentary nature of surviving sources, the institutional development of public health in Galveston and Houston before 1865 is difficult to trace. On one level, the institutions created within the structure of these municipal governments to protect the public health appear to have developed in a smooth, almost uninterrupted fashion. But on the more practical level of the actual workings of these institutional forms, the evidence suggests a different picture. Apart from the reality that municipal health agencies may have had on paper, in practice they were largely informal and temporary committees. Like voluntary fire companies, Boards of Health in Galveston and Houston before 1865 functioned only in emergencies.

The evolution of public health agencies in Houston is a case in point. The first evidence of institutionalized public health in the city of Houston appeared in 1839, when in the spring of that year the mayor was asked to have the Board of Health report to the city council "in relations to their *privileges and duties* in regard to their preventing *nuisances* within the bounds of the city."¹⁷ Precisely when this Board was created, or how many members it included, is not known. Clear from the record is the uncertainty about the powers and the responsibilities of the Board.

Since 1839 was the first visit of Yellow Jack in Houston, that residents and officials should have had little appreciation of the danger is not surprising. More noteworthy is that the ostrich-like approach of 1839 to the threat of yellow fever became a pattern that would for thirty-five years cost hundreds of lives. In the first stage of this pattern, rumors would be ignored and reports of the disease in Houston would be hotly denied until the epidemic reached immense proportions. Then, after it was too late, the public and newspapers would snap from their lethargy and demand herculean efforts from the dazed city officials. Finally, the city authorities would be made scapegoats for having allowed the epidemic to occur.

The course of the 1839 epidemic in Houston illustrated this pattern. As late as September, when yellow fever was already ravaging Galveston,¹⁸ newspapers in Houston maintained that their city was remarkably healthy and sure to remain so. Chiding Galveston authorities for establishing the "universally exploded custom of *quarantine regulations*," the leading Houston newspaper complained of this great inconvenience to commerce. Pleading with the citizens of Galveston to adopt measures "more in accordance with the intelligence of the times," the newspaper argued that quarantines did "no earthly good in preventing disease" and inflicted great injury to the economy

¹⁷Houston *Telegraph and Texas Register*, March 15, 1839.

¹⁸Houston *Telegraph and Texas Register*, September 4, 1839; Smith, *Yellow Fever in Galveston*, pp. 21-24.

of the area. As for Houston, the local newspaper saw no cause for alarm and reminded the city's inhabitants that "although we are at that particular season of the year when it behooves all to be more than usually careful in their habits and diet," the best preventatives against the disease at all times are a "tranquility of mind, regularity of habits and the conscientious discharge of public and social duties." Admittedly, "the direful reports are spreading through the interior of the prevalence of this disease among us." After the Board of Health reported only three cases of yellow fever in the city, the editor proclaimed, "there is no cause for drastic action."¹⁹

A month later the editorial tone changed. The Board of Health, previously regarded as the only necessary guardian against the disease, now found it impossible to keep count of the sick and to bury the dead. Late in October, in an article entitled "Health of the City," a leading Houston newspaper finally admitted that a terrible epidemic existed. After praising the Board of Health for the discharge of their duties, the article then lashed out at the city administration for not having spent more money to stop the accumulation of filth. The newspaper was especially angry that a quarantine had not been set up to protect the city from Galveston. The article claimed unanimous support for its demand that something be done about public health, but offered no constructive ideas on specific programs or agencies to combat the disease. When something was done to improve materially the health of the city, editors, the Board of Health, or the city government could claim no credit. Late in November frosts came and ended the seige of yellow fever.²⁰

Variations on the pattern of response to the 1839 epidemic influenced the development of two governmental health agencies—the City Hospital and Board of Health. Out of a population of slightly more than 2,000, there were over 200 deaths and perhaps as many as 1,000 cases of yellow fever. Created during this emergency, the City Hospital became an unwanted drain on the government's financial resources. Tending primarily to those persons too poor to afford a private doctor, the hospital became a haven for the destitute sick of the city. And quite unintentionally the City Council found itself saddled with a troublesome and expensive department that, unlike yellow fever, failed to go away. At first the hospital was put in the charge of the City Physician, and in June, 1840, the Council voted to pay him \$125 per month from January through May, and to increase his monthly salary \$25 during the dangerous fever season which lasted from June through December. This arrangement proved unsatisfactory. While private contributions to the hospital lagged, the numbers of sick remained the same. Unable to get by on the meager salary of the City Physician, the hospital staff increasingly demanded more money. In January, 1841, the City Council agreed to pay the City Physician one dollar per day for each pauper and three dollars per day for each boarder in the hospital. The cost of this scheme quickly encouraged the Council to explore means by which the city could be relieved of this responsibility to the public

¹⁹*Ibid.*

²⁰Houston *Morning Star*, November 15, 1839; *Telegraph and Texas Register*, November 6-20, 1839.

health. In a called session dealing with the poor and the sick, the Council passed a resolution requesting the county commissioners to pay the expense of maintaining the destitute sick. Understandably, nothing came of this overture to the country, and the City Hospital remained as an unwelcome and neglected agency of the municipal government. Never able to bring themselves to do away with the hospital altogether, the council members nonetheless continued to search for ways to rid the city of this burden.²¹

The 1839 epidemic also furthered the development of the Boards of Health. When yellow fever disappeared late in 1839, Houston's first Board of Health ceased to exist. With memories of the epidemic still fresh, the City Council approved an ordinance in July, 1840, creating another Board of Health.²² The text of this ordinance has not survived, so the duties and responsibilities of the Board members can only be conjectured. If their duties were similar to other antebellum Boards of Health, they kept watch in the city for dangerous conditions and reported their findings monthly to the City Council. The fact that no epidemics occurred in Houston in 1840 suggests that they did nothing, and no records of their activities appear in newspapers or in the minutes of the City Council. The only mention of them occurs in June, 1841, when the board members tendered their resignations. A few days later, new ones were appointed to fill their places.²³

The institutional status of the Board of Health is uncertain, although members probably served terms of only one year. From mid-1841 until July, 1843, there is no mention of Boards of Health in local newspapers or in the minutes of the City Council. The informal, temporary, and perhaps unofficial character of these early Boards of Health is further suggested by an isolated report from the Boards of Health to the City Council on July 17, 1843, which complained that certain stables were a "nuisance likely to endanger the public health." No action was taken on this report and no further mention of any Boards of Health appears in the minutes of the Council until a year later. On May 20, 1844, the Council moved to "create" a Board of Health with twenty-one members, without specifying any of the Board's powers or responsibilities. Boards of Health again dropped from official or public notice until March, 1846, when a new board of fourteen members was "created."²⁴

It is possible, of course, that these early Boards of Health had an institutional continuity and were more active than the available evidence suggests. More likely, in the absence of threats from yellow fever epidemics, these municipal departments withered away and assumed a more private and a less official character. The City Hospital too became less identified with the city government. By 1846, it was referred to as the "Charity Hospital."²⁵

²¹Houston *Telegraph and Texas Register*, November 27, 1839; Minutes of the City Council of Houston (City Secretary's office, Houston), volume A (1840-1847), p. 31.

²²*Ibid.*, p. 34.

²³*Ibid.*, p. 107, 110.

²⁴*Ibid.*, p. 231.

²⁵*Ibid.*, p. 271.

Yellow fever came again to Houston and through Galveston in 1848, 1853, 1855, 1858, 1859, 1862, and 1864. All of these epidemics produced little recoverable information about municipal health agencies. Boards of Health appear as shadowy forms, reporting occasionally to the City Council, spreading lime, firing off cannons, and searching out nuisances. Virtually nothing about their composition, organizational structure, tenure, powers, or duties is recorded.

Only in 1861, and then from indirect sources, does additional evidence surface about institutional health in Houston.²⁶ In a comprehensive health ordinance, passed in 1861, the City Council for the first time took steps to protect Houston from the ravages of yellow fever. This ordinance made it an offense punishable by a fine from five to ten dollars for any resident to permit his property to become unclean. The mayor was to appoint three citizens from each of the four wards of the city to serve as the Board of Health for terms of one year. Members of the Board had the duty to seek out any nuisance to the public health in Houston and were authorized to enter the houses and outhouses of the city to inspect their condition. They could order removal of any substance and require any steps necessary to promote cleanliness.²⁷

Another ordinance, enacted on December 21, 1861, concerned the City Hospital. A lot and building were provided; the mayor had the exclusive right to admit patients. The City Council elected annually a physician and steward for the hospital. When cases of smallpox or yellow fever were presented for treatment, the physician was to care for them in a special building, later known as the Pest House. The physician was instructed to keep careful accounts of the "moneys and effects" of patients admitted to the hospital, and was required to report the information to the City Council. That the Council was still anxious to avoid the financial drain of the hospital was suggested by other sections in the ordinance which required convalescent patients to perform any work deemed proper by the physician and to pay at the rate of one dollar per day for treatments they may have received.²⁸

These health and hospital regulations were supplemented by other ordinances passed in 1864-1865. One made it illegal to dig or disturb the earth or raise floors during the fever season; another regulated the operation of tenements and boarding houses.²⁹ From these enactments, it might seem that the Board of Health and City Hospital were finally on firm institutional footing. Actually, the development of these municipal agencies was only beginning by 1865. It would take three more serious yellow fever epidemics, a cholera scare, an economic depression, and the maelstrom of Reconstruction politics to bring Boards of Health and the City Hospital to positions where they could materially improve the health of Houston.

²⁶Houston *Democratic Telegraph and Texas Register*, October 19, 1848; *Houston City Directory for 1865* (Houston, 1866), W.A. Leonard, comp., pp. 65-66.

²⁷*Ibid.*

²⁸*Ibid.*

²⁹*Ibid.*

The antebellum development of health agencies in Galveston paralleled that of Houston. Boards of Health acted as temporary committees and usually functioned only during emergencies. Dislocations and demands of war, however, accelerated the development of municipal health agencies in both communities. Houston and Galveston were still far removed from godliness, but their residents were beginning to realize that cleanliness lay next to their commercial future and prosperity. No longer an unimportant, swamp village on the edge of a bleak frontier, Houston after the Civil War formed the center of an expanding railroad network. As commercial leaders lent support to policies that would reduce the disruptions caused by rumors and ravages of epidemic yellow fever, the problems of guaranteeing Houston's health took on an important new dimension. Business leaders in Galveston, though still opposed to quarantines, came to similar positions of support for municipal health and sanitation programs.³⁰

After the crushing epidemic of 1867, however, Galveston merchants abandoned opposition to quarantine policies on beliefs that seasonal disruptions of trade were much less costly than the long-term effects of epidemics. The 1867 calamity also encouraged municipal authorities to abandon the narrow interpretations of their constitutional abilities to meet threats of contagion.³¹ Under strong pressure from physicians who came increasingly to dominate the administration of health agencies, city officials moved toward more effective sanitation and quarantine policies. Gradually these officials came to realize that they could not adequately clean their streets, collect their garbage, or protect their cities from crushing epidemics with seasonal campaigns of the sort of spontaneous voluntarism that had constructed cabins along the frontier. During the 1870s, health officers in Houston and Galveston were given broad powers to remedy unsanitary conditions and to compel enforcement of sanitary ordinances through recorder's courts. But always the formulation and execution of such measures were keyed to yellow fever concerns. Under these fears, municipal agencies in Galveston and Houston came to broad interpretations of their latitude for caution.³² Responses to medical imperatives thus sustained a process of legal change whereby broad, theoretical notions about the constitutional propriety of interventions to promote the order, safety, health, morals, and general welfare of citizens came to be acted upon and applied.³²

³⁰E.W. Fornell, *The Galveston Era: The Texas Crescent on the Eve of Secession* (Austin, 1961), pp. 36-41; Minutes of the City Council of Houston, volume B (1865-1869), p. 124.

³¹For an account of the 1867 Galveston epidemic see Kathleen Davis, "Year of Crucifixion: Galveston, Texas," *Texana*, volume VIII (1970), pp. 140-53.

³²See descriptions in Houston *Weekly Telegraph*, September 17, 1870, and Galveston *Daily News*, October 4, 1872.

The abatement of nuisances by the Galveston Board of Health in 1878 exemplified the process. Land owned by residents was dealt with easily. Health inspectors reported the existence of unsanitary or poorly-drained lots to the Board of Health, which in turn notified property owners. Fines were levied against those who failed to improve the sanitary condition of their property. The substantial amount of property owned by non-residents, however, presented a serious obstacle. In the past, Boards of Health had been unable to abate nuisances on such property unless the city offered to pay for the work. Left without jurisdiction over non-residents, the recorder's court, early in 1878, ruled that agents of non-resident property owners could not be held personally responsible for nuisances. This decision necessitated the Board of Health to act against the property itself. Before the fever reports of July, 1878, James T. Masterson, the city attorney, informed the Board of Health that he was uncertain as to the legality of remedying conditions on the land of non-residents, even if the city volunteered to pay for the expenses involved. By September, when yellow fever was killing 200 people every day in Memphis, Masterson reconsidered his estimation of the state police powers delegated to Galveston. On September 18, he issued an opinion which recognized the authority of the Board of Health to condemn the unsanitary property of non-residents. If no improvements on the property were made after the Board had notified the owners by mail, the land could be sold at public auction. Some members of the City Council, Masterson explained, "have voiced doubts about the legality of this condemnation policy. But I do not think that we shall have it challenged in our recorder's court by persons living outside the state. The times are too dangerous. Besides, with Yellow Jack as *amicus curiae*, our position is especially strong." Armed with these new powers, the Board of Health quickly condemned over twenty square blocks of Galveston. Within weeks, all but three of the city's non-resident property owners had put their lots in satisfactory condition. As the city attorney had predicted, none were willing to risk their lives by coming to Galveston to contest the proceedings. In the three instances in which non-residents failed to respond to the notification of condemnation and sale, the property was auctioned off. The Board of Health used the money from these sales to abate nuisances throughout the city.³³

Again by the 1880s, health concerns in Galveston and Houston had gone beyond the worries of epidemic yellow fever. The state of health and sanitary conditions in these cities was still in need of great improvement, but attention to new priorities and achievements made toward improving public health in general owed much to the effects of yellow fever. In the coming decades, Galveston and Houston would rely heavily on the legacy of constitutional adequacy to meet new challenges of expanding and swiftly changing urban environments.

³³Galveston *Daily News*, September 4, 10, 13, 1878.



By 1912 efforts to improve sanitation had become evident as depicted in this photograph of Crawford Street.

OIL! A RESERVOIR OF HOUSTON HISTORY

BY LOUIS J. MARCHIAFAVA

Oil, the blood of Houston's life pulse, has acquired a mystique as no other industry has in the history of the United States. It is a legacy with a distinctly individualistic flavor. With the opening of Texas oil fields during the early twentieth century a new era emerged—an era of the “wildcatter”—characterized by men willing to risk all in a win or lose opportunity of a lifetime. Oil discoveries were reminiscent of the West Coast gold strikes which carried with it a sensationalism resulting from the seemingly “hit or miss” nature of the exploitations, the instant wealth, and the men, who with few of the technological advantages of today, appeared to defy the odds of the unknown in achieving the American dream.

The exploration for oil in Texas has a long history, dating to 1866 when the first oil well began operation in Nacogdoches County near Oil Spring. Lynis T. Barrett, who in truth, can be termed the original Texas wildcatter, brought in oil through the then unique boring technique. With a capacity of ten barrels per day, Barrett's “strike” was seen as a significant achievement. Indeed, his success and the discovery of oil in other areas of the state prophesied a cornucopia of wealth which in time gave rise to a regional folklore expressed in books and on film.

Although serious oil operations in Texas began as early as 1895 in the Corsicana area, the opening of the Spindletop field in 1901 marked the beginning of Houston's romance with the petroleum industry. A year later a gusher came in at Sour Lake, followed by the opening of the North Dayton and Humble fields in 1905. The changes were dramatic. Land, which had previously sold in the Humble region for \$6,400 an acre before the Moonshine Gusher came in, jumped to \$16,000 in less than a week. Oil syndicates became a well-known term linked with names such as ex-Governor James Hogg, Joseph S. Cullinan, Judge Harry Masterson and Walter B. Sharp. The Rice Hotel lobby became a bustling beehive where speculators and operators exchanged information and made deals of a lifetime.

This was only the beginning. In 1908 the Goose Creek field began production; Damon's Mound revealed its potential in 1915; and the Blue Ridge field began operation in 1919. By the 1930s operations had begun in Conroe, Eureka Heights, Tomball and South Houston. By the time of the latter strikes a new geophysical technology had developed to assist the intuitive talents of the wildcatter of previous decades.