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HISTORY

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OF THE

EPIDEMIC YELLOW FEVER

AT

New Orleans, La., in 1853,

BY E. D. FENNER, M. D.,

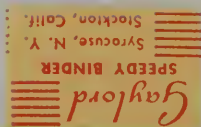
ONE OF THE VISITING PHYSICIANS TO THE NEW ORLEANS CHARITY HOSPITAL.
PRESIDENT OF THE LOUISIANA STATE MEDICAL SOCIETY. MEMBER OF THE
PHYSICO-MEDICAL SOCIETY OF NEW ORLEANS. MEMBER OF THE
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NEW YORK:

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C. F. V.

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IN 1853.

BY E. D. FENNER, M. D.,
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DEDICATION.



TO

MY FELLOW CITIZENS

OF NEW ORLEANS,

This brief, but faithful History of one of the greatest calamities that has ever befallen our devoted City, is most respectfully inscribed, by one who is fully identified with them in personal interest and all the relations of life.

THE AUTHOR.



HISTORY
OF THE
EPIDEMIC YELLOW FEVER,
AT NEW-ORLEANS, IN 1853.

ONCE more it becomes my painful duty to recount the rise, progress, and mournful ravages of the terrible pestilence, which, since the beginning of the present century, has so often and so severely scourged our devoted city. For ten years past, it has been to me an interesting, though somewhat laborious task, carefully to collect all the important facts and circumstances connected with yellow fever as it prevails in this region, with the view to determining its real nature, the source from which it springs, and the best method of treating it. With the exception of the last two years, the memoranda of which are still on hand, my observations have been published from year to year in successive volumes of the New Orleans Medical and Surgical Journal, and in my two volumes of Southern Medical Reports. I have hitherto confined myself chiefly to statements of *facts and attending circumstances*; indulging but little in *theory*, yet not withholding deductions which appeared to me rational and pointing to the necessity of certain *sanitary measures*, of vital importance to the community. The facts which I have recorded within these ten years, obtained from personal observation and that of most respectable physicians residing here and at Mobile, Natchez, Vicksburg, Rodney, Vera Cruz, Galveston, Houston, and Covington, bear forcibly upon all the great questions which have ever agitated the medical profession and the community at large.

concerning the *true cause and real nature* of yellow fever—whether it be a disease *sui generis*, or only one of the Protæan forms or varieties of *endemic fever* indigenous to southern climes—whether it be of *foreign* or *domestic* origin in the United States—whether it be *contagious* or *non-contagious*—*transportable* or *not* in persons or goods from places in this country, where it prevails epidemically, and communicable to persons who reside at distant and altogether different places where this disease was never known to prevail.

But, with deep regret, I must say, in vain have these important facts been laid before a heedless community—facts involving the progress and prosperity of our city, and our pecuniary interests in an eminent degree ; but above all, involving our own lives and the safety of those scarcely less dear to us than life itself. In vain have the *most probable chief causes* of this disease been pointed out, as well as the good results that have followed the removal of such causes in various parts of the world. In vain has this community been informed by many of its philanthropic physicians and through successive reports of its *Grand Juries*, that those causes are to be found in this city from one year's end to another, and perhaps to a greater extent than in any other spot upon the globe. In vain have they been referred to their *Hospitals*, their *Orphan Asylums*, and their *crowded cemeteries* for the indubitable evidences of sickness and death. With stoic indifference they have viewed these appalling scenes and turned a deaf ear to the advice and entreaties of their monitors. Engrossed with the exciting occupations and enjoyments of the winter, they cast not a thought upon the evils that may come upon them in summer. When shown by the reports from their cemeteries that the annual mortality of this city, in proportion to population, *more than doubles* that of any city either in Europe or America, they either disregard the solemn truth or flatly deny it—saying there *must be some mistake*, and calling those who bring to light such unwelcome facts, enemies to the city and traducers of its fair fame.

When informed of the first cases of yellow fever that appear in summer, the newspaper press almost invariably denies the truth of the reports, and, not unfrequently, showers upon the heads of those whose *duty it is* to pronounce upon the character of the prevailing diseases, volumes of abuse and ridicule. If the cases multiply and the signs of the times plainly indicate the approach of an epidemic,

the able Editors of our valuable daily journals, under what I must pronounce a most erroneous impression of their duty to the public, studiously endeavour to conceal or suppress the true state of affairs. The results of this course are, in the first place, to deter some of our most respectable physicians from saying a word about the first cases of yellow fever they see, on account of the disagreeable notoriety they must incur; and secondly, to induce many persons, who wish to leave the city as soon as yellow fever appears, to remain until they are exposed to imminent danger, for want of correct information. All this is wrong from beginning to end, and I do hope that the awful calamities which have lately befallen us will awaken the citizens of New Orleans to a just sense of their past errors and lead to a reformation that shall redound to the honor, glory, and greatness of this goodly city. The policy hitherto pursued in regard to this matter by our city government, newspaper press and business men generally must be changed *in toto*, before we can hope for deliverance from the evils that beset us. The great subject of *public health* must be set aside and neglected no longer, but should command that serious consideration which its importance deserves. 'Tis vain for us to expect to get clear of such an enemy to our happiness and prosperity as yellow fever by *shutting our eyes* against the facts annually presented to our view, by *repudiating* the disease or denying its existence in our midst, until its frightful ravages gain publicity in spite of us, and call forth the pity and charity of the benevolent throughout the Union. We must enter into a thorough investigation of the origin of yellow fever, and resort to the most efficient measures of relief, cost what it may. Time was, when this disease was unknown here. From the best information I can obtain, New Orleans was in existence *three-quarters of a century* before the first epidemic of this disease prevailed here, and it is only within the present year that it has prevailed over the large plantations within sight of the city. Is it not possible to restore the sanitary condition that existed before this disease prevailed here? Many cities and towns have been severely scourged by yellow fever for successive years, but finally got rid of it.

Let us endeavor to ascertain *how* they got clear of it, and do as they did. If they expelled it by removing all filth and stagnant waters, let us make our city *clean* and *dry*. If they owe their de-

liverance to *the accumulation of putrifying matters and foul stagnant waters*, I am quite sure that, without any trouble or expense, we could in a short time display the filthiest city upon the face of the earth ; which, with *the natural advantages of our damp southern climate*, ought to make us *perfectly secure*. If they were protected from danger by *quarantine*, let us forthwith establish the most rigid quarantine regulations ; but, in the name of conscience, let us no longer view with indifference the scenes of death and desolation so often witnessed, or go on as we have been going, under the hope of making enough in winter to enable us to run away from here in summer.

So indifferent had the community become to the sanitary condition of the city within the last two years, that they had no Board of Health, and were depending on a general street commissioner, with an insufficient corps of scavengers, to cleanse the city and remove all local causes of disease. How imperfectly these important duties were performed will appear in the course of my narrative. It affords me much pleasure to say, however, that the fatal ravages of the late epidemic, deplorable as they were, seem likely to be productive of the most beneficial results in future. The representatives of the people in the city government seem at last to be aroused from their lethargy in respect to the important matter of the *public health*, and are at this moment engaged in organizing an efficient system of *sanitary police*. A sanitary commission, consisting of five gentlemen of the first respectability in point of talent, has been appointed to obtain all the facts within their reach relative to the origin and spread of the late epidemic—to examine thoroughly the sanitary condition of the city—to draw up a system of hygienic measures, and to report the results of their labors as soon as practicable, for the consideration of the Common Council. This commission is at present actively engaged in the performance of the important duties confided to it, and will, doubtless, soon publish a volume of facts and suggestions of inestimable value. It has afforded me pleasure to give it all the aid in my power by furnishing such facts as I had either observed myself or obtained from reliable sources.

With these preliminary remarks, which I trust the reader will not deem inappropriate to the occasion, I shall now proceed with my history of the epidemic, and endeavor to give, as briefly as pos-

sible, many of the most material facts in connexion with it; such as the meteorology of the year, the sanitary condition of the city, the commencement, progress, extent, peculiarities, mortality, treatment, &c., of yellow fever, with a statement of the other types of fever that prevailed at the same time. My observations will be comprised within the period of time from the 1st of January to the 1st of November, 1853.

METEOROLOGY.

I am indebted to my esteemed friend, Dr. E. H. Barton, of this city, for the following abstract from his Register, which is doubtless kept with as much care and minuteness as any in the Union. As Dr. Barton is a member of the Sanitary Commission, it is hoped that his full Register for the year will be published among its documents.

Abstract of a Meteorological Register for the city of New Orleans :

1853.

JANUARY.	Maximum.	Minimum.	Average.
Barometer,	30.77	29.98	30.313
Thermometer,	71	33 $\frac{1}{2}$	47.20
Dew Point,	59	30.8	44.93
Rain—days,	4		
“ —nights,	4		
“ Quantity,	3.190 inches.		
Winds, Northerly, 22 $\frac{1}{2}$ days, Southerly, 2 $\frac{3}{4}$ days.			

FEBRUARY.	Maximum.	Minimum.	Average.
Barometer,	30.53	29.69	30.238
Thermometer,	77	36.50	56.05
Dew Point,	68	31	50.48
Rain—days,	5		
“ —nights,	4		
“ Quantity,	4.600		
Winds, Southerly, 12 $\frac{1}{2}$ days, Northerly, 9 $\frac{3}{4}$ days.			

MARCH,	Maximum.	Minimum.	Average.
Barometer,	30.67	29.90	30.262
Thermometer,	78	43	62.43

Dew Point,	71	36.8	56.17
Rain—days,	8		
“ —nights,	4		
“ Quantity,	6.870 inches.		
Winds, Northerly, 15 days, Southerly $12\frac{1}{2}$ days.			

APRIL.	Maximum.	Minimum.	Average.
Barometer,	30.44	30.11	30.260
Thermometer,	85	50	70.39
Dew Point,	71.5	41.5	66.60
Rain—days,	2		
“ —nights,	0		
“ Quantity,	1.848 inches.		
Winds, Southerly $15\frac{1}{2}$ days, Northerly $8\frac{1}{2}$ days.			

MAY.	Maximum.	Minimum.	Average.
Barometer,	30.38	30.05	30.127
Thermometer,	88	60	73.32
Dew Point.	74.7	52.8	67.11
Rain—days,	5		
“ —nights,	0		
“ Quantity,	3.840 inches.		
Winds, Southerly $12\frac{1}{2}$ days, Northerly $9\frac{1}{2}$ days.			

JUNE.	Maximum.	Minimum.	Average.
Barometer,	30.37	30.12	30.256
Thermometer,	91	70	80.73
Dew Point,	80.9	66.3	73.20
Rain—days,	11		
“ —nights	0		
“ Quantity,	1.757 inches.		
Winds, Southerly 11 days, Northerly $9\frac{1}{2}$ days.			

JULY.	Maximum.	Minimum.	Average.
Barometer,	30.37 in.	30.11 in.	30.255 in.
Thermometer,	89°	71°	79.88°
Dew Point,	80.9°	66.5°	72.13°
Rain—days,	18		
“ —nights,	4		
“ Quantity,	11.708 inches.		
Winds, Southerly 11 days, Northerly $9\frac{1}{2}$ days.			

AUGUST.	Maximum.	Minimum.	Average.
Barometer,	30.29 in.	30.04 in.	30.194 in.
Thermometer,	19°	72°	81°
Dew Point	79.4°	66.2°	78.08°
Rain—days,	11		
“ —nights,	0		
“ Quantity,	6.34 inches.		
Winds, Northerly $7\frac{3}{4}$, Southerly $2\frac{1}{4}$, East 9, West 5.			

SEPTEMBER.	Maximum.	Minimum.	Average.
Barometer,	33.33 in.	30.02 in.	30.191 in.
Thermometer,	86°	60°	76.23°
Dew Point,	78.3°	50.3°	70.93°
Rain—days,	14		
“ —Nights,	3		
“ Quantity,	5.70 inches.		
Winds, Northerly $4\frac{1}{4}$ days, Southerly 3, East 12.			

The calculations for the month of October have not yet been completed.

From this abstract we may learn that the winter was quite cool and dry, but without any very cold weather. I did not see any ice in the open gutters of the city, nor was the ground frozen in the heart of the city.

The spring was quite variable; alternately hot and cold, and rather dry. Vegetation *remarkably backward*.

From the 12th to the 20th of May the days were *very hot*, whilst the nights were so cold as to render one or two blankets necessary to comfort. The thermometer rose to 88°, which is within 1° of the highest point in July. On the 21st there was a sudden change, the weather becoming quite cold. This continued for two or three days; and it was about this time, as well as I have been able to ascertain, that the few cases of yellow fever appeared in the city.

The summer was hot, though not unusually so. It will be seen that the *average* of the thermometer was above 79°, which some contend is necessary for the prevalence of yellow fever as an epidemic. The summer was likewise *quite wet*, though not as much so as others in which there was not so much yellow fever. Before entering upon the rise and progress of the epidemic, let us take a glance at the

SANITARY CONDITION OF THE CITY.

In the winter and spring, when the weather was comparatively dry, the streets and gutters were in as good condition as is ever observed in this city, at all times bad enough ; but when summer came, with its scorching sun and frequent rains, the streets, alleys, gutters, batture, privies, vacant lots, &c., were neglected to such an extent by the Street Commissioner, whose duty it is to have them kept in good order, as to call down upon him the indignation of the people and the bitter denunciations of the press. The following is a specimen of these notices, a great variety of which might be clipped from the different newspapers of the day if we chose :—

A MATTER OF SELF-PRESERVATION.

(From the Delta, June 22, 1853).

“ Worse and worse. The late rain has only stirred up the sinks. Filth, dirt, decayed cabbage-stalks, dead dogs, and worse, are the fascinating ornaments of our thoroughfares, at the very time when all the energies of our authorities should be devoted to the preservation of the health of our citizens, which can be secured only by sanitary improvements. The nuisance is becoming altogether insupportable, and everybody suggests that ‘ something ’ must be done, and, day after day, that important ‘ something ’ ends in nothing.

“ It is quite useless to pelt any more editorial pellets at the Street Commissioner, as he cannot be aroused from his apathy. If the giants of the Catskill mountains were playing bowls within earshot of him, our official Rip Van Winkle would not hear the rumbling thunder. So, let him rest. R. I. P. The responsibility of preserving our streets in good condition does not lie on him—it belongs more properly to the City Council. We have appointed a very large number of individuals, interested in aldermanic honors, to make our laws and act as guardians of our safety ; and if they will not do so, they might have the candor to inform us of the fact, and let us look out for more energetic officers. We are supposed to be honored by the presence in our midst of imposing organizations, called Streets and Landings Committees, which are presided over by very agreeable chairmen ; but we give the fact as a matter of hearsay merely, having no reason to be personally cognizant of it. Their presence assuredly does little good for the community.

"A friend at our elbow mentions a plan by which our city can be put in proper order without aldermanic interference at all. Eureka! Let us have a mass meeting of the citizens on the subject, for practical work, and not for the passing of mere resolutions. Let committees be appointed—one to take charge of the fire-plugs, another to go to the Water Works and see that the pumps are in order, and a third to open the sluices of the river, and let the Mississippi perform the cleansing work. The Water-Works department is the most important of all, and the gentlemen placed on the committee to look after it should be energetic and intelligent. This may appear like taking the law into our own hands, but as a *dernier resort*, a matter of self-preservation, we can see no real objection to it. When that portion of our duties is completed, we will call in the assistance of the Rev. Mr. Hanson to decide, 'have we a Street Commissioner amongst us?'"

At all events, a public meeting should be held to take some measures to protect New Orleans against an epidemic which *must* come if our streets continue in their present condition."

The following extract from the same paper illustrates even so serious a subject as this in a humorous manner, and is really too rich to be lost:—

ANTI-YELLOW FEVER.

(*From the Delta, June 22, 1853*).

[COMMUNICATED.]

EDS. DELTA—I wish to relate to you a very strange affair which happened to me a few evenings since:

I had driven to the Lake with a friend, and becoming wearied of the place, and he being engaged and likely to stay some time longer, I concluded to walk at my leisure towards town, until he caught up with me with the buggy.

It was twilight, and as I walked slowly, musing over the past, and imagining the future of the great city before me, I saw just ahead, seated upon a stump by the side of the road, one of the queerest little figures you can conceive of. His back was towards me, and he was bent down, very busily engaged at something. As I came to his side I saw that he was sharpening a scythe.

The appearance and occupation of the little old gentleman were so strange, that I stopped to examine him more thoroughly. He

had on an old yellow coat, quite voluminous in the body, but with very short sleeves. His trowsers were of the thunder-and-lightning pattern, well shrunk up, and short enough to please the veriest dandy in town. His shirt had a large collar, but was without plaits in the bosom. In fine, his clothes were of antiquated material and cut, quite clean, but neither ironed nor starched.

But what attracted my attention most was his face. His features were very small, pinched and wrinkled, something like old and crumpled parchment. His sharp nose, the quick movements of his bony hands, and the twisting of his puckered mouth as he worked with his hone, denoted nervousness.

At last he got through his job, and passing his finger over the edge to try its keenness, gave a grunt of satisfaction, and looking up, his keen ferret-eyes looking full into mine, he ejaculated—"Ah ha, is that you?" with such suddenness and sharpness, that I was quite startled.

"Dull times. But that's nice, isn't it?" said he, snuffing with great satisfaction the foul wind coming from the direction of the city.

I differed with him, and received for my pains a sharp humph! accompanied with a look of contempt.

"Why," said he, "it's the very thing, and it will be better than that in a few days."

Thinking the old gentleman a little cracked, I ventured to ask him what he was going to do with his scythe.

"Going to work," said he, getting off the stump and stretching himself.

"But there's no grass for you to mow down here."

"No," said he, "I am going into the city to work."

"But there is no grass in the city either," I suggested.

"Oh, plenty, plenty," said he with a chuckle. "Plenty of my sort of grass; men, sir, men. All flesh is grass, you know. Eh?"

"The Devil!" I blustered out in my astonishment, for I seldom use so strong language.

"No, sir, not the Devil, either; only a friend of his—an old friend. In fact, sir, some people say he is my father. Don't speak disrespectfully of my respected and venerable ancestor, I beg of you," said he, looking askance at me.

"You are Death, then," I tremblingly said, half interrogatively, half affirmatively.

"Yes, sir," said he, evidently enjoying my fright. "Yes, sir, at your service."

"Very much obliged," said I, thinking it best to appear brave; "but I have no present need for your services."

"No, of course not," said he, with a little severity in his tone. "That is the usual answer. I did not suppose you had any use for me;" and he muttered something about jackanapes, and he wouldn't have asked me, and so on.

"Well," said the old gentleman, after musing awhile with his chin resting on the handle of his scythe, "well, isn't it a shame?"

I did not understand what he was alluding to. It was evident his mind had got into a new channel; so I asked, "Isn't what a shame?"

"Ain't you astonished at my personal appearance?" said he, looking himself over with evident pleasure; "you thought I was a naked skeleton. Come, now, didn't you? Speak the truth and shame the ——, and so forth, ahem? Yes, they pictured me as a skeleton, the impertinent rascals, a long time ago, and I have never been able to stop the burlesque. I killed the fellows, sir, but the Press is a great disseminator of falsehood." And the old gentleman rested his chin on his scythe handle again, and muttering, "Never mind, what I have lost my respectable father has gained, and it's all in the family"—lapsed into the musing.

"Why do you come to New Orleans this summer?" said I, breaking the silence; "it has been so long since you were here that they don't expect you."

"Young man," said Death, solemnly looking up, "don't talk so like a gump. I do just as you do—follow my nose; and if they don't expect me, more fools they. I like variety, and have an eye to future trade, so I didn't intend coming to New Orleans this summer. I was going North with the other fashionables; but your City Council have broken into my arrangements, and the people will have to suffer."

"But," said I, remonstrating, "how have the City Council broken into your arrangements? And you are not going to make the people suffer for what they have done? Surely they alone should bear it."

"I told you just now," said he, in a very positive manner, "that I follow my nose. If men will live in filth, will make a pest-house

for themselves, *que voulez vous, mon cher ?* I must act naturally. As for making the people suffer for the acts of their representatives, I do not see any wrong in that. All of us act upon that principle. But as for killing the City Council, there is no use of my troubling myself."

And here Death put up his hand to his mouth, and throwing his head back, gave me a leer, and imitated drinking out of a bottle. Then he broke out into the most outrageous screeching laughter.

"Why, sir," said he, as soon as he had recovered from a fit of coughing, brought on by his cachinnations, "I have heard some envious fellows say that the reason why the Council did not make their subs let the water flow through the gutters was, that they are interested in lots in the swamp, and are afraid they might be flooded. I have heard others say that they were so anxiously electioneering for the next Council, that they had neither time nor disposition to look after the Street Commissioners. Others say that since the city has been consolidated, they are not competent to attend to their other huge labors, let alone the care of gutters and sinks."

"Well, what do you think about it?" said I.

"What do I think? I think it is a little of all these reasons, and a few more besides—one of which is, that they are a careless set of fellows."

I do not wish to detail to you, Mr. Editor, all the conversation we had, though he told me some very curious things. He told me, at parting, that he wished the Council would do their duty, and let him go North, as he had no disposition to stay here. I was a little offended several times at the disrespectful manner in which he spoke of our council; but, as he said, *que voulez vous, mon cher ?* It was the truth, and I had to admit it.

ANTI-YELLOW FEVER.

The *Picayune*, *Crescent*, *Bulletin*, and other papers all called attention to the filthy state of the streets.

Suffice it to say the sanitary condition of the city was *most miserable*. Indeed it was so bad that if it had given rise to *Egyptian Plague* instead of yellow fever, it ought not to have surprised any one who was fully aware of its whole extent. After this account of our sanitary condition, it will doubtless appear strange to the

distant reader, that the citizens of New Orleans should look *abroad* instead of *at home* for the origin of yellow fever.

We will now proceed with the rise and progress of the epidemic, and give as many of the attendant circumstances and facts as we were able to ascertain from careful inquiry at the time.

COMMENCEMENT OF THE EPIDEMIC.

The very first case of *black vomit* that occurred, happened in one of my wards, at the Charity Hospital, on the 23th of May; and, although so very early in the season, it excited my apprehensions and caused me to inquire whether anything like yellow fever had been seen by others. On the same day I found another case in my wards that bore a strong resemblance to yellow fever. I then commenced a scrutinizing investigation; being well aware that if the facts and circumstances were not *then* ascertained, it would be vain to search for them after the lapse of even a few months. Wherever *rumor* pointed to the existence of a case of yellow fever or any thing like it, I at once repaired in person to the spot, or sought the attending physician for the purpose of getting the most authentic information. I shall now proceed to give *the first cases*, somewhat in the order of their occurrence *as to date*, and state all the attendant circumstances as far as I could ascertain them. un.

The disease made its first appearance among the crew of the ship "*Augusta*," which arrived here *direct from Bremen*, on the 17th day of May, and took position at the foot of Josephine-street, in the fourth district. On inquiry, I learned that this ship brought over 230 European emigrants, who enjoyed good health on the voyage; having only lost two children, which died of Diarrhœa. The vessel was out 52 days, passed on the south of Cuba, but did not approach nearer than 35 or 40 miles of that island. The emigrants arrived here in good health, remained but one day, and then proceeded up to the West. The ship *Augusta* was brought up from the mouth of the river by the same tow-boat that brought up the "*Camboden Castle*," a British ship, direct from Kingston, Jamaica. On the passage up the river there was free communication between the two ships across the tow-boat.

Having heard that there was a great deal of Yellow Fever at Kingston, and that the "*Camboden Castle*" had there lost her captain and several of her crew with that disease, I took occasion

to call on the consignee, in company with Dr. Dalton. We there had the good fortune to meet with the captain of the vessel, who was just clearing her for departure, and politely gave us the following information relative to his vessel and Yellow Fever.

Memorandum of Ship "Camboden Castle."

Captain Chaplin of the ship "*Camboden Castle*" says he entered on duty as captain of this vessel at Kingston, Jamaica, on the 1st of May last, the late captain, McDonald, having a short time previously died there of *Delirium Tremens*, at *private lodgings*,—says there was a great deal of Yellow Fever at that time among the shipping at Kingston, and the *Camboden Castle* had lost seven of her crew with that disease. This vessel had been in that port six or eight weeks—was last from Newport, Wales. Says he obtained seven new sailors to supply the places of those who had died—they were English and American, and he thinks they were unacclimated, though he cannot assert this positively. He sailed from Kingston, *in ballast*, for New Orleans, on the 2d day of May. Says that before leaving Kingston his vessel was *thoroughly cleansed* and *well sprinkled with chloride of lime*, to guard against the danger of sickness at sea. Says he arrived at the Balize on the 16th of May, and at New Orleans on the 17th, took position at Post 27. (which is in the upper part of the 1st District, nearly opposite Robin street.) The ship "*Augusta*" was brought up the river by the same tow-boat that brought the "*C. Castle*," one on each side, and there was free communication between the two ships, across the tow-boat. Captain Chaplin says *there has been no case of fever on his vessel since he left Kingston, either at sea or since he has been here*. He is now loaded with cotton and will leave this evening.

Given June the 8th, 1853.

This is all the connexion that can be traced between the people on these two ships. After arriving at the city, they took position about *half a mile apart*. I shall have occasion to refer again to the *Camboden Castle* when speaking of some cases of yellow fever that occurred in her immediate neighbourhood. I am indebted to Dr. Schuppert, the attending physician of the *Augusta*, and one of the visiting physicians to the Charity Hospital, for the following memoranda :—

CASE 1—On the 23d of May, Dr. Schuppert was called on board the ship *Augusta*, to see G. S——, a sailor, aged 21, whom he found laboring under symptoms which he supposed indicated gastro-duodinitis—skin hot and dry, pulse 100, violent headache, pains in the back and limbs, tongue coated, breath foetid, nausea and vomiting of bilious matters. On the fifth day his skin and eyes turned quite yellow. He recovered, and was discharged on the fourteenth day.

N.B. It will be shown presently that the first case that entered the Charity Hospital must have been attacked on the same day of this.

CASE 2—On the 25th of May, another sailor on the same ship was attacked with symptoms similar to the first, though more violent. He died on the 30th in a state of delirium. Soon after death the body turned yellow, and there were ecchymoses in the dependent parts. No hemorrhage before death. No *post mortem* examination allowed.

N.B. It will presently be shown that another case, about half a mile off, and having no connection, was attacked on the same day as this.

CASES 3 and 4.—On the 27th of May, two more sailors were attacked on the same ship, and with the same symptoms. One of them recovered; the other, G. Woetle, was sent to the Charity Hospital, and died on the 30th of May. He did not throw up black vomit before death. I witnessed the *post mortem* examination of this case. The body was yellow; lower parts livid. The stomach contained about two ounces of *black vomit*.

CASE 5—H. Bruntz, aged 21, on the same ship, *Augusta*, was attacked on the 30th May. Had pains in the head, back, legs and epigastrium, but without nausea or vomiting; pulse full and strong, face and eyes injected, eyes shining and prominent. On the third day the eyes began to turn yellow. On the fourth day he was carried to the Charity Hospital, where he died on the evening of the 7th June. *Autopsy* on the morning of the 8th. The body was yellow; stomach contained about two ounces of *black vomit* and a small worm; liver of a bronze color, parts of it yellow.

There were other cases on board the ship *Augusta*, but these are the only notes furnished of them by Dr. Schuppert. None of the cases threw up black vomit before death; but, as has been shown, this fluid was found in all the cases examined after death. There was much difference of opinion among the physicians who saw these cases and witnessed the autopsies; but for myself, taking all things

into consideration, the unacclimated subjects, the symptoms presented, the *post mortem* appearances, and the continuance of the disease in that part of the city, I expressed the opinion that it was *yellow fever*.

Having thus disposed of the cases on board the *Augusta*, let us now proceed to the next cases that appeared, and see what connection may have existed between them. I am again indebted to Dr. Schuppert for the following notes of the next earliest case to those on the *Augusta*:

CASE 6—W. K., a butcher, aged 26, had lived in New Orleans *one year*; resided on Chipewa street, fourth district, *three squares from the river and eleven squares above the ship Augusta*; had no connection with this ship that could be ascertained; was taken sick on the 25th of May with high fever, severe pains in the head, back and limbs, great thirst, tongue coated, costiveness, &c. &c. Dr. S. had him copiously bled, and ordered an active cathartic. On the following day petechiæ appeared over the whole body, but chiefly on the extremities, hemorrhage from the nose and gums, bowels torpid, skin and eyes slightly yellowish. Croton oil and strong enemata had to be used before the bowels could be moved. When they were opened, the evacuations were dark and very offensive. At the same time he vomited a large quantity of *black matters*. The bleeding from the gums continued for several days, and the skin became quite yellow. The hemorrhage and petechiæ gradually disappeared, and he was discharged cured on the twelfth day.

REMARKS—It may be doubted by some whether this was really a case of yellow fever, but it must be admitted that it presented some of the characteristic symptoms of that type of fever. Supposing such a case were seen in the midst of an epidemic, would any one hesitate about calling it *yellow fever*? The *first cases* that appear are generally more or less defective in what are considered *characteristic symptoms*, and hence the doubts and disputes that so often arise. Their true character is finally determined in a great degree by what follows.

CHARITY HOSPITAL CASES.

I come now to the first cases that appeared at the Charity Hospital, and will give their origin and locality as well as I could ascertain them.

CASE 7.—James McGuigan, an Irishman, aged twenty-six years, X
 was admitted into the Hospital on the 27th of May : said he had been sick four days : was last from Liverpool. He was taken to one of my wards, but after I had paid my morning visit and left. At noon, the assistant house surgeon, Dr. Canter, prescribed for him, thinking it a case of *bilious fever*, as he afterwards told me. Dr. C. saw him again in the evening, and did not then suspect he had *Yellow Fever*, nor did he think him dangerously sick. In the course of the night he became delirious, and early on the following morning it was discovered that he was throwing up *Black Vomit* freely, and died about six o'clock. Having been told these facts at my morning visit of the 28th, after finishing my prescriptions, I proceeded to the *dead-house*, for the purpose of making a *post mortem* examination. Drs. W. Stone, Choppin, McGibbon, and a number of others, were present.

Autopsy, four hours after death.—Body muscular and rigid ; face and neck slightly yellow ; lower parts of neck and body livid. *Lungs* dark colored, but sound. *Liver* mottled : partly the color of mustard, and other portions like nutmeg. Gall-bladder nearly empty. *Stomach* distended with gas ; contained, also, about four ounces of *Black Vomit*, like coffee-grounds ; mucous membrane thickened and soft. *Intestines* contained dark pultaceous matters. *Kidneys and Spleen* normal. *Bladder* contained urine. *Brain* greatly engorged—considerable effusion of serum under the membranes and in the ventricles.

No one who witnessed this examination expressed any doubt at the time that it was a case of *Yellow Fever*, and I so marked the ticket, but I understood that some doubts were afterwards expressed.

Let us now look to the previous history of this case, to ascertain which correctly has cost me a great deal of trouble. When he first presented himself for admission into the hospital, his case attracted so little attention, that no special inquiry was made about him. He reported himself to the clerk as having been in the City "one week," and last from Liverpool, but did not say on what vessel he had come. The clerk of the hospital having some reason to suspect that he came on the ship *Northampton*, I at once sent to the Custom-House for the purpose of examining her list of passengers. The name of McGuigan was not found amongst them, and I there-

fore concluded he did not come over on that vessel. At that time I inquired for him in all quarters, but in vain. At length, however, the *Sanitary Commission* was appointed to investigate the origin of the epidemic, and before it went Mr. Parshley, a stevedore, who professed to know all about McGuigan, and gave quite a plausible account of his case. He said that McG. did come over on the ship Northampton, and that he became personally acquainted with him whilst engaged in discharging that vessel—he knew when he was taken sick and died. In short, he told the Commission quite a marvelous tale about the bad sanitary condition of the Northampton at the time he discharged her. I had some reason to doubt the accuracy of this story, but, on application to the consignees, I was gratified to learn that the Northampton was daily expected back to the City. She arrived here on the 11th of November, and on the 12th I obtained from the Captain (Reed) the following memorandum of his voyage to this port last Spring.

Captain Reed says, that on his voyage from Liverpool to New Orleans, last spring, he brought three hundred and fourteen emigrant passengers, and arrived here on the 10th of May—that he passed to the North of Cuba, not nearer than fifty miles, and having fine winds, he passed along there quite rapidly: that there was not much sickness on board; there were six deaths, four children and two adults; the former died of bowel complaints: one of the adults from hemorrhage of the nose: says the emigrants all left his ship within three days after arriving here. Captain R. says his ship was in better order, as to cleanliness, when he arrived here than most vessels: that on the voyage she was swept every day, washed three times a week, and fumigated twice a week with burning tar: says there was no occasion to use the two rooms called "*the Hospital*," as such, and they were filled with spare rigging, stores, &c.: says he left here for Liverpool with a load of cotton, on the 14th of June: that during his entire stay here he had but one case of fever on board his ship, and that was a boy, who was attacked on the 10th of June, and was attended by Drs. Austin and Thorp, who pronounced the case *Yellow Fever*. He recovered: that after leaving here on the 14th of June, his mate was attacked with *Yellow Fever*, and died on the 18th. The Captain was attacked on the 20th, but very lightly, and was never confined to bed—says he had had *Yellow Fever* before in Havana: says he recollects the man

James McGuigan ; that he came over with him in May last as passenger, steward or cook, and was numbered among the crew of the vessel: says he left the ship with the passengers, but thinks he went into the employ of Mr. Parshley, and was engaged in discharging her when he was taken with Yellow Fever—heard of his death before he left in June.

Thus we have a full and minute account of James McGuigan, from beginning to end. From his own account, he must have been attacked on the very day that the first case occurred on board the ship *Augusta*. The two vessels laid not more than a hundred yards apart. McGuigan had been in the City one week the longest, but I do not think there can be much doubt that both of these cases, the first that occurred, contracted their disease in the locality where they were placed, and from the same remote cause.

The second case that appeared at the Charity Hospital was G. Woctle, from the ship *Augusta*, and has been given already. He died on the 30th May, and black vomit was found in his stomach after death.

I shall here introduce two cases that occurred on *Gormby's Basin*, a filthy pond situated in the *upper and back part of the City*, and were attended by Dr. M. M. Dowler. A number of streets in the fourth district, or Lafayette, are drained into this basin, and there is a canal leading from it to the Swamp in the rear. The quarter is a *very filthy one*, unpaved, inhabited mostly by poor people, and having in it a number of soap factories.

DR. DOWLER'S CASES.

1. Johanes Kaien, a German, had lived in the city about twelve months—resided on Gormby's Basin—was employed getting shingles in the *Swamp*, where he went out to work very early in the morning and came in late in the evening: *never went to the shipping*, and was a temperate man. Was taken sick on the 29th of May, and died with *black vomit* on the 2d of June.

2. Kaien's wife was attacked on the day after he died, and was buried the eighth day afterwards.

Dr. Dowler, an experienced and highly intelligent physician, has no hesitation in pronouncing these cases *Yellow Fever*. He communicated them to the Sanitary Commission, who have kindly favored me with the notes.

From the same source I learn that the next cases that occurred in this neighborhood were on the 10th and 22d of July. As appropriate in date, I will here insert the following note:

YELLOW FEVER ON BOARD SHIP "NIAGARA."

I am indebted to Mr. John O. Woodruff, Ship Agent on Magazine Street, for the following facts, which were furnished by his clerk, Mr. Moulton, on the 7th of July, 1853:

"The American ship 'Niagara' arrived here on the 30th of April, direct from New York: took position first at Post No. 3, near the foot of St. Joseph Street. Afterwards moved up to Post 26, where she was laden with cotton, and left for Liverpool on the 4th of June. *Had no sickness up to this time.* On the morning of the 5th she was at the mouth of the river, where she was detained two days getting over the bar.

"On the morning of the 8th she got outside, and the Captain, Livermore, telegraphed Mr. Woodruff that 'he was quite sick and had a doctor to see him.' In the evening Mr. W. replied by telegraph, that if he was much sick he had better return to the city, and let another Master be sent to take charge of the ship. This message was not received, and the ship set sail. The next we hear of this vessel was through one that went into Galveston, the Captain of which reported that he had spoken the ship Niagara, and was informed that '*the Captain had died of Yellow Fever on the 10th of June, and two men on the 17th; one more case on board.*' This was about the 30th of June. Heard nothing of her since."

N. B.—It must be remembered that the ship laid in the immediate vicinity of the "Camboden Castle," "Saxson," and "Harvest Queen."

We will now proceed with the cases at the Charity Hospital.

CASE 8th.—John Allen, a Scotchman, aged 24: had resided in the city two years, with the exception of two months last summer spent on a trip to Boston. Never had Yellow Fever: was admitted into Ward 17 on the 4th of June, then sick seven days, and was discharged cured on the 12th. This young man was in one of my wards, and I had no hesitation in pronouncing the case Yellow Fever the first time I saw him. He was in an advanced stage of the disease, (eighth day,) and presented the following symptoms:—His skin was of a muddy, yellowish hue, hot and perspiring; eyes

yellow; tongue natural; gums engorged and bleeding; head hot and painful; pulse sixty; tenderness over the epigastrium; bowels constipated; intellect somewhat clouded and confused; great thirst. He had been treated by Dr. Benedict before coming to the Hospital, and had been cupped and purged. I had a blister applied over the stomach, and gave him but little medicine, but had him carefully nursed. He recuperated slowly, and was discharged on the 12th, as before stated.

I learn from Dr. Benedict that this young man slept at No. 17 Religious Street, but worked on the Levee. He told me he was engaged for nine days, immediately before he was taken sick, in loading the ship "*Harvest Queen*" with cotton. This ship laid at Post 26, nearly opposite Robin Street, in the upper part of the first district, and left here for Liverpool about the 31st of May.

P. S.—Nov. 18th.—I learn from Dr. Benedict that Allen is still living, and has had no other attack of Yellow Fever this summer.

The ship "*Harvest Queen*" laid very near the "*Camboden Castle*," but Allen said he had not been on board of the latter vessel. At first he gave a somewhat different statement, when his mind was confused, but when entirely relieved he stated as above.

CASE 9.—Michael Mahoney, Irish laborer, aged 16, from Liverpool, four weeks on the ship "*Saxson*;" admitted into hospital, Ward 19, Dr. Haile, June 6th: then sick three days; died on the 7th: body turned yellow; large quantity of *black vomit*, with sediment like coffee-grounds, in the stomach; Liver yellowish. This young man had not been able to find employment in the city, and was allowed to sleep on board the *Saxson* every night.

I called on the consignee of the ship *Saxson*, Mr. Giffney, and ascertained the following facts:—"The ship *Saxon*, Captain Crosby, from Liverpool, *direct*, arrived at New Orleans on the 10th of May, after a long passage, brought Irish emigrants, took position at Post 27, in the immediate vicinity of the *Camboden Castle*. Has had no sickness on board since the vessel arrived here, excepting the case of the boy Mahoney."

CASE 10.—Thomas Hart, a robust young man, had lived in New Orleans eighteen months, entered the hospital, Ward 19, (Dr. Haile's,) on the 5th of June, then sick four days; died on the 8th, (morning.)

Previous history.—This man had been working on the Levee,

mostly in the fourth district, and was much exposed to the sun; his residence was in a filthy quarter.

Symptoms.—Fever, headache, and pain in the abdomen, difficulty in passing urine, eyes injected, slight nausea, anorexia, gums swollen and red, skin hot, leaving a yellowish tinge when pressed with the finger, sense of fullness and uneasiness in the epigastrium, bowels costive, very restless, great thirst, &c. On the second day he was no better. On the third day he was much worse. He now presented slight hemorrhage from the mouth and nose, eyes yellow, complained of intense pain in the hypochondriac region, hiccup in the evening, at night stupor, and death at 2 o'clock, A. M.

Autopsy at 9 o'clock, seven hours after death. *External appearance.* Body yellow and rigid, lower parts livid. *Stomach* contained about an ounce of reddish fluid, mucous membrane *very highly engorged* and corrugated. *Liver* of mustard color, full and plump. Gall-bladder contained dark green bile; mucous membrane of small intestines engorged; large intestines normal. *Brain* highly engorged, not much effusion under the membranes. *Kidneys* large and soft. Bladder contained four ounces of urine. *Spleen* normal. *Lungs* much engorged; upper and posterior portion of right lung found hepatized.

REMARKS ON CASE 10.—The foregoing notes were kindly furnished by Mr. Taney, the student of the Ward. I did not witness the examination of the lungs, but saw the diseased one on the morning afterwards. It was then greatly disorganised.

I understood that doubts were expressed as to the correctness of the diagnosis in this case, and that it was pronounced a case of *Pneumonia*. I must continue to *think* that the disease was *Yellow Fever*, and this diagnosis is fully sustained by the symptoms and facts that have been presented. I do not deny that a portion of lung was found hepatized seven hours after death, but, to my mind, it is not unreasonable to suppose that such a condition might have been the effect of *hypostasis*, the patient having *died slowly*, and *seven hours* having elapsed before the Autopsy was made. One thing is certain; there were none of the usual signs of pneumonia observed before death, and no one suspected that disease in the case before us. But, admitting that there was pneumonia, I should look upon it as an *intercurrent affection*, which is quite common in idiopathic fevers. I have dwelt particularly on this case, because I heard it was pointed out, by those who denied the existence of Yellow Fever

in the city, as a specimen of the *blunders* committed by those who contended *there was*. If not an unquestionable case, I maintain that it at least presented much more the appearance of Yellow Fever than of Pneumonia.

Up to this period, we have given accounts of *ten cases*, which were pronounced *Yellow Fever* by those who attended them; but there was by no means a unanimity of opinion amongst all who saw them. Some thought the subjects were *too yellow*, others that the yellowness was *not exactly of the right hue*; whilst others, again, maintained that yellowness was not at all characteristic of this fever: some said what was pronounced *black vomit* was *not dark enough*, others that it was *too black*; others, again, that it was not black vomit because it was of a *reddish hue*; whilst others, admitting a *resemblance*, still could not find "*the old fashioned Black Vomit.*" Some would not admit the cases were Yellow Fever, because they occurred "*too early in the season,*"—they had never known Yellow Fever to break out so early in this city, and therefore did not think it possible. Such were the discussions going on from day to day, among physicians and others, until the following *unquestionable case* occurred, which put an end to all controversy. The skeptics all gave it up after seeing this.

CASE 11.—Margaret Russell, an Irish girl, aged twenty-two, had lived in New Orleans six months; entered the Charity Hospital, ward thirty-six, (Dr. Robertson,) June 10th—then sick six days, and died on the 11th, after turning yellow and throwing up large quantities of *unmistakeable, old fashioned, coffee-grounds black vomit*. *Previous history*.—Having learned that Margaret had lived with Mrs. Edwards, who keeps a boarding house on Tchoupitoulas street, just above Race street, I called upon Mrs. E. and ascertained the following particulars. Mrs. Edwards' residence is but one square back from the river, and about equidistant from the ship *Augusta* above, and the *Camboden Castle* below; perhaps a little nearer to the latter. Mrs. E. has had but few boarders lately; said that the last stevedore who boarded with her had left her house a week before Margaret Russell was taken sick; that no other person having anything to do on the river had boarded with her for some time past; said that Margaret had lived with her for two months past; that she staid pretty closely at home, and never went to the river; that she was attacked with

headache, fever, pains, &c., on Sunday, the 5th of June; had no idea it was Yellow Fever; gave her an emetic on Monday; other medicines on Tuesday and Wednesday; and finding her no better on Thursday, sent for a physician. On Friday, the 10th, she commenced throwing up *black vomit*, and was sent to the Charity Hospital.

Thus we have an *unquestionable case of Yellow Fever* occurring in a servant girl, whose occupation confined her closely at home, and *who had not exposed herself to infection or contagion in any way whatever*. It must have originated in the place where she resided. Mrs. Edwards said there was no other case of fever in her house at the time these notes were made (June 13th).

About the same time that this girl was attacked, another case of *black vomit* occurred in the immediate vicinity. I am indebted to Dr. W. P. Sunderland for the fact, as follows:—

CASE 12.—June 10th, Dr. Sunderland was called to see a young man, James Murray, at Mrs. Conroy's boarding-house on Race street, near the corner of Tchoupitoulas. When he got there he found the patient *dead* but a few minutes. He saw a quantity of *black vomit*, which he was told the patient had been throwing or spitting up for six hours previous. The body was yellow. Dr. S. pronounced it *Yellow Fever*.

On the same day that I called to see Mrs. Edwards, (June 13th,) I likewise called on Mrs. Conroy, from whom, and the brother of the deceased, I obtained the following particulars of this case:—

James Murray, Irish laborer, aged 25 years, arrived here on the ship "*Rufus K. Page*," about the 15th of April last, and went at once to board with his brother at Mrs. Conroy's. In a short time he found employment in Mr. Hadden's Tobacco Warehouse, on Hunter street, between Tchoupitoulas and Levee streets. P. Murray said his brother James was not much exposed to the sun in his employment, and was not in the habit of going on board ships, but that he had gone on one (name not recollected) the day before he was taken sick, Sunday. He thinks this ship had just arrived from Liverpool, and that James went on board under the expectation of meeting some old acquaintance from Ireland. He was attacked with fever on Monday morning, the 6th of June, was treated *pretty boldly* by the landlady, Mrs. Conroy, until the following Friday, June 10th, when he commenced throwing up *black*

vomit. Mrs. C., not willing to trust her professional skill any further, now advised that a physician be called in. Dr. M. was first called, and afterwards Dr. Sunderland, who found the patient *dead*, as before stated. Immediately by the side of Mrs. Conroy's house is a blind or closed alley that runs from Race street, parallel with Tehoupitoulas street, in the rear of the houses fronting on the latter, as far up as Mrs. Edwards' boarding house, mentioned in the previous case; thus placing these two boarding houses back to back, diagonally, with a filthy alley between. Mrs. Conroy informed me (and I noted it in her presence) that this alley was much neglected and generally *very filthy*—that it had been cleaned but once in the last week or two. As we sat on the front steps talking, I observed a pile of stinking rubbish before the door and the alley.

So here we have another unquestionable case of Yellow Fever apparently originating in the same locality, and it was in *this neighborhood* that the epidemic first prevailed amongst the resident population. But more of this anon. On the 17th of June, an Irish girl named Ellen Mullen was attacked with Yellow Fever in this house, and was sent to the Charity Hospital on the 20th, where she was cured, after a long and severe spell. About the middle of October Patrick Murray, before mentioned, was attacked in Mrs. Conroy's house, and recovered.

As I cannot make room for notes of all the cases that occurred from this time forward, I shall now direct attention to other and different locations, where the fever made its first appearance.

CASES 13th and 14th—Timmons, and his little son aged twelve years, entered the Charity Hospital, Ward 30, (Dr. McGibbon,) on the 16th and 17th of June. The man had been sick about three days, and the boy about six. They had lived in the city three years, but never spent a summer here before. They resided on Louisa street, just above St. Mary's Market, and about 600 yards below Race street. The man got well, but the boy died of hemorrhage from the mouth. Timmons had lost one or two of his children at home, and on the 25th of the month his wife and last child entered the hospital, and both died; thus leaving the poor fellow bereft of all his family.

CASE 15th—Mary Lane, Irish woman, aged 20 years, entered the Charity Hospital on the 21st of June—had been in the city eight months—sick one day; said she resided near *the New Basin*. Died on the 24th of June.

The New Basin is the terminus of a canal that leads back to the Lake. It is on Julia street, about nine squares back from the river, and at least three quarters of a mile below Race street. So here is a locality quite remote from any in which we had found Yellow Fever before, and I am not aware of there having been any sort of connection between the cases.

We now come to a new locality, in quite a different quarter.

DR. BROWNING'S CASES, NEAR THE MINT.

I am indebted to Dr. George Browning for the following notes:

No. 1.—On the 21st of June Dr. B. was called to a man on Old Levee street, near Esplanade, and opposite the U. S. Mint. The subject was a German shoe-maker, aged eighteen years, had lived in the city seven months, and was sick two or three days before Dr. B. saw him. Found him with hot fever, pains in the head, back and limbs, irritable stomach; afterwards slight hemorrhage from the nose. He died on the morning of the 24th. Did not throw up black vomit, but the body turned quite yellow after death. No *post mortem*.

Nos. 2 and 3.—On the day the above case died, (June 24th,) Dr. B. was called to two other cases of fever at a sailor's boarding-house in the immediate vicinity, both of which recovered without hemorrhage, or yellowness.

No. 4.—A robust Irishman, unacclimated, residing in the same house as Nos. 2 and 3, was attacked with fever on Saturday, the 25th, and was taken to the Charity Hospital on Sunday morning, the 26th of June. Was admitted into Ward 25, (Dr. Meux,) and died with black vomit on the 28th.

No. 5.—June 27th, Dr. B. was called to a German shoe-maker, aged 33, who lived next door to case No. 1; had been in the city 6 months—been sick five or six days before Dr. B. saw him: he died with black vomit on the night of the 28th.

Dr. Browning has since informed me that he recently, at my request, made more particular inquiry about cases number two and three, and ascertained that one of them was a sort of runner for the house, whose business it was to visit the shipping for the purpose of getting boarders. The other was a sailor, who had been going between the city and the West Indies for ten years past. They were both Germans.

Dr. B. further states that subsequently there were several other cases of Yellow Fever in this boarding house, some of them fatal; but that *the first case in the neighborhood certainly occurred, as before stated, in the shoemaker, who was closely confined at home.*

Let us now trace the appearance of the disease in still a different locality, at about the same time of the preceding ; i. e. Algiers, a town on the opposite side of the river, entirely unpaved.

CASE 21.—Eliza Lacy, Irish girl, aged 21, had lived in Algiers 9 months. Entered the Charity Hospital, (Dr. Robertson's ward,) on the 25th of June, then sick three days. She had hemorrhage from the mouth and from a blister over the stomach, also black vomit, and died on the 9th of July.

CASE 22.—Rose Turner, Irish girl, aged 21 years, had lived in Algiers 6 months. Entered the Charity Hospital on the 29th of June ; then sick four days ; died July 4th. I find this case marked "*Remittent Fever*" on the books of the Hospital ; but I know it was *Yellow Fever*.

From this period onward the epidemic prevailed severely in Algiers.

We will mention one more separate and distinct locality where the fever broke out at this period ; viz., *the back part of the third district*, formerly the third municipality. It is unpaved.

CASES 23, 24, 25, 26.—On the 28th and 29th of June a family of four persons, consisting of Mary Kelly and her sister, Mrs. Kelly, in the female wards, and Edward Kelly and his brother, a boy aged 15 years, were all admitted into the Charity Hospital. They all died excepting the boy. This family had been in the city *five months*, and resided on Mandeville street, three squares below the Pontchartrain rail-road, and six squares back from the river. The disease did not prevail epidemically in this region till late in July. On inquiry I was not able to trace any sort of connection between these cases and the preceding.

At the regular meeting of the Physico-Medical Society, on the 2d of July, I stated most of the preceding facts as they had been noted at the time of occurrence. Several members mentioned having seen cases of Yellow Fever, in private practice, in the month of June.

Dr. Benediet said he had seen six cases—five of them in one house on Religious street : "thought they were simple *intermittent*

and *remittent bilious fever* at first, but some of them proved to be *yellow fever*, and died with black vomit. All that recovered *turned yellow*."

Dr. Lindsay said he had seen five or six cases of Yellow Fever in the same region.

Dr. McGibbon mentioned two cases he had seen in Lafayette : he thought one of them was Yellow Fever, but the other doubtful. They were young men residing in the same house, on the corner of Bacchus and Fourth streets.

The late lamented Dr. D. Elliot Reynolds mentioned eighteen or twenty cases of fever that had occurred on the steamship *Falcon*, lying opposite Jackson Square. This ship had arrived here from Aspinwall, on the 20th of June—no sickness on board at that time. In a few days fever broke out amongst the crew, at first thought to be *remittent bilious fever*, but some of them proved to be *Yellow Fever*. Two of these cases died of *black vomit*, under the care of Dr. Marmillon.

Having now traced the disease from its beginning on the 23d of May, through all the different localities where it first appeared, up to the last of June, let us pause a moment and review the facts thus far presented.

There had been forty-seven deaths from Yellow Fever up to the 2d of July, as appeared in the weekly reports from the cemeteries. About the same number of Yellow Fever cases had been *admitted* into the Charity Hospital up to the 1st of July.

I have not given accounts of *all* the cases that occurred up to the 1st of July, because it would have taken time and space ; but I have minutely traced *all the first cases*, in the respective localities where they occurred. The following are the different localities I have pointed out as the seats of the first cases :—

1. River, at Josephine Street, ships Augusta and Northampton ; see cases 1 and 7.
2. Chipewa Street, eleven squares above Josephine street; case 6.
3. River, at Robin Street; cases 8 and 9.
4. Gormby's Basin, upper and back part of the city; Dr. Dowler's cases.
5. Race and Tehoupitoulas Streets; cases 11 and 12.
6. Louisa Street; cases 13 and 14.
7. New Basin; case 15.

8. Near the Mint, lower part of the city; Dr. Browning's cases.
9. Algiers, across the river; cases 21 and 22.
10. Mandeville Street, lower and back part of the city; case 23.

The reader will please refer back to the cases for particulars. The localities designated circumscribe *almost the entire outskirts of the city*, at the same time *dipping pretty far in*; and it was from these different points, or their vicinities, that the disease continued to spread, though by no means with equal speed, as I shall presently show. It must be recollected that we are, as yet, only up to the *first of July*, when the disease was still prevailing *sporadically*. The epidemic was not declared until two or three weeks later. I put myself to considerable trouble to ascertain the foregoing facts, most of which were noted down at the time they occurred, and I believe they are, in the main, correctly stated. I must at least think they are more authentic and minute than any that can be collected at this late day in relation to the commencement of the Great Epidemic. Now, if any one can trace any sort of connection or communication between the first cases of the disease as they appeared in the different localities I have pointed out, or anything like the *gradual spread of an imported contagion or infection from one or more points to the region around*, I can only say, it is more than I have been able, satisfactorily, to do.

It was currently reported, during the summer, that this fever was brought to us by vessels from Rio Janeiro. With the view of ascertaining what truth was in these reports, I called upon Mr. Lonsdale, one of the largest dealers in coffee, who could tell me all about the Rio vessels. Mr. L. said that nearly all the vessels that arrived here from Rio, after the 1st of April, had suffered more or less from Yellow Fever after leaving that port, but that *none of them had brought cases to New Orleans*. He could only make special mention of sickness on the following vessels: 1. The ship *Siri*, Capt. Higgins, arrived here on the 10th of May, and took position at Post 13. The Captain had lost his wife, son, and some of his crew before leaving Rio, *but had no sickness on the voyage, and none after arriving here*. This position is about a mile below that of the Augusta and Northampton.

2. The ship *Mary Kendall* arrived here from Rio on the 25th of June, via Jamaica, where she had to put in on account of distress from Yellow Fever: had left Rio on the 25th of January. Mr. L.

thinks the Captain had lost his wife and sister-in-law before leaving Rio. Brought no case to this port—there were plenty of cases here when she came.

It was reported that the ship *Adelaide* had brought from Rio the first cases of Yellow Fever that were seen here; but on careful inquiry I find that *this ship has not been here this year at all*.

Something was said about the fever having been brought here by the iron ship *Evangeline*. On inquiry, I found that this ship arrived here *direct from Liverpool on the 10th of June, after we had a number of cases*.

I find the following interesting communication in the *New Orleans Delta* of the 17th of September:

YELLOW FEVER AT RIO JANEIRO.

“A correspondent, who has been for a number of years a resident of Rio Janeiro, furnishes the New York Commercial Advertiser with the following interesting account of the Yellow Fever, as it has prevailed there, during the three last seasons:

“Frequent reference to the Yellow Fever of Rio de Janeiro having, of late, been in the New Orleans prints and letters, to the effect that the fever now prevailing there was imported from Rio, giving the name of the vessel, and that it might have been prevented by quarantine regulations; also, “that the fever, which was more malignant than ever known, was of a similar character as the Rio fever, being something like the plague, the corpses after death having black spots on them”—thus leaving the inference that the Rio fever was the worst kind for virulence and extent, giving most erroneous opinions of the health of Rio, and creating a most unnecessary alarm. The undersigned being a resident of Rio, feels called upon to state a few facts in the case, that the public may be correctly informed, and judge of the propriety of renewing the antiquated notion of quarantine to prevent contagion, or feeling uncalled-for anxiety for friends who may be visiting Rio while the fever is prevailing.

“Prior to 1850, Rio was considered the most healthy tropical city in the world, no fatal epidemic having ever visited it; Yellow Fever and Cholera were unknown. Early in February, 1850, some cases of fever occurred on board a vessel from Philadelphia, which terminated fatally with all the signs of Yellow Fever. Others

were soon reported on board ship and on shore. It spread rapidly, so in April, when it was at its height, the total number of deaths were from one hundred and sixty to one hundred and eighty per day. From 1st May it decreased, and in June it had nearly disappeared. The average of deaths while it prevailed was fifty per day for four months, two thirds being by the fever. The disease was not so virulent and rapid as it usually is in Havana, and with immediate and proper treatment a large proportion recovered. The population of Rio Janeiro is about two hundred and fifty thousand, and the number of vessels in port was very large, many bound to California with passengers. Exposure and imprudence always increase the victims, and all know that none are more exposed than seamen, or more careless.

“The same fever pervaded the whole Brazilian coast in 1850. At Bahia it was traced to a vessel from New Orleans, and believed by many to have been imported in her. With equal propriety, it might have been said to have been imported into Rio from Philadelphia. Both would be absurdities, as the vessels left the United States in the winter season, and never had any sickness on board till after their arrival.

“The epidemic was no doubt an atmospheric one, somewhat like the cholera. A malaria pervaded the whole coast; this was proved by several cases of fever appearing on board vessels from Europe prior to arrival. It was probably a visitation in lieu of the cholera, which has visited every part of the world except Brazil.

“The fever was confined exclusively to the city and suburbs. It did not spread into the interior, so that there was a safe and speedy retreat to a place of safety for all those who could leave the city.

“In 1851, there were a few sporadic cases, but it never could be called epidemic on shore. The cases on ship-board were more numerous; but, with proper care, they were not very fatal. The same remarks apply to 1852.

“The fever this year has been worse than in 1851 or '52—having begun earlier than usual; but not nearly so bad as would be supposed by the reports published in the public prints. It is true that there have been some severe cases, but they were isolated ones, and exceptions.

“The true test are the bills of mortality, which are daily pub-

lished, in the most particular manner, officially. Their correctness has never been doubted by those who know the city and the facts. I have carefully examined them, and collected the following results, which may be relied on as correct.

“Average daily deaths at Rio, from official reports, blacks and slaves included:

Jan.	5	Yellow Fever.	7	Consumption.	Total, all diseases,	28
Feb.	7	“	6	“	“	27
March	5	“	6	“	“	26
April	5	“	5	“	“	24
May	4	“	5	“	“	20

—
Average of 5 months—

5 1-5 6

“About five eighths of the deaths by fever were in the hospitals, which are well arranged and managed. At the hospital appropriated to seamen, at Jurujuba Bay, by the published weekly reports, in May the deaths were only 17 per cent. of the number entering, at that time about fifty per week. This was after a steamer was provided by the Board of Health to receive patients and take them to the hospital. The steamer was provided with beds, physician and medicines, so that no time was lost in treating the disease. Previous to this, many were in the last stages before they were taken to the hospital, consequently many more deaths.

“By the bills of mortality examined, it appeared that the number of deaths of persons from seventy years and upwards, [averaging 80 1-3 years] were $3\frac{1}{4}$ per cent. of the whole number, when daily the average was twenty-five. The daily average at other seasons is under twenty. Three were 111, 115 and 118 years. Few if any cities can show a similar result.

“The number of deaths by consumption has increased very much of late years. This is frequently ascribed by the Brazilians to vaccination, as previous to its introduction consumptive cases were very rare.

“The name of the vessel stated in the New Orleans print as having introduced the fever there from Rio, was the Adelaide. No vessel of this name can be found as having loaded at Rio for New Orleans, or to have arrived there.’”

G.

It is often referred to as a *fact*, that the first cases of Yellow

Fever in this city *always occur among the shipping*. This is *not true*, as I have shown in my previous accounts of Yellow Fever in this city. In short, it is evident, from the facts within my knowledge, that the *shipping* has suffered much worse than the city from the contact. with

From the foregoing facts it will be seen that the disease steadily progressed with increasing speed from the time of its first appearance, about the 23d of May. If we had not an *epidemic* actually upon us at the period we have now reached, (July 1st,) there was certainly a strong probability that we soon would have one. But this was by no means a conceded point; on the contrary, there were all sorts of cavilings, disputes and discussions in regard to it; and those who interpreted correctly the signs of the times, and foreseeing the impending danger, advised their friends who intended to leave the city to hasten their departure, were *most soundly abused* for their conduct. It were needless now to recount the unfortunate victims who were thus *ensnared*, from want of correct information and judicious advice. The city was *actually without a Board of Health* at the time, although the weekly reports from the cemeteries were published as formerly, under the direction of the Mayor and the late Secretary. This was all the *correct* information that was published, and even this was complained of by some who thought it better to *suppress the truth than cause a panic*.

We may now proceed in a more summary manner, noting only the more prominent incidents that occurred in the rapid progress of the disease. Although I have pointed out ten different localities, (some of them not far apart,) where Yellow Fever cases first occurred, it is certainly true that the disease progressed most rapidly in the region where the very first cases were observed—I mean the region in the upper part of the city bordering on the first and second districts, lying between Robin and Josephine Streets, and extending as far from the river as Magazine Street. It was here that the disease first prevailed as an *epidemic*, which it did to a great extent before any cases originated in the centre of the city, as I shall presently show. This region contains but *two paved streets*, viz.:—*Tchoupitoulas*, running parallel with the river, and *Felicity Road*, running diagonally across; the former a great thoroughfare, the latter not. The streets in the rest of this extensive area are *unpaved*; the houses are, for the most part, of an inferior order, and are occupied chiefly by the Irish and Dutch. The water-

works fount, and a number of large cotton-press and tobacco warehouses are in this region. But more of this when we come to take a general review of the ground over which the epidemic travelled.

We are now into the month of July, and will proceed with our *memoranda*, as they were noted down in my diary. Throughout this month the weather was hot and wet—the unpaved streets very muddy.

July 2d.—I note eighteen deaths from Yellow Fever at the Charity Hospital—the physicians in the upper part of the city very busy, whilst those on and near Canal Street have but little to do. As yet, I hear of no cases in the better classes.

July 6th.—Miss Pearsall, a highly respectable and accomplished young lady, died of Yellow Fever on Coliseum Place. The death of this young lady caused quite a panic, and hastened the departure of many from the city who had intended to leave about this time. Mr. Pearsall, her father, left a few days after her death, was attacked on the river, and died of Yellow Fever at Natchez.

July 8th.—Called to my first case in private practice, Miss B., on St. John Baptist Street, near the water-works.

July 9th.—Reports from the cemeteries show fifty-nine deaths from *Yellow Fever*, and fourteen from *other fevers*, for the week ending this date.

July 10th.—Heard of the death of a Hydropathic physician, Dr. Gray, on the corner of Girod and Carondelet Streets.

July 13th.—Deaths from Yellow Fever fifteen to twenty a day at the Charity Hospital; most of the cases come from the water-works region, a few from about the New Basin, some from Algiers and Claiborne Street. Dr. Beard told me he had two cases on Girod Street. The disease is approaching the heart of the city.

July 15th.—The Howard Association come out in the papers offering their benevolent services to the poor and afflicted—are complained of for doing so by some who persist in saying there is *no epidemic, and will be none*. Four or five cases of Yellow Fever have originated recently within the Charity Hospital. This may be marked as the period when it might be said that Yellow Fever prevailed to the extent of an *epidemic*, though there was no Board of Health to publish such a declaration, and some persons, *even physicians*, still denied it most strenuously.

July 17th.—Yellow Fever increases rapidly. Interments for the

week ending yesterday, three hundred and forty-four; of which two hundred and four were from *Yellow Fever*; nearly four times as many as the week previous. Nearly half of these deaths occurred at the Charity Hospital, where the mortality has been very great, owing chiefly to the late stage of the disease in which the patients enter; yet it is undoubtedly a very malignant fever.

July 18th.—The epidemic is coming into the heart of the city. I hear of cases at the St. Charles, Verandah and City Hotels—two cases among the servants at the Orleans Club-Room on St. Charles Street. But even as yet, the physicians in this part of the city have very few cases, some of them none.

July 23d.—Interments for the week ending to-day, six hundred and seventeen; of which four hundred and twenty-nine were from *Yellow Fever*. Still there are but few cases in the centre of the city. The epidemic reigns chiefly in *the unpaved parts all around*.

About this period there were numerous calls in the newspapers for the organization of a BOARD OF HEALTH—City Councils busily employed with this matter.

August 2d.—A *Board of Health* has been organized, and the papers of this morning contain its first *weekly and daily* reports. For the week ending July 31st, the interments were eight hundred and eighty-four; *Yellow Fever* six hundred and ninety-two. Interments on the first day of August, one hundred and forty-two; of which one hundred and twenty-three were from *Yellow Fever*.

August 4th.—The epidemic begins to rage in the central part of the city—Canal Street.

August 6th.—Col. Bliss, a distinguished officer in the United States Army, died of *Yellow Fever* at Pascagoula, on the Lake shore. He had not been in New Orleans for seventeen days when he was attacked. Left here on the 13th of July, and was attacked on the 30th. Dr. McCormick, Assistant Surgeon, U. S. A., tells me this, and says there was another fatal case at Pascagoula in a man who had not been away from there at all. This man died a day or two before Col. Bliss.

August 7th.—Weekly report of the Board of Health to this date shows one thousand one hundred and eighty-eight deaths, of which nine hundred and fifty-nine were from *Yellow Fever*, and twenty-nine of other types of fevers, such as "pernicious," "malignant," "congestive," "intermittent," "typhus," "typhoid," &c. The prev-

alence of these various types of fever with Yellow Fever will be more distinctly pointed out in the statistics that will follow.

August 15th.—I find the following summary of the work of death in one of the city papers:

“A correct report of the interments in all the Cemeteries of the city for each day in the month of August, to the 14th of said month:

	Total.	Yel. Fev.	Other Dis.	Not stated.
August 1...	142	106	25	11
“ 2...	135	115	14	6
“ 3...	146	124	17	5
“ 4...	166	135	15	16
“ 5...	150	128	9	13
“ 6...	238	194	30	14
“ 7...	209-1186	165-967	40-150	4-69
“ 8...	219	187	23	9
“ 9...	201	166	21	14
“ 10...	230	193	33	4
“ 11..	223	192	13	18
“ 12..	207	180	25	2
“ 13..	214	179	22	13
“ 14..	232-1526	191-1288	26-163	15-75
<hr/>				
Total,....	2712	2255	313	144

J. C. EDMONDS, M. D.,

Secretary of the Board of Health.”

At this period the epidemic rages most awfully; the public consternation and distress are indescribable.

On the 18th, the Mayor of the city, under the advice of the Board of Health, ordered rounds of cannon to be fired in various quarters of the city, at sunset every day, and barrels of tar to be burnt at nightfall all over the city. The firing of cannon was soon discontinued on account of its injurious effect upon the sick, but the *tar-fires* were kept up for a considerable time.

August 21st.—I cannot do better than insert here the following summary review of the epidemic up to this date, from the *Picayune*:

THE EPIDEMIC.

CEMETERIES—HOSPITAL—REMARKS.

“The interments in all the cemeteries of the city for the week ending at 6 o'clock yesterday morning, Saturday, the 20th inst., are

in detail as follows, the deaths by Yellow Fever being those certified to by the physicians.

Interments for the twenty-four hours ending at 6 A. M., on—

		Total.	Yellow Fever.
Sunday, August	14.....	232	191
Monday, “	15.....	213	182
Tuesday, “	16.....	193	163
Wednesday, “	17.....	219	191
Thursday, “	18.....	219	188
Friday, “	19.....	234	203
Saturday, “	20.....	224	184
Total,.....		1534	1302

“During this week the cases of deaths reported for causes unknown number seventy-four. At least sixty-three of these were Yellow Fever deaths, which, added to the total above, would give one thousand three hundred and sixty-five deaths by Yellow Fever for the week ending at 6 A. M. on the 20th inst.

“The mortality for the week previous to the above was as follows:

“Interments for the twenty-four hours ending at 6 A. M. on—

		Total.	Yellow Fever.
Sunday, August	7.....	209	165
Monday, “	8.....	228	193
Tuesday, “	9.....	192	164
Wednesday, “	10.....	224	184
Thursday, “	11.....	217	194
Friday, “	12.....	210	183
Saturday, “	13.....	214	179
Total,.....		1494	1262

“The unknown cases were fifty-four in number. Of them at least forty-six were deaths by Yellow Fever, making the total deaths by this cause for the week ending the 13th inst., one thousand three hundred and eight.

“The returns for the week previous to the one just referred to were as follows:

"Interments for the twenty-four hours ending at 6 A. M. on—

	Total.	Yellow Fever.
Sunday, July 31.....	157	137
Monday, August 1.....	142	106
Tuesday, " 2.....	135	115
Wednesday, " 3.....	146	124
Thursday, " 4.....	166	143
Friday, " 5.....	150	128
Saturday, " 6.....	238	194
Total,.....	1134	947

"The unknown cases were fifty-seven. Of them, taking the same proportion (six sevenths) as in the preceding tables, the deaths by Yellow Fever were forty-nine. The total deaths of Yellow Fever for the week ending on the 6th inst., were nine hundred and ninety-six.

"The interments for the three weeks ending yesterday are as follows:

"Week ending at 6 A. M. on—

	Total.	Yellow Fever.
Saturday, August 6.....	1134	996
" " 13.....	1494	1308
" " 20.....	1534	1365
Total,.....	4162	3669

"In our weekly reports heretofore we took no account, as we have now done, of the proportion of Yellow Fever cases in those interments reported daily as from unknown or not stated causes. The slight increase in the totals of Yellow Fever interments as given in the above table is owing to the addition of this proportion.

"This table shows an increase for the week ending at 6 P. M. yesterday over the previous week of forty in the total of interments, and of fifty-seven in those by Yellow Fever. This increase compares favorably, (if such a word can be used in connection with such a subject,) with that of the second week in the table over the first. The increase there was three hundred for total interments, and three hundred and twelve for those of fever.

" But if the increase for the week ending yesterday is not so decided, it must be considered that the proportion of mortality to the population is greater than it was even a week ago. How long this is to continue, it is not for human authority to say, except that experience tells us that the first frost will, without doubt, cut short the career of the epidemic. We do not well see how its severity is to last much longer, for there must be few unacclimated persons left to undergo its power.

" We follow out the same form of returns, and comparisons between them, for the reports from the Charity Hospital. These are made up to midnight of each day. Our weekly report consequently ends at midnight on Friday, the 19th instant.

" Report of the hospital for the twenty-four hours ending at midnight on—

	Admissions.	Deaths.	Yellow Fever.
Saturday, August 13.....	69.....	42.....	33
Sunday, " 14.....	72.....	40.....	35
Monday, " 15.....	87.....	47.....	46
Tuesday, " 16.....	61.....	39.....	34
Wednesday, " 17.....	66.....	35.....	33
Thursday, " 18.....	74.....	28.....	24
Friday, " 19.....	59.....	41.....	39
Total,.....	498	272	244

" The report for the week previous, ending on the 12th instant, gave 594 admissions, 282 deaths, and 266 by Yellow Fever.

" For the week ending on the 5th instant, the admissions were 542, the deaths 304, and those by Yellow Fever, 296.

" The totals of the hospital reports for the three weeks ending at midnight on Friday, the 12th instant, are as follows :

	Admissions.	Deaths.	Yellow Fever.
Friday, July 29.....	570.....	218.....	207
Friday, August 5.....	547.....	318.....	307
Friday, August 12.....	594.....	282.....	266
Friday, August 19.....	498.....	272.....	244
Total,.....	2209	1090	1024

" The decrease in the admissions and deaths at the Charity Hos-

pital for the week ending at midnight last Thursday, is to be attributed for the most part to a large portion of its class of patients seeking relief at the four city infirmaries and other hospitals.

"The mortality reports of the Charity Hospital, as compared with those of the city exclusively, are for the last three weeks as follows :

		Total Deaths.		Yellow Fever.	
		City.	Hospital.	City.	Hospital.
Week ending	August 6..	816	318.....	689	307
Week ending	" 13..	1212	282.....	1042	266
Week ending	" 20..	1262	272.....	1121	244
Total,.....		3290	872	2852	817

"The Howard Association, having received ample funds from the generous people of New York, Baltimore, Philadelphia, Washington, Savannah, Baton Rouge, Natches, and various parties in and near this State, are opening four new infirmaries for the indigent sick, and one especially designed for convalescents. Baton Rouge has also sent a deputation of her citizens to assist the Howard Association in waiting on the sick. This is indeed an act of benevolence that the good Samaritan might envy."

"The Mayor, Council Committee, and Board of Health exert themselves unremittingly in the discharge of their responsible and difficult duties. They have the cemeteries in excellent order, and for the last few evenings have had cannon fired, and tar burned as an experiment to purify the atmosphere."

"Many objections being made to the firing of cannon as injurious to the sick, that measure was stopped by the Mayor's order, and he yesterday issued a notification to the citizens to the effect that coal tar will be placed at accessible points throughout the city, and all persons are requested to get as much of it as they wish, and burn it in their yards and about their premises morning and evening."

SYMPATHY FOR THE SUFFERERS.

"The Washington Union of the 14th contains the following notice and report of the proceedings in Washington on behalf of the sufferers by the epidemic in this city. It will be perceived that the President contributed handsomely on the occasion :

" Last evening a meeting of the citizens of Louisiana was held at the National Hotel, and also of the citizens of Washington in the Council Chamber of the City Hall, to take steps to contribute to the relief of the people of the Crescent City, who are exposed to the ravages of an unparalleled epidemic—that malignant scourge of that devoted city—the yellow fever."

" At these meetings the best feelings of the human heart were displayed. Our worthy Mayor, the Hon. J. W. Maury, presided at the Council Chamber, and explained the object of the assemblage pertinently, and with great feeling. The address of Prof. DeBow was able and eloquent, and that of J. M. Carlisle, Esq., replete with all the graces of oratory, and abounding in sentiments of kindness and benevolence. Mr. Wilder, of New Orleans, made a few judicious remarks, and Col. Seaton, of the National Intelligencer, evinced a warm interest in the object of the meeting. On motion of Col. Seaton, a committee was appointed composed of five members from each Ward, with instructions to collect contributions. Upon the adjournment of the meeting, his Honor the Mayor invited those present to make their contributions. About eight hundred dollars were at once subscribed, the name of Franklin Pierce gracing the list, having been placed there by his request. Wm. W. Corcoran, Esq., the wealthy and whole-souled metropolitan banker, stepped forward and contributed the liberal sum of five hundred dollars. Deeply sympathizing with our afflicted friends in the commercial emporium of the south, we rejoice that a movement has been made in our city under such favorable auspices for their relief."

August 28th.—*Greatest Mortality*.—The week ending on yesterday displays the highest mortality of the epidemic. From this period its ravages decreased ; at first slowly, but in a short time very rapidly, as will hereafter be shown. I again extract from the carefully made summaries of the *Picayune* of this date :

THE EPIDEMIC.

CEMETERIES—HOSPITALS—REMARKS.

" The interments in all the cemeteries of the city for the week ending at 6 o'clock yesterday morning, Saturday, 27th inst., are in detail as follows :

"Interments for the twenty-four hours ending at 6 A. M. on—

	Total.	Yellow Fever.
Sunday, August 21	269	230
Monday, " 22	283	239
Tuesday, " 23	258	220
Wednesday, " 24	222	188
Thursday, " 25	218	186
Friday, " 26	193	151
Saturday, " 27	185	151
Total	1628	1365

"Of the total interments 90 were cases where the doctor's certificate did not state the cause of death. Of these at least 77 were yellow fever cases, making the deaths by yellow fever for the week 1442.

* * * * *

"The returns for the fourteen weeks ending yesterday at 6 A. M., since the first yellow fever death took place, are as follows :

"Week ending on Saturday—

	Total.	Yellow Fever.
May 28	140	1
June 4	142	1
June 11	154	4
June 18	147	7
June 25	167	9
July 2	177	25
July 9	188	59
July 16	344	204
July 23	617	429
July 30	723	555
Aug. 6	1134	947
Aug. 13	1494	1262
Aug. 20	1534	1302
Aug. 27	1618	1365
Total	8579	6170

"The cases in which the doctor's certificate did not give the cause of death, were as reported by the Board of Health for the last five weeks in the preceding table, to the number of 279. Of these at least six-sevenths were yellow fever cases, giving 239 for that class of disease out of the 279. These, added to 6170 at the foot of the general table above, show that in the four districts of this city, from May 28 to August 27—or within a day of three months—6449 human beings have died of yellow fever.

"It would be an interesting statistical fact for the Board of Health to inquire into, how many children and grown persons, born here, have died of the fever? how many have had the fever twice? how many colored persons have died of it? We know of a number of children born here, under the age of ten years, who have died of the fever; we know positively of one case, and have heard of a good many, where the person attacked had already had the fever here; we know of negroes who have had the fever and died of it; and we know, too, of a number of persons who have lived here through several epidemics, some of whom have been attacked this year, and others have escaped it altogether."

I can testify to the facts specified by the Picayune.

September 1.—A pleasant day—hard shower early in the morning. The epidemic is declining rapidly; deaths from it now only amounting to about 100 a day.

September 2.—This day is appointed by the Mayor of the city as one of fasting and prayer.

Yellow Fever is now prevailing at Mobile, Natchez, Vicksburg, Woodville and Thibodauxville. The latter place is a small village situated on Bayou Lafourche in this state. The following extract is from one of our city papers:

"YELLOW FEVER AT THIBODAUXVILLE.—The following endorsement was written on the mail bill from Thibodaux, September 2, which arrived here yesterday: 'Stores closed—town abandoned—151 cases of yellow fever—22 deaths—postmaster absent—clerks all down with the fever.'

" 'Respectfully, J. C. WHITE, Ed. of Minerva.' "

"YELLOW FEVER IN MOBILE.—The interments in Mobile on the 31st ult. were 27, of which 22 were yellow fever. On the 1st inst. the number reached 32, of which 23 were of yellow fever. On the 2d inst. the interments were 43, of which 37 were from yellow fever cases."

September 7th.—Only 48 deaths from yellow fever to-day.

September 17th.—The deaths from yellow fever have now got ten down to 24 a day; for the last week 221. All the infirmaries of the Howard Association have been closed, excepting one, which is still kept open for convalescents. In fact, the *epidemic is now*

over, though this is not yet announced by *authority*, and we may expect to see *sporadic* cases till the end of the year.

On the 20th September, having little or nothing to do at home, I made a visit to my friends in Mississippi, when I saw something of the yellow fever of Vicksburg and Jackson. I returned to New Orleans on the 7th of October, and found the city *uncommonly healthy*. Went up to the Charity Hospital on the 8th, and found 10 wards closed for want of patients; yet I saw a few cases of yellow fever there.

October 8th.—The mortality for the week ending this day, was 133; of which 42 died of yellow fever, and of these 36 died at the Charity Hospital; consisting chiefly of laborers and others, who had recently come to the city.

The following extract is from the last weekly summary of the epidemic that appeared in the *Picayune*:—

“The following is a table of the total interments, and of those by yellow fever only, which were certified to by the physicians, from the week the first yellow fever case was reported as terminating fatally, up to 6 A. M. yesterday morning :—

“Week ending on Saturday at 6 A. M.

	Total.	Yellow Fever.
May 28.	140	1
June 4.	142	1
June 11.	154	4
June 18.	147	7
June 25.	167	9
July 2.	177	25
July 9.	188	59
July 16.	344	204
July 23.	617	429
July 30.	723	555
Aug. 6.	1134	947
Aug. 13.	1494	1262
Aug. 20.	1534	1302
Aug. 27.	1628	1365
Sept. 3.	955	749
Sept. 10.	576	421
Sept. 17.	365	221
Sept. 24.	263	125
Oct. 1.	219	85
Oct. 8.	133	42
Total.	11,100	7,813

Cases in which causes of death were not stated in the last	
ten weeks of this table	450
Of these six-sevenths for yellow fever	385
Total of deaths by the fever since May 28	8,198" *

October 13th.—The Board of Health announce publicly that "*there is now no epidemic in the city, and that absentees and strangers may come in with safety.*" This announcement was welcomed with joy, and from this time people rushed in from all quarters. A few were attacked after their arrival here, but not severely, the malignancy of the fever having been greatly mitigated.

I stated, in my memorandum of the 17th September, that I considered the epidemic was really over then, although there was no public announcement to that effect. My opinion was based, not *alone* upon the great diminution of cases, but also upon *the change of type* that was visible in the new cases then occurring. Fevers of the *pernicious, intermittent, and remittent* types became more common than yellow fever. In fact, the yellow fever type was gradually giving place to the remittent and intermittent, as will appear plainly in the statistics to follow. This is what always occurs, as I have completely demonstrated in my previous writings on the subject.

The number of deaths from yellow fever, for the week ending September 17th, was 221. Now, if we refer to the period when the deaths first got up to a similar amount, we shall find that it was the week terminating the 16th of July, when the deaths were 204. Thus we have *two months* as the period during which it may be said *yellow fever prevailed as an epidemic*. This again corresponds with the observations of the past. We have more or less yellow fever in this city *every year*, but, after a constant residence here of twelve years, I must say I have never known it prevail to an *epidemic extent* for a longer period than *sixty or seventy days*. Some persons attempt to draw a distinction between *epidemic* and *sporadic* yellow fever; but this is *sheer nonsense*. If there be such a disease as yellow fever at all, you may see as *genuine a case* of it in a season when not more than a dozen of the kind occur, as in one presenting thousands of cases.

A popular error of extensive prevalence, and long standing respecting yellow fever, is, *that an epidemic can alone be extinguished by*

frost. I demonstrated this error in my histories of the epidemics of 1847 and '48, and the events of the present year fully confirm the correctness of my observations. In 1847 the epidemic ceased long before the appearance of frost; yet sporadic cases were seen to a considerable extent to the end of the year. On the present occasion, the disappearance of the epidemic was published by the Board of Health on the 13th of October, whilst the *first frost* was announced on the 25th of October, and that was only observed on the outskirts of the city. On the 31st there was a much heavier frost, but by this time a large number of persons had returned to the city. It is true that some of them were attacked with the fever, as before stated; but the cases were generally mild, and easily managed. We shall, doubtless, continue to see scattering cases till the end of the year. The general remote cause of all the endemic fevers seen here, which, in its most virulent or powerful state, produces an epidemic of yellow fever, gradually undergoes modification in the progress of time; it becomes less virulent or powerful, and in proportion to the degree of this change will it produce the milder types of fever. This position is illustrated by the remark of a highly intelligent practitioner of the 4th District, whom I met about the 10th of October. On being asked whether he saw much yellow fever at that time, he replied that "he saw a good deal of fever, but he hardly knew whether it was *yellow fever* or not." I asked him how the cases looked, if they became *dangerously ill or died*? He said "they then generally looked *precisely like yellow fever*." Another professional friend in the same District told me a short time afterwards that he had just been astonished at seeing a case of intermittent fever terminate in *fatal black vomit*. Such observations show that the prevailing *fever-cause*, which in August produced *yellow fever* in nine-tenths of the cases that occurred, had become so much weakened in October as to produce mostly the *remittent and intermittent types*; yet the relationship between them was still so close, that if the latter were not promptly cured, they ultimately presented the worst features of the former.

✓ The disease first prevailed to an *epidemical extent* in the region bordering on the junction of the *First and Fourth Districts*, extending from the river back and around the *Water-works*, as I have more distinctly shown in the foregoing memoranda. It was shown that it also broke out in various other places quite remote from each

other, and having no special or marked intercommunication. It is worthy of particular notice that the *Epidemic prevailed in the unpaved, and, of course, least improved parts of the city all around, long before it did in the central and best improved parts.* It is well known that the Epidemic was not so bad this year on Chartres, Royal, Burgundy, Customhouse, Bienville, Conti, and St. Louis streets, as it was in 1847. Thirty years ago this region bore the chief brunt of the Epidemics. From this city, which was the starting point, the Epidemic influence gradually expanded until it ultimately spread over a more extensive region around than was ever known before. Along the Mississippi river it extended from the Balize up to the mouth of the Arkansas, where the village of Napoleon was severely scourged. On Red river it went as high as Shreeveport; on the Alabama river it went as high as Montgomery, the capital of the State. On the Tombigbee, as high as Demopolis. It extended to Pensacola, in Florida; to Galveston, Houston, Indianola, Victoria and other places in Texas. It prevailed terrifically in the village of Thibodauxville on Bayou Lafourche, and also in some of the towns over in Attakapas. But let us get through with the Epidemic in this city before adverting to its ravages in other places.

THE GENERAL CHARACTER OF THE DISEASE.

It seems to be generally conceded that the Yellow Fever of this year has been more malignant and unmanageable than any ever seen here before. Such at least is the opinion of the oldest practitioners with whom I have conversed, and I am quite confident it is true as far back as 1841.

The tendency to black vomit was more rapid, and there were more cases of this than usual. At the same time there were more recoveries from black vomit than was ever known before. This will be more particularly noticed under the head of *special observations*.

I think that *head-symptoms* were unusually severe and dangerous. Many died in delirium and convulsions.

I think that *suppression of urine* was much less frequently observed in dangerous cases than formerly.

Hemorrhages were exceedingly common, and often fatal. Many died of hemorrhage from the nose, gums and bowels. Drs. Kennedy and Henderson told me of a very clever young man who died

of hemorrhage from the scrotum. Hemorrhage, however, was not always an unfavorable symptom ; on the contrary, it often indicated the approach of a *salutary crisis*. Indeed, it is *the natural crisis of this type of fever when its course is not interrupted by art*. How often have I hailed with joy the appearance of a moderate hemorrhage from some *safe part*, as the nose, gums or uterus, in the critical stage of Yellow Fever, when it had been previously altogether uncertain how the case was going to terminate ! At this stage of the disease, a small quantity of blood flowing spontaneously from any part except the *stomach* is most generally followed by the happiest effects, reducing any remaining febrile excitement and allaying nervous inquietude. When hemorrhage sets in, however, there's no telling how far it may go before it stops. Believing as I do that it is a *natural critical discharge in this type of fever*, I would recommend that no efforts be made to check it whilst it is *within the bounds of safety* ; but when it seems to threaten life, we should then resort to astringents, styptics, stimulants and tonics.

Black vomit is nothing but a hemorrhage from the stomach, and may exist in any degree, from a few particles of blood mixed, as it were, into a quantity of light glairy fluid, presenting the appearance of floating dark specks or *flœculi*, to that of a rapid and profuse discharge of *pure red blood*. Before this discharge takes place in any degree there is great engorgement of the mucous membrane lining the stomach. The hemorrhage that then occurs is the effort of nature to relieve this engorgement ; consequently, if the patient dies without throwing up much black vomit, we find the mucous membrane greatly engorged, thickened, and red or livid ; whereas, if the hemorrhage had been *very profuse*, we find the mucous membrane after death pale and softened. Hence we may explain a fact that has been observed by many, viz., that *recovery is more apt to take place after free discharges of black vomit than after very slight*. The reason is obvious : in one instance nature effectually relieves the distressed organ by directly depleting its morbidly engorged blood-vessels ; whilst in the other there is not a sufficient discharge to afford any relief.

When a patient is threatened with black vomit the great indication is, to remove that engorgement of the blood-vessels of the stomach which is its proximate cause ; but of this I shall speak more fully when I come to the subject of *treatment*.

Discharges of precisely the same nature as black vomit take place from the mucous membrane of the *bowels*, presenting the same shades of color, from a brown to a deep black, and onward to *pure blood*, according to the activity of the hemorrhage. This is an enlarged view of the true nature of black vomit, without being restricted to any *particular appearance* as alone characteristic of that discharge. If such a view had been taken by the intelligent physicians who saw the first cases that died of Yellow Fever at the Charity Hospital this year, we should not have had so much discussion as to whether the fluid found in the stomach was *too black* or *not black enough*, *too red* or *not red enough*, &c., to be *genuine black vomit*. If this term is to be restricted to *any special appearance* of the matters ejected from the stomach in fatal cases of Yellow Fever, I will venture to assert, that it cannot be shown in a *fifth part* of the cases. On the contrary, if it be used to designate *that critical hemorrhage* from the stomach and bowels of all shades and degrees, so often met with in fatal cases of Yellow Fever, then might we even go so far as to speak of a *white* black vomit. The rice-water discharges of Asiatic Cholera are admitted to be "*white hemorrhages*;" and Sir Henry Marsh, of Dublin, calls some dropsical effusions "*white hemorrhages*;" then why may we not have a whitish discharge from the stomach in Yellow Fever that is equivalent to the celebrated black vomit? In fact, *we do*; and I have often heard the remark made by physicians of the first respectability.

Black vomit and other hemorrhages rarely occur amongst full-blooded negroes, though I have heard of a number of cases this year, and had one myself. Mulattoes and Quadroons are almost as liable to them in Yellow Fever as white people, and quite a number have died of hemorrhages this year. This difference between the Black and Mulatto must proceed from the mixture of races.

Black vomit is quite common amongst white children with Yellow Fever, but they are far more apt to recover from it than adults. I shall say more of this in another place.

Black vomit is by no means *restricted to Yellow Fever*, but is occasionally met with in other diseases, such as dysentery, cancer of the stomach, and the state of pregnancy.

There were various rumors afloat that this was not *genuine Yellow Fever*, or such as has generally prevailed here before, but some-

thing altogether different ; some saying it was a "*modified typhus*," others that it was "a species of *plague*," whilst others again called it the "*African fever*." For myself, I saw no just grounds for any such distinctions. Whatever typhoid symptoms it presented are common in *prolonged cases* of Yellow Fever. I saw nothing at all resembling the descriptions of *plague* ; and as for "*African fever*," I would like to know what is meant by the term. There is no part of Africa where so malignant a fever is generated as the Yellow Fever of America ; and those who assert that this was an African fever, ought not only to point out its *distinguishing features*, but also show how it was introduced here. The truth is, the Epidemic was nothing but an uncommonly malignant Yellow Fever, presenting all the characteristic symptoms of that disease as it is generally seen here, but in a more virulent degree. No two Epidemics that ever occurred here were so precisely alike, but each differed from the other, and demanded some slight modifications of treatment to suit.

I deem it useless to give a general description of the symptoms of Yellow Fever, as they are to be found in all the works on the subject, though in the main they give a very imperfect idea of the disease. The general impression derived from reading descriptions of Yellow Fever is, that it is *a violent fever of a single paroxysm, lasting about seventy-two hours, and presenting strongly marked characteristic symptoms, by which it may readily be distinguished from all other types of fever*. I have not found it so ; nor have I yet found the man who could always say correctly whether a case, examined *per se*, was Yellow Fever or not. I have already shown what differences of opinion were expressed about the first cases that appeared this year, and have only to add, that the same thing occurs here every year. The truth is, Yellow Fever is so closely allied to various remittent and intermittent fevers, that no uniform and reliable distinction can be drawn between them in the early stages, and the only way we get at the fact that Yellow Fever is prevailing, is by observing the *final results*, whether in *death* or *convalescence* ; and the former is by far the most conclusive of the two. Even in such an epidemic as this, thousands of cases occurred which no one would have thought of calling *Yellow Fever*, if it had not been generally known that many of the same character and appearance had terminated in fatal black vomit.

I need not say anything more about the general character of the disease this year, save that it presented every variety of aspect and type ever seen in Yellow Fever, from the mildest attack to the most violent, and showed such a tendency to death amongst *whites* who were for the first time exposed to it, as to demand the most prompt and judicious treatment.

On reflection, there is one other feature of this epidemic which is worthy of mention, and that is, a *tendency to relapse*, which presented itself in many instances. After the customary subsidence of the fever, at the end of the third day, there would be a period of calmness lasting from twenty-four to forty-eight hours, and then the fever would kindle up again, and last for one day or more. This secondary fever was often very dangerous, though it frequently terminated happily. The interval of convalescence after the first attack was sometimes so long, as to appear more like a *second attack* than a *relapse*. From two to four weeks have been known to elapse between two distinct attacks of the fever in the same person. Heretofore these relapses, or second attacks, were not at all common. On the 4th of November I was called on board a steamboat, to see a gentleman who had just come down from the village of Warrenton, situated on the river just below Vicksburg, where the Yellow Fever had been very bad. He said this was the fourth attack or relapse he had suffered since July. He died of black vomit on the 8th.

SPECIAL OBSERVATIONS.

Under this head I shall notice some particular points, such as *recoveries from black vomit*, *second attacks* of Yellow Fever, attacks upon *creoles* or natives, and attacks upon *negroes*.

1. *Recoveries from Black Vomit*.—When *well-marked black vomit* is presented in a case of Yellow Fever, I consider the chance of recovery as but little better than *one in a hundred*; yet I shall be able to show quite a respectable number of recoveries from this desperate condition this year. I had two in my private practice, and several in my wards at the Charity Hospital. One of my private cases was a little Irish girl, aged about eight years; the other was a *black negro woman*. One of my cases at the Hospital was a young Spaniard, whom I shall mention more particularly under the head of *treatment*. I also saw a mulatto boy, patient of Dr. Hes-

ter, who threw up black vomit copiously during twenty-four hours, and recovered. The youngest subject of black vomit I ever saw, was a white infant aged *five weeks*, who was born after the epidemic broke out. It died, as did also the mother, who was unacclimated.

Dr. Boyer, resident surgeon of the *Maison de Saintè*, informs me that there were *fifteen* recoveries from black vomit in that institution. Prof. Jones says he had *two* recoveries in private practice, and *eight* or *ten* at the Charity Hospital.

Dr. McKelvey says he had *three* recoveries in private practice, and some at the Charity Hospital.

Dr. Lindsay informs me he had six or seven recoveries from black vomit.

Dr. M. M. Dowler says he had four recoveries from black vomit—two women, one man and one child six years of age. Dr. D. never knew adults to recover from black vomit before, but has known several children.

Dr. Wedderburn says he had four or five recoveries from black vomit.

Dr. Rushton says he had two cases to recover from black vomit.

Dr. Choppin, House Surgeon of the Charity Hospital, gives it as his opinion that *seven per cent.* of the cases of black vomit in that institution recovered.

Notwithstanding all this testimony to the fact of recovery from black vomit, one of the most prominent physicians of the city, who has practiced here near twenty years, tells me he never knew a case of *unquestionable black vomit* in Yellow Fever get well.

I have only mentioned the names of such of my professional friends as I happened to meet with, whilst taking down these special observations. It will be the same with those to follow. I might enlarge them to any extent if I had time and space.

2. *Second Attacks of Yellow Fever.*—I mean by this, persons who have had the disease in former years. In my history of the Epidemic of 1847, I mentioned that several instances of this were observed, and the same has occurred this year. There can be no doubt that if a person have a plain attack of Yellow Fever during the prevalence of a *severe* epidemic, there will be but small probability of his ever having it again, provided he remains in the same place; yet the rule is by no means *invariable*, as I shall presently show. If one has it, however, during a *mild* epidemic, or when

there are only a few sporadic cases, his subsequent exemption will not be near so great. Thus there were numerous attacks this year among persons who had had other attacks since 1847, but not many among those who had it that year, or any previous *strong* epidemic. I am satisfied that the correct doctrine on this point is laid down in my "Report on the Fevers of New Orleans." (See *Southern Medical Reports*, vol. 1.)

I saw no case this year which had been attacked in 1847, but several who had the disease well-marked in 1848 and subsequently.

Dr. Jones informs me that he saw one case in a person who had Yellow Fever in 1847, and one who had it in 1839.

Dr. Kennedy says he never attended a case of Yellow Fever in a person whom he had treated before for that disease. Dr. K.'s experience extends over a period of twenty years.

Dr. Lindsay tells me he treated this year at least a dozen cases who said they had had Yellow Fever before—some of them in 1847; but he cannot vouch for the accuracy of their statements. He had one case this year whom he treated last year in a well-marked attack. His last attack was mild, and only lasted two days.

Dr. Moses M. Dowler, who has practiced here seventeen years, says he never saw a second attack of Yellow Fever in a person whom he had himself attended, but a good many who said they had it the second time, and had been attended by others—he is disposed to believe that such instances have occurred.

Dr. W. Stone, and Dr. Sunderland also, say they never knew a second attack, and are disposed to doubt the testimony of those patients who told them they had the disease more than once. Both of these gentlemen are of opinion that second attacks of Yellow Fever are as rare as second attacks of small-pox or measles. Dr. Stone even goes so far as to think that *acclimation, once attained, is never lost by removal from localities where Yellow Fever prevails.*

It is needless to multiply quotations upon this point, as similar contradictory testimony and opinions might be obtained throughout the profession. The thing is at last reduced to a *matter of opinion*, and cannot be definitively settled. Those who have made up their minds that a person can have Yellow Fever *but once*, will not be convinced to the contrary by any facts that can be presented, and *vice versa*.

3. *Attacks upon Creoles or Natives of New Orleans.*—^xOne of the

most extraordinary features of this epidemic is presented in the fact that the natives of the city, *both white and colored*, have suffered severely, and many of them died of it. This is generally admitted, and beyond dispute. Children who were born since '47 have suffered most; but many born previous to that time likewise suffered, and some of them died of black vomit.* I saw two Quadroon girls, sixteen and seventeen years of age, who were natives, and had never lived anywhere else—they had the fever severely, but recovered. A child, aged five years, in the same family, also had it. I attended a Quadroon boy, about eight years of age, who had a severe attack, attended with hemorrhage from the gums. I have already mentioned the case of a white infant only *five weeks old* that died of black vomit. It may be stated generally, that all children, and young persons in the city, who had never had Yellow Fever previously, were attacked this year. Of course there were some exceptions to this, as there are to every general rule.

† I am informed that the Creoles on the coast, above and below the city, suffered much worse from Yellow Fever than those in the city, many adults having died of the disease.*

4. *Attacks upon Negroes.*—This epidemic affected unacclimated negroes, or those who had never had Yellow Fever before, equally as generally as it did the white population, though not so severely. This is equally true of the mixed races generally.× It is a well established fact that there is some thing in the negro constitution which affords him protection against the worst effects of Yellow Fever; but what it is I am unable to say.~ During an epidemic he will take the fever almost, if not fully as readily as the white, but it will be altogether milder and less dangerous in its tendency.× In short, it will correspond more exactly with the bilious remittent fever that prevails in the country, and requires precisely the same treatment. And yet this type of fever in the city negro must be produced by the very same cause that gives rise to malignant Yellow Fever in the white race. Occasionally we see the hemorrhagic diathesis of Yellow Fever displayed in the negro, but it is by no means common.~ The least mixture of the *white race* with the *black* seems to increase the liability of the latter to the dangers of Yellow Fever; and the danger is in proportion to the amount of white blood in the mixture. Very few negroes ever die of Yellow Fever in this city; but I learn that a considerable number have

been lost on the plantations this year. The cause of this may readily be imagined when it is recollected that Yellow Fever never prevailed on the plantations before, and of course most of the physicians were not familiar with its treatment. *

I consider the danger to negroes from Yellow Fever to be no greater than that from *bilious fever* in the country, and *not half so great as from congestive intermittent*.

TREATMENT.

I feel quite at a loss as to what I should say upon this important branch of my subject. To go into a full consideration of all the various plans of treatment pursued by the physicians of New Orleans, would require more space than I should allow in a paper, which, I fear, many will think already *too long*; whilst, to confine my remarks, merely *to my own method*, would, doubtless, fall far short of the reader's expectation. I do not claim to have discovered *the very best method* of treating Yellow Fever—one that is *superior to all others*; on the contrary, I doubt not that there are other methods pursued by some of the intelligent physicians of this city equally as successful, and, for the sake of humanity, I most heartily wish that all were more so. But when I look around me, and compare the results of my practice with that of others who pursue different methods, I find no reason to change my views, but much to convince me of their correctness.

In New Orleans may be seen the results of every imaginable course of treatment, from *doing nothing at all*, up to the use of *the most potent remedies in heroic doses*; and cases have recovered and died under all. Whilst many have, doubtless, been lost from *want of medical aid*, it cannot be denied that many have likewise died from *over-medication*. What is to be inferred from this great variety of treatment, but that *the true nature and proper management of Yellow Fever are not yet well understood by the mass of those who undertake to treat it*? I do not maintain that there is *but one proper method* of treating Yellow Fever as a distinct disease, or that *any single remedy is indispensable* to its cure; because the endless variety of persons liable to it, and the different aspects which the disease itself presents on different occasions, must necessarily require some modification of treatment; but I do think there ought to be a more uniform agreement among physicians as to the *patho-*

logy of the disease, and the *general principles* which should govern its management. We doubtless have at command all the remedies that are necessary to the cure of Yellow Fever, when *it is* curable; but the thing is, to know which is best adapted to the purpose, and the principles which should govern their application. This must be learned by observing the action of remedies, and a careful study of the pathology or *true nature* of the disease. We must observe how it attacks, how it progresses from stage to stage, how it terminates—whether it be in *death* or *convalescence*. If in *death*, how does it stop the machinery of life? If in *recovery*, how is that recovery brought about? It is of vast importance to know what would be the course of this fever if left *entirely to nature*, without any medication whatever. This knowledge would not only aid us in the proper selection of remedies, but also teach us *when* we should aid the efforts of nature, and *when* withhold medicines altogether. The best medicines in the world, improperly given, may do harm. I mention these things merely to show the importance of understanding both the nature of the disease and the action of remedies.

Yellow Fever is a disease which does its work in a short time. All agree that whatever active or powerful remedies are to be used, should be applied *within twenty-four or thirty-six hours after the attack*. This is the stage, if any, for blood-letting, quinine purgatives, calomel, &c. But, if this opportunity be lost, the patient's main dependence for recovery must be upon the efforts of nature, aided by careful nursing, and the physician should then be extremely cautious in the prescription of medicines. At the *critical stage*, generally the end of *the third day*, when the fever goes off, the physician has an opportunity to display his best skill and judgment in its management. Many a patient has been lost by the slightest indiscretion at this stage, and many also from taking too much medicine. I have had many patients admitted into my wards at the Charity Hospital on the fourth day of sickness, having never taken a dose of medicine. I did not attempt to *cure* such cases, but left them almost entirely in the hands of nature, enjoining upon them not to rise from bed, opening the bowels by a mild enema, if costive, and ordering the body and extremities to be occasionally sponged with warm vinegar, or whiskey and water, if the skin was at all hot and dry. A number of these cases re-

covered, and they were always peculiarly interesting to me, on account of the opportunities afforded of learning the natural course of this fever uninfluenced by medicines.

As the main object of this paper is to give a sort of historical narrative of the origin, progress, extent, and mortality of the great Epidemic which has so severely scourged our city, and the account is already drawn to so great a length, I deem it best not to enlarge it by a discussion of the debatable topic of *Treatment*. I could not do justice to this subject, without devoting at least ten or fifteen pages to its consideration, and therefore will defer it to a future period. As many of my professional readers, however, may expect me to say something about the "*abortive treatment*" of Yellow Fever, so highly extolled in some of my previous writings, I must not pass it by in silence.

In 1847, and ever since, till the present season, I have been able *promptly to cut short* nearly all the cases of Yellow Fever I was called to treat in this city; and there was but one year, (1851,) in which there was not a good deal of it to be treated. Several other highly intelligent physicians of this city have done the same. Our chief remedies for this purpose were large doses of quinine and opium, given at the onset of the fever. In reporting my satisfactory success with this treatment, I admitted that the disease treated, although certainly *Yellow Fever*, was of rather a milder type, and that it remained to be seen whether this abortive treatment would be equally successful in a more malignant epidemic. The opportunity has been presented this year, and I now must make a candid statement of the results of my experience.

When this epidemic broke out, I was one of the visiting physicians to the Charity Hospital, and soon had ample opportunities to test the abortive treatment by large doses of quinine and opium. It did very well in many cases where there was a *fair opportunity to apply it*, but I soon discovered that it did not display that controlling influence over this fever which it had done over all the Yellow Fever I had met with for six years previously. I then fell upon a more moderate use of the sulphate of quinine, and finally gave preference to the *Ferro-cyanuret*, in combination with blue mass, and without opium or morphine. I was pleased with the results, and pursued this course to the end of the epidemic.

I do not recollect to have treated any case of Yellow Fever

without giving quinine in some form, and am willing to compare results with any physician in the city. I still believe it to be *one of the most*, if not *the most valuable* of all our remedies in Yellow Fever—in short, that it is just as valuable in this type of fever as it is in bilious remittent. Many physicians tell me they found the sulphate of quinine to fulfil their expectations this year as well as usual, whilst others report quite differently.

When this epidemic broke out, the sulphate of quinine was prescribed boldly, by perhaps a large majority of the physicians of New Orleans; but from *the injudicious use of it*, which fell under my own observation in the wards of the Charity Hospital, I soon foresaw and predicted the *disrepute* into which the remedy would inevitably be brought, if things went on in that way. My prediction was fulfilled. From the *abuse* of the remedy in the hands of many who knew not how to prescribe it judiciously, a popular prejudice rose up against it, and in the eyes of many it was brought into unmerited disgrace. But this has happened to almost every valuable remedy in the whole *Materia Medica*, and must continue to occur, as long as people will rashly venture to administer powerful medicines, who know little or nothing about medical science. Notwithstanding the obloquy which has been heaped upon this great and glorious remedy this year, it still maintains the high reputation it has long held amongst those physicians who have learned to prescribe it with judgment. If people expect to discover a *sovereign remedy* for *any special disease*—one that may be pitched into the human body without discrimination or judgment, wherever that disease is found, they are woefully mistaken. The *art of prescribing* medicines is of more importance to the community than the *real virtues* of the medicines; for the former is possessed by but few, whilst the drug stores abound in valuable remedies.

From all I have heard and seen, I am sure that no one can boast this year of the *extraordinary* success of his treatment, whether he used quinine or not, *calomel* or not, large quantities of medicine or *none at all*. Yet I would by no means wish to convey the idea that the success of the experienced physicians of New Orleans has not been highly commendable this year, considering the virulence and malignancy of the epidemic, and the numerous difficulties in the way of bad nursing, &c., they had to contend with. For myself, I will state conscientiously that I lost less than nine per cent. of my cases

in private practice, to which I was called *in good time*, and had a *reasonably fair chance to treat*; and about 16 per cent. of the whole. I doubt not that many physicians met with equal, if not superior success, and under all the circumstances, I do not think it should be considered discreditable. If the same success had been attained by all the physicians of the city, our population would not have been *decimated* as it has been by this dreadful pestilence.

This is all I shall say at this time in respect to the treatment of Yellow Fever. I shall enlarge upon it at another time, but could not omit this occasion to say something in defence of a great remedy, which has been much abused and calumniated. There are men in all professions and pursuits who are ever ready to chime in with popular prejudice, and always trim their sails to suit the current of public opinion, without regard to the principles of truth and science.

There even be some who have such unbounded confidence in the *inherent and unerring wisdom of the People en masse*, as to maintain that they never fail to arrive at the most rational and correct conclusions upon all great questions, whether of Law, Politics, Religion, Science or Philosophy. If such persons would only look into the history of *popular delusions and errors* in regard to Medicine, and all that relates to the origin, spread and treatment of disease, they would surely abandon this utopian idea. If the time ever come, which some predict, that *the People* shall take upon themselves to determine whether *quinine or any other medicine* shall be given in Yellow Fever or not, I cannot doubt that the results will be extremely unfortunate. The people may select their doctors, but they are compelled to intrust their lives to them when employed.

FEVER STATISTICS.

In my previous memoranda frequent allusion was made to the various types or kinds of fever that were designated in the reports from the cemeteries during the prevalence of the epidemic. The following table will show the principal types of fever, that appeared in the *mortuary* reports of the Board of Health during the months of June, July, August and September.

FEVERS.	DEATHS.			
	June.	July.	August.	September.
Scarlet,.....	16	1	1	0
Typhoid,.....	13	29	18	8
Typhus,	15	3	17	4
Remittent Bilious,.....	17	14	9	2
Congestive,.....	12	24	20	8
Pernicious,.....	13	10	59	30
Cerebral,.....	6	6	22	0
Malignant,.....	1	6	5	3
Uncertain,.....	3	2	6	1
Intermittent,.....	1	7	8	1
Yellow,	46	1380	4797	722
Total,.....	143	1482	4962	779

Various names of fever found on the reports from the cemeteries, such as nervous, hectic, Chagres, putrid, ataxic, worm fever, &c., have been omitted, as the cases amount to but few.

From this table it will be seen that in the month of June the deaths from all the fevers specified amount to 143 ; of which Yellow Fever 46. In July, all fevers 1482, Yellow Fever 1380. In August, all fevers 4962, Yellow Fever 4797. In September, all fevers 779, Yellow Fever 722.

The total number of deaths from *all fevers* during these four months, as published, was 7472 ; of which 6945 died of Yellow Fever, and 527 died of other types.

I regret that the month of October could not be added to the above table, on account of the incompleteness of the returns.

From these *mortuary* statistics, it will be seen that during the reign of the *great epidemic*, which slew its thousands, people likewise died of *all sorts of fever*. The statistics of the *living*, which I shall now present from the Charity Hospital, also show a similar variety of fevers prevailing together, though in somewhat different proportions.

TABLE, showing the number of patients *admitted* into the New Orleans Charity Hospital, for *all kinds of fevers*, during the months of June, July, August and September. 1853.

JUNE.			JULY.		
FEVERS.	ADMITTED.	DIED.	FEVERS.	ADMITTED.	DIED.
Intermittent,	314	1	Intermittent	335	0
Remittent,	79	6	Remittent,	126	8
Continued,	11	1	Continued,	6	1
Typhoid,	13	5	Typhoid,	8	4
Typhus,	8	5	Typhus	2	1
Congestive,	3	2	Congestive,	4	4
Ephemeral,	5	0	Ephemeral,	10	7
Pernicious,	7	5	Pernicious,	5	3
Scarlet,	1	0	Yellow,	1157	620
Yellow,	50	24			
Totals,	486	49	Totals,	1653	648
All Diseases,	1127	118	All Diseases,	2096	719
AUGUST.			SEPTEMBER.		
FEVERS.	ADMITTED.	DIED.	FEVERS.	ADMITTED.	DIED.
Intermittent,	181	2	Intermittent	112	0
Remittent,	15	0	Remittent,	21	0
Continued,	1	1	Continued,	2	0
Typhoid,	2	0	Typhoid,	2	3
Typhus,	0	0	Congestive,	6	5
Congestive,	4	3	Ephemeral,	15	0
Ephemeral,	11	0	Pernicious,	6	3
Pernicious,	7	5	Hectic,	1	1
Yellow,	1495	941	Yellow,	350	180
Totals,	1716	952	Totals,	515	192
All Diseases,	1940	1020	All Diseases,	874	252

From this table it will be seen that there were admitted of *all diseases* during these four months, 6037 patients; of which 4370 were for *fever of all kinds*.

Of the 4370 fevers of all kinds admitted, 3052 were *Yellow Fever*, and 942 *intermittent*. The proportion of other types may be seen by a glance at the table. I must mention that the diagnosis of diseases at the Charity Hospital is not entered upon the tickets of patients as soon as they enter, as it should be, but is deferred till

From this it is evident that *upwards of a thousand cases were admitted when the disease had already reached its second stage.* Dr. Choppin further states, that 168 of these cases were in *articulo mortis* when admitted. He estimates that about 7 per cent. of all the cases of *black vomit* in the hospital this year *recovered*. This, if true, is extraordinary.

Dr. Jewell, of Philadelphia, gives a table of 44 cases of Yellow Fever in that city last summer, which shows a mortality of 80 per cent. Of 11 cases treated in the Pennsylvania Hospital, 4 recovered. In the Blockley Hospital there were 3 cases and 1 recovery.*

It is difficult to draw anything like a fair comparison between the results of treatment in the Charity Hospital and in private practice, on account of the advanced stage of diseases in which most patients generally are when they apply for admission, especially in Yellow Fever and Cholera. For the latter disease they seldom apply until they are on the verge of collapse, and too often when perfectly hopeless. Fifty per cent. is about the general average of mortality from Yellow Fever at this hospital in epidemic seasons. Sometimes it is much greater.

I will now give such reports and statistics as I have been able to procure from the other hospitals, prisons, asylums, and benevolent societies in the city, and first

THE MAISON DE SANTÉ.

This was formerly Dr. Stone's private infirmary, but is now in the possession of the Sisters of Charity, who keep it in beautiful style. They employ Dr. Stone and Dr. Wedderstrandt as consulting surgeons, and Dr. Boyer as resident physician. We are indebted to the politeness of the latter gentleman for the following interesting report:—

“DR. FENNER,

“DEAR SIR—At your request I send you the number of admissions and deaths of Yellow Fever in the Maison de Santé, during the Epidemic of 1853. Very respectfully,

“P. C. BOYER, Resident Physician.

* Quarterly Summary of the Transactions of the College of Physicians of Philadelphia, October, 1853.

" At the Maison de Santé, a private hospital under the charge of the Sisters of Charity, the first case of Yellow Fever was admitted on the 13th of July ; from that time until the disappearance of the Epidemic the admissions of Yellow Fever amounted to 338, the deaths during the same time 97. Among the number discharged cured there were fifteen cases of black vomit.

" All the Sisters of Charity connected with this institution were unacclimated ; three of the number recovered from Yellow Fever, the others passed through the Epidemic without being attacked.

" Maison de Santé, N. O., Nov. 11, 1853."

THE TOURO INFIRMARY.

This is a new hospital, which has been established within the last year or two, by the munificence of the venerable Mr. Touro, one of our oldest citizens, and one who has used his immense wealth more for the improvement of the city than perhaps any one who has ever lived here. The infirmary which has the honor of bearing his name is under the exclusive control of Dr. J. Bensadon, who has politely furnished me the following report on Yellow Fever :—

" Yellow Fever cases from July 1st to November 1st—

	Admitted.	Discharged.	Died.
Males	362	218	144
Females	161	92	69
Totals	523	310	213

" Three recovered from black vomit, 13 from hiccup and hemorrhage ; 109 died with black vomit.

" Of the 213 deaths, 26 died within 10 hours after their admission ; 38 within 24 ; and 24 within 48."

A large number of the Yellow Fever cases in this infirmary were sent there by the Howard Association and the Hebrew Benevolent Society. Under all the circumstances, I consider the success of Dr. Bensadon in the late Epidemic highly creditable. The infirmary is situated on Old Levee Street, just above St. Mary's Market.

CITY WORKHOUSE AND HOUSES OF REFUGE.

We are indebted to Dr. John F. Thorp, the attending physician,

for the following reports of the *first ten cases* of Yellow Fever that occurred in each of these institutions.

CITY WORKHOUSE.

Situated on Hevia Street, in the back part of the city, parallel with the Charity Hospital. The inmates are chiefly males, condemned to work for short periods as punishment. Dr. Thorp gives the date of admission into the workhouse, the date of attack, and the results.

	Admitted.	Attacked.	Result.
Case 1	June 9th	June 29th	cured.
" 2	unknown	July 2d	"
" 3	May 10th	" 2d	"
" 4	June 18th	" 2d	"
" 5	unknown	" 2d	"
" 6	July 11th	" 12th	"
" 7	June 18th	" 13th	"
" 8	July 14th	" 15th	died.
" 9	June 9th	" 18th	"
" 10	July 2d	" 14th	cured.

Total number of cases treated in this place, 89. Deaths, 14.

BOYS' HOUSE OF REFUGE.

This institution adjoins the City Workhouse. The first case of Yellow Fever that occurred here was on the 22d of June, in a boy who had been in the House *one year*. The next five cases had also been confined there *one year*. There were 21 cases in all, of which 6 died.

GIRLS' HOUSE OF REFUGE.

Situated on Apollo Street, near Triton Walk.

The *first two cases* occurred on the 1st of July. There were 21 cases in all, of which only 1 died, and she a matron who had been in the House for several months. Dr. Thorp appends the following remarks about the cases in this institution :—

"These persons had all been in the Refuge for some months, and from this fact I believe the disease originated there; or rather that their isolated condition did not protect them from the general cause, or epidemic influence prevailing at the time. Both Houses of Refuge were in bad condition as to cleanliness."

CITY PRISON, PARISH JAIL AND LUNATIC ASYLUM, AND BOYS'
HOUSE OF REFUGE.

Dr. E. Sabatier is the city physician for the Second and Third Districts, and has charge of all these establishments. On account of recent bad health, Dr. S. cannot at this time furnish a full and minute account of the Yellow Fever at these places, but has kindly given me a few notes, which I deem worthy of insertion. There was more Yellow Fever in the City Jail and Parish Prison this year than was ever known before.

The first case occurred about the last of July, in a man who had been in the prison about three months, and had been treated for intermittent fever about two months previously. At the time above stated, he was taken out to court for trial, or something of the kind. Whilst there he was attacked with Yellow Fever, and had to be taken back to the prison. His attack proved a severe one, attended with hemorrhage and yellowness, but he finally recovered.

About a week afterwards another case occurred, in a man who had not nursed, or been about the first case. From this time cases continued to multiply till they reached the number of 30, of which 5 died. There were about 300 prisoners in the jail at this time, and there was free intercommunication amongst them; in short, they were kept together within very narrow limits. There were two rooms set apart for the hospital, in one of which the Yellow Fever patients were kept to themselves. Before this was done, however, several were attacked with Yellow Fever, who had been placed in hospital for other complaints. If the disease were really *infectious*, it appears strange that only 30 out of 300 should have taken it under such favorable circumstances for communication.

The *Lunatic Asylum* is a department of the Parish Prison, and is used chiefly as a temporary resort for lunatics previous to their being sent up to the State Asylum at Jackson. There were from 30 to 40 inmates during the summer, much crowded, no separate apartment for the sick. There were 9 cases of Yellow Fever amongst them, and no death. The first two cases occurred on the same day, (August 6th,) in persons who had been in only a few days. The next case occurred on the 10th of August, in a man who nursed the two first. There was then a lapse of nineteen days be-

fore another case occurred. He had been in the Asylum ever since the 7th of January previous. The last case occurred on the 1st of October.

Most of the cases occurred in those who waited upon the sick, but they were all in such close quarters that there could not be much difference in the amount of intercourse.

The Boys' House of Refuge of the Third District is situated on the Gentilly road, quite in the country, about three miles from the city prison.

Dr. Sabatier says there was a good deal of Yellow Fever among the inhabitants around the Asylum, but *only one case* occurred in the Refuge.

PRIVATE INFIRMARIES OF THE BOARD OF HEALTH.

The Board of Health established four temporary hospitals during the worst of the Epidemic, one in each district of the city. I have before me reports from only two of them, viz., No. 1 and No. 4, which furnish the following statistics:—

No. 1 received 343 cases, and lost 155.

No. 4 received 432 cases, and lost 207.

I have not had time to collect any information from the other hospitals and asylums in the city.

HOWARD ASSOCIATION.

This far-famed Benevolent Association consists of but thirty members, is a chartered institution, and has been in existence ever since the year 1837. The officers are now preparing a full statement of its transactions during this memorable Epidemic, which will be published in pamphlet very soon. We are indebted to the kindness of Mr. Kursheedt, the Treasurer, and one of its most active members, for the following statistics, which could only be given approximatively at present.

From the 14th of July to the 1st of November, the Association took charge of 10,500 patients, of which about thirty per cent. died.

Total amount of donations received, about.....	\$225,000
Amount expended in this city, about.....	140,000
“ “ in other places, about.....	20,000
Balance on hand, invested, about.....	66,000

Its benevolent aid was extended to about twenty places in Louisiana, Mississippi, and Texas. About forty physicians enrolled their names, subject to call, soon after the Association offered its benevolent services to the indigent sick. Three of these physicians fell victims to the Epidemic, viz., Dr. Jacobson, late of St. Louis; Dr. Friend, late of Alabama, but originally of Petersburg, Va.; and Dr. Lucien Hensley, late of Frankfort, Ky., all most worthy and intelligent gentlemen. Peace to their *manes*! They fell in the *holy cause of suffering humanity*, and most probably will have no more durable monument to their memories than this brief notice of their untimely fate. Dr. Friend was a widower, of middle age, who had very recently settled amongst us, and has left a family of orphans, who, I hope and trust, may never suffer for want of that benevolence which he so liberally displayed while living.

The physicians of New Orleans attended a vast number of destitute sufferers in all parts of the city who had not called upon the Howard Association for relief, but their chief charity service was done at the great Charity Hospital, where, as has been shown, a small number of them attended *thousands of cases*, without one cent of pay. They were required by the administrators to visit the hospital every morning and evening during the Epidemic, and notwithstanding their pressing engagements in private practice, I believe most of them discharged their duty faithfully. There is, perhaps, no place in the world where more *charity service* is done by the medical profession than in New Orleans, and there is no other profession, or pursuit whose charities can be compared with it; but I am sorry to add, that I know of no place where these benevolent services are more lightly appreciated than here.

MORTALITY OF THE EPIDEMIC.

I shall now endeavor to give an *approximative* calculation of the deaths caused by this Epidemic in the five months, from the 1st of June to the 1st of November.

Months.	Total Deaths.	Yellow Fever.	Other Dis.	Not stated.
June	666	40	581	45
July	2077	1406	559	112
August	6235	5189	689	357
September .	1681	1070	498	113
October ...	676	165	438	73
	<hr/> 11,335	<hr/> 7,870	<hr/> 2,765	<hr/> 700

This table presents the deaths from Yellow Fever, as shown on the *burial certificates*. It is generally admitted that *six-sevenths* of the certificates in which the cause of death was *not stated* during the Epidemic should be added to the Yellow Fever list, which, being 600, would make that list amount to 8,470. Taking this as correct, and having *some certain data* to go by, we may now make an *approximative* calculation of the whole number of cases of Yellow Fever that occurred in the city during the five months above specified, and also the general rate of mortality for the whole.

	Cases.	Deaths.	Loss per cent
The Charity Hospital.....	3052	1765	56
Howard Association, about....	10500	3150	30
Maison de Santé	338	97	28
Touro Infirmary	523	213	40
City Workhouse, 1st Dist.....	89	14	15
Boys' House Refuge.....	21	6	28
Girls' House Refuge.....	21	1	5
City Prison, 2nd Dist.	30	5	16
Lunatic Asylum.....	9	0	0
Bd. of Health Infirmary, No. 1.	343	155	45
“ “ “ No. 4.	432	207	48
Totals.....	15,858	5613	

We thus have 15,858 cases, with a loss of 5,613, which is at the rate of $35\frac{1}{2}$ per cent., inasmuch as all these deaths were certified by physicians; when deducted from 7,870, the total of the same class, it leaves a balance of 2,257 deaths, to be distributed amongst other hospitals and infirmaries, asylums and private practice. If we consider these 2,257 deaths to be 20 per cent. of the whole number of cases treated in the last-mentioned quarters, it would show 11,285 cases, which, added to 15,858, the number of cases above ascertained, would give a probable grand total of 27,143 cases treated in the city during the time specified.

Estimating the probable population of the city at 100,000 during the Epidemie, it thus appears that upwards of *one-fourth* of them had the fever; and of those who were attacked, within a fraction of 29 per cent. died, being nearly 8 per cent. of the estimated population. Of course these results would have to be different if we either raise the amount estimated for the population, or add to

the list of *certified deaths* by Yellow Fever, six-sevenths of those in which the cause of death was "*not stated*" during the prevalence of the Epidemic. Every other city or town visited by this Epidemic was at least *decimated*, and some of them more.

The great Epidemic of 1847 only caused about 3000 deaths in this city and Lafayette, which were then separate, but are now united.

Let us now review some of the prominent facts presented in the foregoing history of one of the most terrible pestilences that ever visited an unfortunate city.

1. We have shown that when this pestilence broke out, the condition of the city in respect to *cleanliness* was so bad as to be an object of *public notoriety*. Indeed it was in such a state, that if it had given rise to Egyptian Plague instead of Yellow Fever, it should not have surprised any one. The only surprising thing is, that with so much filth of all kinds as is always to be found in this city, we do not have an Epidemic every year. The fact that *we do not*, has even led to the public expression of the strange opinion, that the public filth of the city, instead of *originating* Yellow Fever, absolutely *protects* us from it in no small degree.

a 2. ~~X~~ We have shown that Yellow Fever appeared much earlier this year than usual, and that the *first cases* occurred in persons who had been in the city but a few days, in one instance six days, and in another thirteen. These were unacclimated persons, who had just arrived from Europe, and came over in vessels direct from Liverpool and Bremen, without stopping at any place where Yellow Fever was prevailing. X

b 3. ~~X~~ We have shown that no vessel that arrived here from any *infected* port, whether in South America or the West Indies, brought any cases of Yellow Fever, had any on them whilst they were here, or gave rise to any cases previous to those which must have originated in this city. X

c ~~X~~ 4. That within a very few days after the occurrence of the first cases, others were seen in different and remote places, having no sort of connection or intercommunication that we were able to trace after a careful inquiry. That shortly afterwards other cases occurred in still more remote and separate localities, under like circumstances. X

d 5. ~~X~~ We have shown that the disease was the same that prevails

here to a greater or less extent every year, differing only in the extraordinary degree of its malignancy. X

6~~X~~ We have shown that all the varieties of endemic fever which prevail throughout the southern country were seen here in the midst of the Epidemic Yellow Fever, and they were seen to interchange types just as is observed among the fevers of the country. X

From these facts I am led to the inevitable conclusion, that the disease we have been considering originated from local causes existing in this city, aided by an extraordinary constitution or condition of the atmosphere at the time.

I am not prepared to maintain that the putrifying filth which is to be found to a great extent in this city at all times, is *the sole cause* of Yellow Fever ; for if it were, we should certainly have an Epidemic here every year : but I do believe it is almost a *sine qua non*, and that if it were effectually removed, and the whole city well paved, it would effect more towards *the prevention* of Yellow Fever here than anything that can be devised. This opinion is surely well supported by the established facts, that *Yellow Fever always breaks out and rages worst in the unpaved and least improved parts of the city*, whilst the *well-paved and best built portions generally suffer least from it*.

It is often stated and believed by many, that Yellow Fever always breaks out first amongst the shipping. *This is not true*, as I have repeatedly demonstrated in my previous writings on the subject. It is firmly believed by many persons that New Orleans is indebted to its naval intercourse with the West Indies, Vera Cruz, or Rio Janeiro, for all the Yellow Fever that is ever seen here. In opposition to this opinion stands the stubborn fact that this intercourse has been continued, with but slight interruption, for half a century past, whilst we have only had Epidemics of Yellow Fever on an average of about once in every three years. And, furthermore, I have, upon several occasions, carefully noted cases of this disease which were imported from Havana and Vera Cruz, and although they were placed in apartments where they were surrounded by persons who had never had Yellow Fever, I never knew the disease to be communicated in a single instance.

The great Epidemic of this year certainly broke out first in New Orleans, but the peculiar constitution of the atmosphere, upon which I must think it in a great measure depended, extended to a

greater circumference than was ever known before in this region. Still it had its bounds ; and nearly all places within those bounds which had local causes of disease capable of generating Yellow Fever, with the aid of this extraordinary constitution of the atmosphere, did have it. The range of this Yellow Fever atmosphere, although so wide, was as well defined as the narrow locality in the city of Philadelphia, in which the disease originated and was confined last summer.

I am not prepared to maintain that Yellow Fever is *never* communicated, *per se*, from person to person. On the contrary, I can readily conceive that, like cholera, typhus, and dysentery, it may sometimes display infectious or contagious properties to a limited extent. I have *never seen* an instance of the kind ; but cases have been reported to me, upon such *reliable testimony*, that I could see no other way of accounting for them than *direct communication*.

Admitting it as true, that Yellow Fever is capable of regenerating itself in the bodies of the sick, and of thus extending from person to person in close proximity, let us pause a moment and examine *the value* of this fact. At all the places where Yellow Fever prevails in the United States, it appears at *distinct intervals* of different lengths. It breaks out and rages for a season, disappears entirely, and after a lapse of time returns again. When it reappears, how often can it be traced, with *reasonable probability*, to infected vessels, goods, or persons? If this can be done in a *considerable majority* of instances, it will be sufficient to make a *rule* ; and the instances in which such a connection cannot be fairly traced, must be set down as *exceptions* to the rule. Now, I maintain, after careful observation of the outbreaks of Yellow Fever at New Orleans for the last twelve years, that no such connection could be reasonably traced in any instance. Nor has it been traced in a satisfactory manner in Mobile, Natchez, Vicksburg, or any other place in the United States, where this disease has often prevailed. Hence the *great majority* of the physicians, and others who have had the best opportunity of observing, have come to the conclusion, that Epidemics of Yellow Fever do not *usually*, if *ever*, originate from this source. This is also the uniform conclusion, with but *few exceptions*, of all those who have seen most of the disease in all parts of the world where it prevails, as any one can see who will examine the volumes of testimony that have been published on the subject.

Again, Yellow Fever may be contracted in an infected district, and conveyed in the person of the sufferer to a place quite remote. In such instances, which are very frequent, and doubtless familiar to thousands of persons in this region, *how often* is it communicated to those who come in contact with it? I will venture to say, *not as often as once in fifty cases*. Many would say, not once in a hundred.* Two highly intelligent gentlemen of Memphis have recently told me that probably not less than seventy-five cases of the malignant Yellow Fever of this year were landed from the steamboats at that place, and there died, or recovered without communicating the disease in a single instance. Dr. Jewell, of Philadelphia, informs us that eleven cases of Yellow Fever were admitted from the infected district into the Pennsylvania Hospital, and three into the Blockley Alms House; they were mixed promiscuously with other patients, yet the disease was not communicated in a single instance. Dr. Ball, of this city, who, on behalf of the Howard Association, visited the village of Providence when the Epidemic was at its worst, tells me of several instances in which the disease was taken back to the plantations without being communicated. I will not weary the reader with instances of the kind.

If, then, it be true that Yellow Fever is not communicated from one person to another by immediate presence or contact, independent of other influences, oftener than *once in fifty or a hundred exposures*, it would certainly make but a *rare exception* to a general rule; and this I believe to be about the true and real value of the now popular and warmly advocated doctrine of the *contagiousness of Yellow Fever*. It is equally applicable to *fomites* of all kinds.

I have now admitted, for the sake of argument, all that is contended for by the most strenuous advocates of contagion, and what does it amount to?—that Yellow Fever may be conveyed from place to place, in ships, goods and persons; and even be communicated to those who come in contact, yet *this effect is so seldom produced* as to make but a *rare exception to the general rule*. Now, does this afford sufficient inducement for the establishment of *Quarantine*, involving heavy expense, and throwing serious impediments in the way of commerce and travel? *That is the question!* and I only wish that the Legislature, who have to decide and act upon it, were as fully informed as they ought to be, as to all that has been done in regard to it within the last fifty years. France and England,

two of the most enlightened and rigid governments in the world, after enforcing Quarantine against Yellow Fever for half a century, are now abandoning it as *useless*. The reports that have been made to them by the able men appointed to investigate the subject show most plainly that all that can be done, to either *check* or *prevent* the ravages of Yellow Fever, consists in *proper attention to cleanliness, ventilation and drainage*.

The numerous instances presented this year in which Yellow Fever appeared to be conveyed from place to place by means of persons, goods, or vessels, have led to the belief that the progress of this disease might be arrested by quarantine measures, and it is evident that the people of this city and state are bent on having the experiment tried. We sometimes need a quarantine station for other purposes, and it may not do a great deal of harm to try its efficacy in keeping off Yellow Fever ; but of this I am by no means sure. I, for one, however, shall not object to the establishment of quarantine for the purpose of keeping off Yellow Fever, provided the *more rational and hopeful measures of protection be not neglected*. I mean such measures as belong to a strict and efficient sanitary police for the whole city. In a word, let the city be kept as clean as possible; let all putrifying filth be removed at a proper time, and dashed into the middle of the river; let the privies be so improved as to conduct their effluvia into the upper air; let there be no stagnant water on any vacant lot, nor under any house; suffer not the houses of the poor to be too much crowded with inmates; extend the pavement of the streets as fast and as far as possible; and last, though not least, let there be fresh water running from the river through all the cross streets of the city, back to Bayou St. John and the New Canal, for at least eight hours out of every twenty-four, the year round. All this would cost a great deal of money; but what if it does? We are infested with destructive evils which cannot be gotten rid of without the expenditure of money, and the use of great efforts besides. Is it not better to spend many thousands of dollars annually for the *preservation* of our people, than *millions*, as we do, for *attending them during sickness, and burying them when dead*? Some of our patriotic and spirited politicians have laid down the maxim—" *millions for defence, but not one cent for tribute*." Let this maxim be *reversed*, and it is applicable to us. We vote almost *nothing* for de-

fence, but are compelled to pay millions as tribute to the King of Terrors.

If I were asked whether, if all the sanitary measures I have pointed out, and others not mentioned, were adopted and strictly enforced, there would then be any *surety* that the city would be completely exempted from Yellow Fever, I could not answer positively in the affirmative; but I would say with confidence, judging from what has been accomplished in other places, and what we see in parts of our own city, that we might *reasonably expect at least a vast amelioration*—that we should have epidemics of all kinds *much less frequently, and less malignant* when they come.

We may look for much valuable information relative to the causes and contagiousness of Yellow Fever from the labors of the Sanitary Committee, who are actually engaged investigating those subjects throughout the whole region that was visited by the late Epidemic.

I must here close my remarks upon the great Epidemic which has so severely scourged our devoted city. If they serve to throw any light whatever upon the origin and true nature of the disease, or the best means that can be adopted for escaping it in future, I shall be amply rewarded for my well-meant though rudely-executed task. I have spoken to my fellow-citizens of New Orleans *plainly* and *independently*, as I think one should who is completely identified with them in whatever may befall the city, whether of *weal* or *woe*. I am not, and never expect to be, a candidate for any office within their gift, and therefore have no occasion either to flatter their pride, or to humor their prejudices. *Truth* has been the only object of my search, and I have published nothing but what I believe to be true. As an *independent voter*, I have the right to comment respectfully upon the conduct of all our public servants, and I do so when I think it proper. The celebrated Dr. Rush, of Philadelphia, a revolutionary patriot, and one of the greatest ornaments of the medical profession, maintained that "city authorities were justly chargeable with the lives of all who die of *preventable* diseases within their jurisdiction, and that they should be made responsible for the same before the courts of justice." This sentiment has been quoted with high commendation by the General Board of Health of England. If such were the law of this land, however, I should tremble for the fate of *our*

worthy Mayor and Boards of Aldermen, if arraigned before the stern and inflexible Judge who at present presides over *the 1st District Court*.

I have found so much to say about the Epidemic in this city, that I have thought it best to reserve what I have ascertained in relation to its ravages in other places around. If this publication, however, should meet with sufficient encouragement, it will be followed by a second edition, which will contain full accounts of the Epidemic at all the places visited by it. The whole will form a component of a volume, comprising *a minute History of the Yellow Fever at New Orleans and the surrounding region, for the last twelve years*. It will contain the best essays that have appeared on the subject in this region.

ADDENDUM.

After completing the foregoing history of the Epidemic at this place, I have thought it best to add the following extracts from "*The Second Report of the General Board of Health of England on Quarantine in Yellow Fever*," presented to both Houses of Parliament in April, 1852. With its appendices extending to 414 pages, it contains an extensive and searching inquiry into the subject, from authentic documents, received from all places where Yellow Fever has prevailed, both in America and Europe, and is signed by the Earl of Shaftesbury, Mr. Edwin Chadwick, and Dr. T. Southwood Smith. I must say that my humble observations fully confirm the remarks and conclusions of this learned and able commission.

After considering a great deal of testimony relative to the *localizing conditions which favor the origin and spread of Yellow Fever*, the Report says—

"We submit that the preceding evidence establishes a complete identity between the localizing conditions of Yellow Fever as they are found to exist within the Yellow Fever zone, and those of Cholera and other epidemic diseases over all the districts in which they prevail.

Medical authorities appear to be agreed that the conditions which have now been described, and the like, are not in a proper sense the causes of epidemic diseases, but rather the circumstances which determine the actual outbreak, spread, and intensity of such diseases when an epidemic influence is present. What that epidemic influence is, constituting the true material cause of any prevailing epidemic, the present state of medical science is unable to explain. The filthiest localities, the most crowded quarters and dormitories, are not at all times the seats of those particular forms of disease called "fevers," though the inhabitants are generally in a depressed state of health. Even in epidemic seasons some such places often escape. While cities and countries in a bad sanitary state are

sometimes devastated by pestilence ; at other times, their sanitary state remaining unchanged, these same cities and countries continue free from pestilence for indefinite periods, the intervals occasionally numbering many years ; and then sometimes suddenly, but more frequently by slow and appreciable degrees, pestilence again returns and rages with its former fury. Why this is—why conditions which sometimes act so powerfully do not universally and invariably produce epidemic disease, is a problem yet to be solved. What is certain, however, and what is of the utmost practical importance is, that a bad sanitary condition is at all times attended with an excess of sickness and mortality, and that whenever epidemic diseases do prevail, they concentrate their violence in these unhealthy localities. Still the sanitary conditions, as far as is apparent, remaining the same, epidemics return only periodically. It has been generally inferred, therefore, that for the development of that extraordinary amount of the same kind of disease simultaneously amongst great numbers of the population which constitutes an epidemic, there must be, besides the known conditions, the presence of some other condition as yet unknown ; and hence these known conditions are commonly said to be not generating, but localizing causes ; the unknown or real causes being, in our ignorance of their true nature, compared to poison clouds which pass from city to city, and from country to country, bearing and scattering poison germs, the seeds of pestilence, for the development of which the localizing conditions that have been described afford the fitting and perhaps necessary nidus.

But there is another question of great importance on which medical opinion appears to be less unanimous ; namely, the extent to which filth, overcrowding, and decomposing organic matter or the like, may actually generate fever. Though it is generally agreed that these causes cannot of themselves produce such epidemics as those in question, yet the evidence is indubitable that they are capable, when concentrated, of generating individual and even numerous cases of fever of different types, and of the highest degree of malignity. Sir John Pringle and others state, with reference to bodies of men, that whenever wounded soldiers, with malignant sores or mortified limbs, were crowded together, or whenever only a few of such diseased persons were placed in a room with the sick from other diseases, for example, with those la-

boring under intermittent and remittent fevers, a severe and mortal typhus quickly arose ; nay, that whenever men previously in a state of sound health, were overcrowded in rooms without ventilation, typhus fever was sure to be produced.

From indubitable facts it is argued that we see at the present time the actual generation of typhus in a similar manner, constantly going on before our eyes. One of the physicians of the London Fever Hospital gives the following illustration of the facts :—

“A number of Irish arrive in London, and crowd together in the close, undrained and filthy courts in Gray’s Inn Lane. They are healthy when they arrive from the country ; there was no fever in the neighborhood when they came. Twenty or thirty persons occupy a room containing barely space enough for the healthy existence of four. All sorts of abominations accumulate around these overcrowded dwellings. In a few days typhus breaks out. During the spring of the present year, (1851) upwards of one hundred cases of typhus have been received into the London Fever Hospital from courts occupying one side only of Gray’s Inn Lane. The disease has not spread to the other side of the street ; it has not extended even to houses in the infected courts that are in a cleaner and less crowded state ; the prevalence of the fever has been strictly limited to the houses and rooms in which the common localizing causes are very intense.”

That Yellow Fever may be so produced, in the climate of Yellow Fever, is placed by every-day occurrences in those regions beyond the possibility of doubt. So much indeed is this the case, that a physician after many years’ service between the tropics, gives the following receipt for the sure and rapid production of Yellow Fever :

“Take,” says Dr. Bone, ‘of soldiers lately arrived in the West Indies any number ; place them in barracks in a low wet situation, or in the mouth of a gully, or on the brink of a dry river, or on the summit of a mountain, and to leeward of a swamp, or of uncleared ground, and where there is no water or only bad water ; give them each only twenty-two inches of wall in their barrack room ; let their barracks be built of boards or lath and plaster, and have neither galleries nor jalousied windows, but close window shutters, and a hole or cellar under the flooring for containing mud and stagnant water, and holes in the roof for the admission of rain, and

the windows only eighteen inches from the floor, that they may be obliged to sleep in the draught of air ; and let them have drill every morning on wet ground, and when fasting ; guard mounting, and all kinds of fatigue not in the morning or evening, but during the hottest time of the day ; when on sentry, no shed to keep off the direct rays of the sun ; bad bread, putrid meat, few vegetables, plenty of new rum, especially in the morning ; discipline enforced by terror and punishment, not by mind and prevention ; an hospital similar to the barraek room, without offices, always crowded, plentifully supplied with rum, scantily with water, and so ill regulated that the men dread to enter it ; a firm belief in the doctrine of contagion, and a horror of approaching any person affected with Yellow Fever. Let these directions be attended to in Trinidad, or even in Barbados, and especially when the air is stagnant, or charged with noxious vapors subsequent to long drought, the soldiers will soon die, some of them of Yellow, some of them with Black Vomit, and those first, in the rooms where these directions have been most carefully observed."

"It is proved by melancholy experience that when due care is not taken to prevent the concurrence of these and similar conditions, individual cases of Yellow Fever, in a Yellow Fever climate, may be as surely produced as cases of typhus among the Irish in the courts of Gray's Inn Lane and St. Giles's."

The following are the

Conclusions of the General Board of Health relative to Yellow Fever.

"From a consideration of the whole of the preceding evidence respecting Yellow Fever, we have arrived at the following conclusions :—

"1. That Yellow Fever Epidemics break out simultaneously in different and distant towns, and in different and distant parts of the same town, often under circumstances in which communication with infected persons is impossible.

"2. That Yellow Fever Epidemics are usually preceded by the occurrence of individual or sporadic cases of the disease, which sporadic cases are likewise common in seasons when no Epidemic prevails.

"3. The Yellow Fever Epidemics, though occasionally extend.

ing over large tracts of country, are more frequently limited as to the space over which they spread, often not involving the whole of a town, and sometimes not even any considerable district of it.

" 4. That Yellow Fever Epidemics do not spread from district to district by any rule of gradual progression, but often ravage certain localities, while they spare entirely, or visit very lightly, others in the immediate neighborhood, with which the inhabitants are in constant intercommunication.

" 5. That Yellow Fever Epidemics, when they invade a district, do not spread from the houses first infected to the next, and thence to the adjoining, and thus extend as from a centre; but, on the contrary, are often confined to particular houses in a street, to particular houses on one side of a street, to particular rooms in the same house, and often even to particular rooms on the same story.

" 6. That in general, when Yellow Fever breaks out in a family, only one or two individuals are attacked; commonly the attendants on the sick escape; and when several members of a family are successively attacked, or the attendants on the sick suffer, either the epidemic was general in the locality, or the individuals attacked had gone into an infected district.

" 7. That when Yellow Fever is prevalent in a locality, the most rigid seclusion in that locality affords no protection from the disease.

" 8. That, on the other hand, so great is the success attending the removal from an infected locality, and the dispersion of the sick in a healthy district, that by this measure alone the further progress of an epidemic is often arrested at once.

" 9. That such dispersion of the sick is followed by no transmission of the disease, not even when the sick are placed in the wards of a hospital among patients laboring under other maladies.

" 10. That no one of the preceding facts can be reconciled with any other conclusion than that, whatever may be the exciting cause of Yellow Fever, it is local or endemic in its origin: and the evidence of this conclusion is, therefore, cumulative.

" 11. That the conditions which influence the localization of Yellow Fever are known, definite, and, to a great extent, removable; and are substantially the same as the localizing causes of Cholera, and of all other Epidemic diseases.

" 12. That, as in the case of all other Epidemic diseases, in proportion as these localizing causes are removed or diminished, Yel-

low Fever ceases to appear, or recurs at more distant intervals, and in milder forms.

" 13. That besides the common external localizing causes, there is one constitutional predisposing cause of paramount importance, namely, non-acclimatization—that is, the state of the system produced by residence in a cold climate; in other words, European blood exposed to the action of tropical heat; the practical lesson being, that the utmost care should be taken to prevent individuals or bodies of men recently arrived within the Yellow Fever zone, from going into a district in which the disease actually exists, or has recently been present.

" 14. That there is no evidence to prove that Yellow Fever has ever been imported.

" 15. That consequently the means of protection from Yellow Fever are not quarantine restrictions and sanitary cordons, but sanitary works and operations, having for their object the removal and prevention of the several localizing conditions, and when such permanent works are impracticable, the temporary removal, as far as may be possible, of the population from the infected localities.

"We deem it our duty to state, in conclusion, that from the most careful examination which we have been able to make of the mass of evidence submitted to us from which the foregoing conclusions have been deduced, we have not found a single fact or observation clearly ascertained and authentically recorded, opposed to the general tenor of such evidence. We have met with no exceptional cases. We have indeed found the opinions of some authorities, for whom we entertain great respect, not in accordance on some points; but these have reference for the most part to matters of a purely professional and scientific nature. On the great practical question, whether, whatever may be the nature and mode of propagation of Yellow Fever, Quarantine and Sanitary Cordons can afford any real protection against its introduction and spread, we believe there is now a very general unanimity of opinion, in accordance with the evidence we have submitted, that they cannot. We believe there is the like general agreement in this further practical conclusion, that the substitution of Sanitary or Hygienic measures for Quarantine isolation and restriction, would afford more certain and effectual protection."

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