

A Mission of Mercy amidst Terror, Death, and Despair

The Story of the National Relief Boat in the Great Yellow Fever Epidemic of 1878

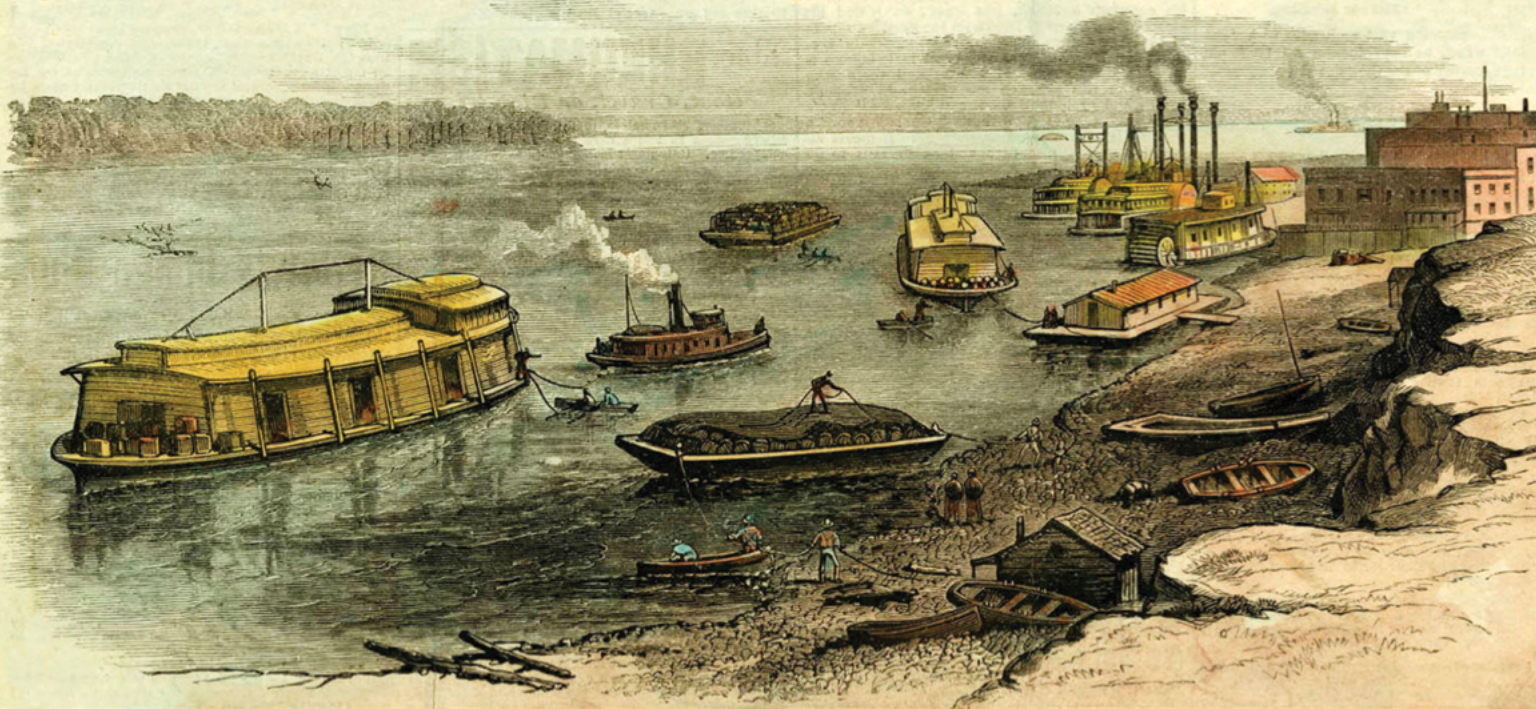
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Today's coronavirus pandemic has been historic in its scope and in the anxiety it has created in the general population. One result is that the Army has been called upon to manage distribution, and in some cases the administration, of the vaccine in relief of the pandemic, as well as other efforts in support of pandemic relief. Designating the Army as a relief provider is not new or unique to this medical crisis. It recalls a similar, and in some ways, a much more desperate attempt to relieve the suffering of a great epidemic. The Army's intent to deliver vaccines across the country to significant points of need is reminiscent of the national relief boat effort that was conducted during the great yellow fever epidemic of 1878.

Between July and October 1878, a scourge hit the Mississippi Valley the likes of which the Nation had never seen. It was a yellow fever outbreak, which at that point was by far the worst epidemic in U.S. history. Yellow fever is a horrible disease. Also called "Yellow Jack" and "Black Vomit" among others, the names called out the most dreadful symptoms of the disease. Patients developed yellow skin and their eyes turned

yellow. Abdominal pain and dark, often bloody vomiting; bleeding from the nose, mouth, and eyes; liver and kidney failure; and brain dysfunction, including delirium, seizures, and coma, were telltale signs of this deadly plague. The disease was not only deadly, but it was also terrifying to behold.

The first official yellow fever death occurred in New Orleans on 10 July, though there were indications that deaths occurred as early as 27 May that were simply not reported.¹ The fever steadily spread up the Mississippi River to Memphis, where the first death was recorded in early August. By mid-August, news of the epidemic was reported daily across the Nation and the world. Major newspapers like the *New York Times* were publishing daily reports and grim accounting of the pestilence from most of the larger towns and cities along the river. After many daily reports recounting numbers of cases and deaths, the *New York Times* eventually simply announced that the number of deaths was decreasing, not because the disease was subsiding, but rather, from the scarcity of people left to become its victims.²



Boats bring food into the city during the Memphis quarantine. The 1878 yellow fever outbreak in Memphis, Tennessee, killed more than five thousand people in the city. (Photo by Science History Images/Alamy Stock Photo; original from *Harper's Weekly*, 1879)

A Nationwide Cry for Help

On 9 September, a group of prominent citizens from the region, including the president of the New Orleans Chamber of Commerce and a congressman from Louisiana, sent a telegram to every city in America, pleading for all possible aid. As part of their message, they recounted the plight along the Mississippi, which reflected the economic strain as well as the lethal fever. They reported that “all business is entirely suspended ... south of Memphis, over fifty steamboats are tied up and their crews discharged. The longshoremen and the gang of stevedores and laborers ... are without employment. Four great lines of railroad are paralyzed, and their employees are idle.”³ And, “these employees are poor, and dependent upon their labor for support ... [they] have no means to get away from the pest ridden cities. For them there is no labor, no wages, no bread, nothing but death or starvation.”⁴ There were, in fact, no trains or steamboats operating in the region at all. This created widespread lack of food, mail, and medical supplies, compounding the suffering in the region.

The details of the citizens’ committee’s cry for help only served to reinforce the news that was reported out of the region. On 18 August, the *New York Times* reported the results of the fever in Grenada, Mississippi: “Picture a town of 2200 inhabitants reduced in one short week to 200 with only 30 or 40 well ones, and this

is the scene before you.”⁵ On 24 August, a reporter from the *Vicksburg Herald*, a veteran of the Civil War, wrote,

God only knows the ghastly sights and scenes of pain transpiring in Vicksburg tonight. We have seen the horrors of battlefield, have tasted the sorrows and deprivations of prison life, have buried comrades and friends on lonely, far-off battle fields, but we have never, in a varied and eventful life, witnessed anything which so awakened the sensibilities of our nature. May God have mercy on us all.⁶

And on 28 August, the *New York Times* described Canton, Mississippi:

Not a single business house is open except two drug stores ... The Mayor and family are sick, the Board of Aldermen have fled. The Court-house is locked up and the officers have fled to some safe place. Nothing but hearses and coffins are to be seen in the streets.⁷

These are not exceptional reports, but reflect the common reporting out of the region. The devastation was incredible and widespread. Memphis, for example, the second largest city in the south in 1878, started the month of July with a population of forty-seven thousand. By September, that number had fallen to just nineteen thousand, when over twenty-five thousand Memphians fled the city.⁸ Of the remaining population,

seventeen thousand had the fever. And, about 30 percent of those infected died of the fever.⁹ Imagine reading this in today's media: "A man on Poplar Street yesterday cowardly deserted his wife and daughter ... with the fever; if he isn't dead, somebody ought to kill him."¹⁰ This came from the *Memphis Appeal*, a newspaper where out of forty-two employees, nineteen died, twenty-one were bedridden, and only two survived not stricken by the fever.¹¹ By the end of August, the *New York Times* headlines read, "The Southern Fever Terrors. New Orleans Doctors Abandon all Hope."¹² This was the level of desperation and despair engulfing the region.

The Nation Responds

Due to the difficulties of a solely governmental effort to rapidly respond to the crisis, particularly the fact that Congress was out of session, a National Relief Commission was formed. The commission consisted of a collection of prominent citizens including federal Judge Arthur MacArthur Sr. (father of Lt. Gen. Arthur MacArthur Jr. and grandfather of Gen. Douglas MacArthur); Gov. Alexander R. Shepherd, former governor of the District of Columbia; and Surgeon General John M. Woodworth, United States Marine Hospital Service (the modern-day Public Health Service).¹³ The commission, which today might be characterized as a joint task force, was established to permit a rapid response that could incorporate both government efforts and charitable contributions to the cause. The chairman of the commission, Shepherd, worked directly with Secretary of War

George W. McCrary and Brig. Gen. Robert MacFeely, the commissary-general of the Army, to provide relief to the region through the distribution of needed food, medicines, and other goods to the stricken region. Money and supplies were solicited in support of the relief effort and a plan quickly devised: a national relief boat.

This plan was to send a steamboat, dispatched from Saint Louis, laden with provisions, ice, and medicine,

to provide relief from Memphis down to Vicksburg and beyond, while additional efforts would be made traveling up river from New Orleans.¹⁴ The official report indicated that the expedition went no further south than Grand Gulf, "because we learned at Vicksburg that the points below were supplied from New Orleans."¹⁵

The first boat selected for the journey was the *Eagle*, a midsized boat with a capacity of 150 tons. But the overwhelming support in both funds and goods were too much for the *Eagle*. The commission had to find a larger boat and settled on the steamer *John M.*

Chambers, a stern-wheel boat with a capacity of 300 tons. The *Chambers* was chartered on 2 October for a departure date of 4 October.¹⁶

The next step, provisioning the boat, was already in progress. Lt. Col. (Brevet Brig. Gen.) Edward Beckwith was the commissary general for the Army's Division of the Missouri in 1878. On 26 September, he was instructed by MacFeely to assist a subcommittee of the commission: "Afford this sub-committee any aid in your power to enable them to secure supplies at



The Catholic Sisters of Charity tended the sick and dying in Memphis, Tennessee, during the fever outbreaks of the 1870s. (Photo courtesy of the Tennessee State Library and Archives via Digital Library of Tennessee)

the lowest rates.¹⁷ Money was sent from nearly two dozen cities and organizations from across the country. Additionally, goods such as bedding and clothing were sent from as far away as Philadelphia and New York.

The subcommittee consisted of the chairman of the commission, Gov. Shepherd; assistant surgeon H. M. Keyes of the United States Marine Hospital Service; United States District Attorney William H. Bliss, the treasurer for the expedition; and John T. Mitchell, a commission member with extensive shipping and supply experience.¹⁸ Together with Beckwith, they were able to procure, or receive from donated cash and material contributions, “aggregating \$20,000 in money (besides a large quantity of merchandise), has been expended in the charter of a steamer and the purchase of an assorted cargo of such provisions, clothing, bedding, medicines, and ice.”¹⁹ When the boat left Saint Louis, the reported value of the cargo itself was more than \$20,000, an amount that today would have a projected worth of over \$50 million.²⁰

In 1878, there was no effective treatment or cure for yellow fever. The source was unknown and was attributed to many things from bad air to human-to-human contact. None of the experts at the time suspected that it was a mosquito-borne illness. Consequently, the treatments used were wildly divergent, and by today’s standards many were barbaric and lethal in their own right.

The Howard Association, named after eighteenth-century philanthropist John Howard, was a collection of

autonomous groups formed specifically to fight yellow fever outbreaks. The medical director of the Memphis Howard Association, Robert Mitchell, set a strict protocol of treatment for his doctors to follow. First, the patient was to be given Calomel, a mercury-based medicine that could cause mercury poisoning if not carefully administered. Next was a mustard footbath followed by sponge baths of whiskey and water until the person’s temperature

fell below 102 degrees. This was followed by two doses of quinine and then ten days on a diet of milk, lime-water, and chicken broth.²¹ Quinine was an effective treatment for malaria but not for yellow fever, and it could promote nausea and delirium, both common symptoms of the fever.

Some doctors were proponents of warm teas; drinks like black, watermelon, or orange-leaf tea were a preferred treatment. Others proposed lemonade and champagne and other wines. To promote the action of the kidneys, the salts of potash or ammonia, with or without the spirits of nitric ether, were commonly used.

Wines as well as distilled and fermented liquors were almost always used during convalescence.²²

Many doctors published their methods for their colleagues’ consideration. A certain Doctor Gibson, from Yazoo City, had a particular yellow fever prescription of a mixed solution of arsenic, quinine sulphate, and cherry laurel water with a few drops of sulphuric acid to dissolve the quinine. The yellow fever patient was to take a teaspoonful of this remedy after every meal.²³ Doctor W H. Falls of Cincinnati was a proponent of



A Howard Association physician of Memphis, Tennessee, visits patients stricken with yellow fever and communicates the dire situation that the city faced during its 1870s public health nightmare. (Photo courtesy of the Tennessee State Library and Archives via Digital Library of Tennessee)

vigorous trial and error to find a treatment. In one trial, he administered massive dosages of chloride of mercury to find the right solution. He tried it on four patients, and all four died.²⁴ The *Daily Picayune* summed it up like this: “Doctors disagree on the treatment, but under the different kinds of treatment the result appears the same. The grave swallows up all alike.”²⁵

Because of the broad spectrum of opinions on treatments for the fever, the subcommittee sought to provision the boat with a range of medicines and other items to meet the divergent theories of care. As part of the medical supplies, the cargo included two hundred cases of medicine selected for “special use of yellow-fever patients,” 105 tons of ice, and twenty-four cases of lemons, as well as 1,500 bottles of champagne, six cases of brandy, four cases of sherry, and 121 gallons of whiskey.²⁶ For disinfectants, they carried twenty-five barrels of turpentine, two crates of carbolic acid, and twenty-five barrels of chloride lime. For general relief, there were large supplies of food (five tons of bacon alone), dry goods, hardware, and housekeeping goods.²⁷

In addition to acquiring a boat and the requisite supplies, manning the expedition was the final step in the preparation and posed its own challenge. The trip was considered by many to be a suicide mission. The Army requested volunteers for command of the expedition. Two officers volunteered and were selected for the mission. The expedition commander was 1st Lt. Hiram H. Benner, 18th Infantry, who had commanded

Maj. James D. Campbell Jr., U.S. Army, retired, is a defense contractor and works as a volunteer at the National Museum of the United States Army. His great-great-grandfather was George H. Mitchell, the post office volunteer on the steamship *John M. Chambers*. He first became aware of the epidemic and the relief boat effort when he found a short journal of Mitchell's among some old family papers.

a company during the Civil War, was twice a prisoner of war, and had since spent the last thirteen years on the frontier and in the deep South.²⁸ His second-in-command was 2nd Lt. Charles Hall, 13th Infantry, only two years out of West Point, who would also serve as the commissary department head, handling the distribution of all nonmedical supplies.²⁹ At the beginning of the mission, a member

of the expedition noted that Hall “was the right man in the right place.”³⁰ This was a prophetic observation that would prove out in a matter of days on the voyage. Assistant surgeon Keyes oversaw the medical portion of the mission and distribution of all medicines and medical supplies. He had as his assistant a druggist named Henry L. Kessler. Frank Reilly, from Chicago, was aboard as an observer and assistant physician along with Keyes.³¹ Reilly had served as the regimental surgeon of the 26th Illinois Infantry during the late war. In addition to assisting Keyes, he wrote dispatches to the *Chicago Times* newspaper during the expedition.³² The boat's captain was Vincent M. Yore. The full complement of men aboard was forty-one on its departure.³³

The National Relief Boat

The plan called for the *Chambers* to leave Saint Louis on 4 October for points south. The *Saint Louis Dispatch* reported on the departure:

She went with the good wishes of the whole nation and a million prayers are going up for the safe return of the men aboard. To go was something like walking into the jaws of death, for few have gone from the North into the plague stricken land who lived to return.³⁴

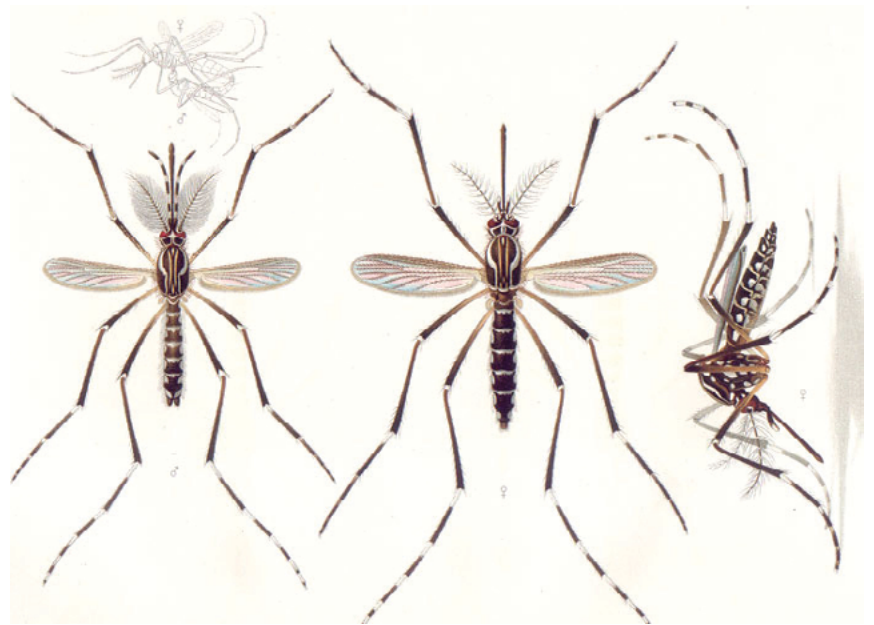
The *Chambers* left Saint Louis at 11:00 on 4 October for a journey of over seven hundred miles to Vicksburg but stopped only a few minutes later at the arsenal below the city. Due to the high value of the cargo, there was some concern that the cargo might be at risk from river pirates or other criminal bands. The arsenal issued twenty carbines and two thousand rounds of ammunition for the crew to protect the cargo.³⁵ After the *Chambers* left the arsenal and only a few hours into the voyage, the boat had to stop to repair the wheel and rudder. That night the boat laid over near Chester, Illinois, due to the dangers of navigating that part of the river in the dark. Shifting sand bars, snags, and drifting logs made night travel an unnecessarily dangerous threat to the success of the mission.

On 5 October, the *Chambers* sailed to Cairo, Illinois. They stopped there to take on more donations for support of the relief effort and more supplies for the boat itself. In addition to three hundred bushels of coal for the steamer's boiler, they procured one hundred yards of bagging cloth. The cloth was hung around the edge of the boiler-deck to create a sort of screen to protect the crew.

The boat was disinfected three times a day by sprinkling chloride of lime around the boat and by saturating the cloth around the deck with turpentine to ward off the fever.³⁶ These were particularly extraordinary measures considering that one of the primary sources of risk for steamboats was fire. Ironically, less than six years later, the *Chambers* would be destroyed by fire a little north of New Orleans.³⁷

On 7 October, the *Chambers* reached Memphis. Benner reported that “Memphis looks like a grave ... The city looks mournful in the extreme, appears gloomy and desolate, with a funeral pall overhanging it and dread disease lurking in the shadow.”³⁸ The *Memphis Herald* recalled the arrival, “being the first incident in river [travel] ... that has transpired within the past sixty days. In other words, river business would be completely dried up but for the great event of to-day, which will be hailed all along the river, as the *Chambers* passes down, with eager delight.”³⁹ In Memphis, the boat took on its final crew member and ten tons of mail for distribution along the route. George H. Mitchell brought aboard the mail, which had been gathering for two months, to be delivered down the river. He became the forty-second and final member of the expedition.⁴⁰ During their collection in Memphis, the mail bags had been carefully fumigated with sulfur every night in the Memphis post office, but once on board, like the shroud around the deck, the mail bags were sprinkled with turpentine three times each day to disinfect them.⁴¹

After its departure from Memphis, the *Chambers* sailed down the river delivering mail and dispensing medicines and supplies along the way. They made an average of about ten attempts to land each day. However, every day the crew encountered obstacles that prevented them from landing or from providing any relief items to that point. Sometimes they found abandoned landings with no one there to receive any supplies or mail. At one landing point there was a large sign that read, “don’t want anything, keep away from here.”⁴² At others, the quarantine was absolute with “armed men stationed to enforce



Color print of the yellow fever or dengue mosquito *Aedes aegypti* (then called *Stegomyia fasciata*, today also *Stegomyia aegypti*). (Photo courtesy of Wikimedia Commons)

same,” or “a squadron of Cavalry with loaded guns compelled us to leave, would not receive mail, papers or nothing.”⁴³ Even though they had taken the precaution of arming against robbers of the valuable cargo, there was never an actual threat. The overwhelming fear throughout the region of any contact with outsiders rendered even the thought of going to the boat so terrifying that no one was willing to venture close, much less attempt to board or rob the boat.

Along the route, the crew witnessed what the reports in the newspapers had described. At almost every stop they got the report of the sick, dead, and dying and the ominous warning of what to expect downriver, “fever below.” Reilly reported that the national relief boat often moored at the “deserted Levees of the Mississippi.”⁴⁴ What had been thriving river towns were now simply ghost towns. He also observed that many of their stops were greeted by the “tearful gratitude of the survivors.”⁴⁵ At Greenville, Mississippi, George Mitchell recorded that the “place has suffered terribly and that out of a population of [about 1400] who remained in the city, there was 900 cases and 277 deaths.”⁴⁶

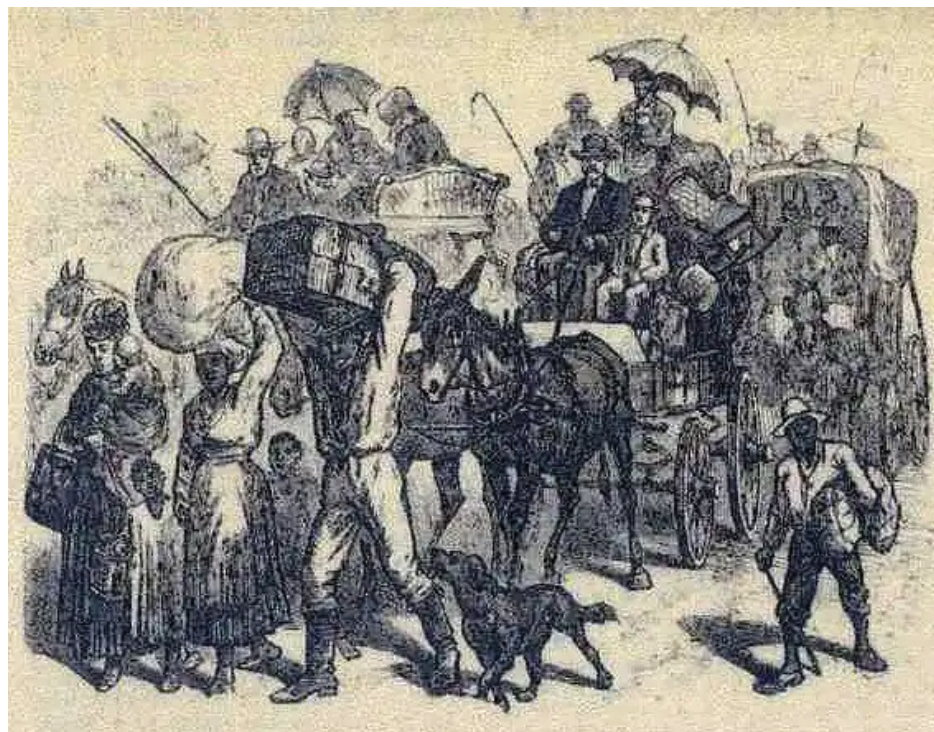
By 13 October, the *Chambers* had reached Vicksburg, having made over thirty stops along the way, some for medicine, some for supplies, and every stop for mail.⁴⁷ In Vicksburg, Hall delivered all of

the remaining cargo to the Howard Association there. The morning of the 13th, Benner became sick and was confined to his quarters. The watchman was stricken on the 14th. The *Chambers* crossed the river and the crew waited to see if Benner's condition would improve. Four days later, he was dead from yellow fever.⁴⁸ The captain of the boat, Yore, was stricken and sent ashore to a hospital in Vicksburg. The watchman died on the same day as Benner. Benner died at 2:30 in the morning on 17 October. He laid in state from noon until 4:00 p.m. and his funeral was conducted immediately afterward.⁴⁹

The *Chambers* stayed in Vicksburg following the funeral in search of a new captain and pilot for the return to Saint Louis, since Yore had the fever and the pilots refused to stay with the boat. Reilly reported that immediate flight was their only hope, so the delay caused very grave concern among the remaining members of the crew.⁵⁰ Fortunately, they were able to leave the next afternoon for the return trip, but the pilots that they brought on board were hardly recovered from the fever themselves. Hall was now in command and would see the boat safely back to its port in Saint Louis. He described the return as "a slow and tedious crawling up the river."⁵¹ There were issues with the engine as well as fog and river obstacles. They were obliged to steam only during the day due to the condition of the river and of the pilots. They lost another pilot at Memphis and had to steam to Cairo, Illinois, before they could find a replacement. The boat finally arrived at the quarantine station below Saint Louis at about 9:00 a.m. on 29 October.

Aftermath

The *Chambers*, following an inspection and thorough disinfection, arrived back in Saint Louis on the afternoon of 29 October. Benner and the head watchman



Over twenty-five thousand citizens evacuated the city of Memphis in 1878. (Photo courtesy of Historic Memphis)

J. M. Dalton were dead. Yore had been left down river with the fever but would survive. Other members of the crew were also left behind due to the fever and in some cases fear of continuing. The boat reached Saint Louis with less than three quarters of its original crew.

While the relief boat did not bring healing relief for the suffering, it was seen as a great success. Army leadership endorsed an order that stated in part that it "fulfilled [its] perilous mission in a manner worthy of praise and admiration."⁵² The Congressional Record described it as a "permanent, lasting record in the archives of ... a great nation's appreciation of a courage and heroism that has no precedent in all its annals and no parallel in all the history of noble deeds."⁵³ George Mitchell's final journal entry reflected the gratitude of the people that he encountered. They were moved by the gracious and heroic efforts made by this expedition. Despite formerly opposing the Federal Government, "hereafter and henceforth they truly believed that we were one family and under no circumstance would they be induced to lift a voice or hand against the North."⁵⁴

The fever itself died with the coming of winter, as one correspondent put it, in the battle between the

Jacks: Yellow Jack and Jack Frost.⁵⁵ It would be decades before a cause for yellow fever was determined and a vaccine developed. The Army was a key element in that effort as well. In 1900, Maj. Walter Reed, Medical Corps, led an investigation board in Cuba to study tropical diseases, particularly yellow fever. His work was instrumental in confirming the vector for the disease through mosquitoes and in developing a vaccine. His chief nurse for the project was Lena Angevine Warner. During the 1878 epidemic, she had been discovered nearly dead, surrounded by the bodies of her six family members, all dead from yellow fever.⁵⁶

Benner was buried in Vicksburg in the National Cemetery there. He was regarded a hero and given a hero's burial. Despite fears of the fever, the procession was long and colorful. There were fifteen different participating groups in the parade including three bands, dozens of carriages, a special escort of former Federal Army and Confederate officers, and others.⁵⁷ The gratitude of the Nation was such that Congress passed a bill for a pension specifically for Benner's wife and two daughters.⁵⁸ Mrs. Benner would in later years become the first post mistress of the Raven Park, Illinois, post office.

Surgeon General John M. Woodworth died on 12 March 1879. His death coincided with the passage of a bill to establish the National Board of Health. The Yellow Fever Commission noted that "his last and greatest effort, and the one which probably shortened his life, was his successful endeavor for the establishment of the National Board of Health, the bill for which passed the last Congress."⁵⁹ The success of the national relief boat was a catalyst to action and helped Woodworth in his advocacy for this bill. The commission made a resolution that in his death, "science has lost an eminent disciple, humanity an earnest laborer, and the United States Government an active, indefatigable, and zealous official."⁶⁰ They found that his work

"would nationalize sanitary science, and prevent the introduction and spread of contagious diseases."⁶¹

Frank W. Reilly became the sanitary inspector of Memphis and then the Mississippi Valley following the epidemic. He was later a member of the Illinois State Board of Health and long-time assistant commissioner of health for the city of Chicago. He was called one of the most notable characters in the annals of medicine and contributed greatly to the improvement and standardization of sanitation and medical care in Chicago, the state of Illinois, and across the Nation.⁶²

Second Lt. Charles S. Hall took command of the expedition and saw it safely to its conclusion. He later served in various positions across the west on frontier duty from Fort Baynard, New Mexico Territory, to Fort Sill, Oklahoma Territory. He ended his career as a captain of cavalry in the Illinois Regiment following the Spanish-American War.⁶³

George Mitchell, like Benner, had been a company commander during the Civil War, serving in the 5th New Jersey Infantry. The *Memphis Herald* recorded, Memphis has furnished its hero in connection with the God's-errand of the national relief-boat. Mr. George H. Mitchell, connected with the post office of this city, volunteered to take out the mail for points on the Mississippi ... He took out ten tons of mail matter, the largest that has ever left this city on any route ... That duty finished, he tendered his services as a nurse to Lieutenant Benner, and watched faithfully by his bedside to the last ... The distribution of that mail to the benighted denizens along the banks of the Mississippi, who had been virtually out of the world since the incipency of the plague, was the crowning glory of the mission of the relief boat.⁶⁴

He would eventually become the director of the United States National Cemetery in Memphis. ■

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63. The Report of the Sixty-Second Annual Reunion of the Association of the Graduates of the United States Military Academy, 10 June 1931, 152–56, accessed 11 December 2020, https://penelope.uchicago.edu/Thayer/E/Gazetteer/Places/America/United_States_Army/USMA/AOG_Reunions/62/Charles_Scott_Hall*.html.
64. Keating, *The Yellow Fever Epidemic of 1878*, 437.