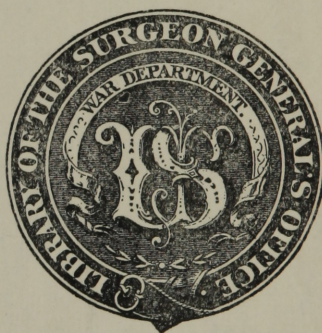


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A REPORT
ON THE
HISTORY AND CAUSES
OF THE
STRANGERS OR YELLOW FEVER
OF CHARLESTON:
READ BEFORE THE
BOARD OF HEALTH.

By THOMAS Y. SIMONS, M. D.
CHAIRMAN OF THE BOARD.

PRINTED BY ORDER OF THE BOARD.

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BOARD OF HEALTH,

OCTOBER, 18, 1839.

AT a meeting of the Board, convened this day at five o'clock P. M., the Chairman, Dr. THOMAS Y. SIMONS, read an elaborate and interesting document on the history and progress of Yellow Fever in this city. After which, the Board resolved itself into a Committee of the Whole, JAMES CHAPMAN, Esq. in the Chair, when the following Resolutions were offered and adopted:

Resolved, That the thanks of this Board be returned to the Chairman for the able manner in which he has discharged the duties of his office: and that 1000 copies of his address, presented at this meeting, be printed in pamphlet form, under the direction of the City Inspector.

Resolved, That the foregoing Resolution be published in all the daily papers of this city.

The Chairman having resumed his seat, and there being no further business, the Board adjourned.

From the minutes.

A. G. HOWARD, M. D.,
CITY INSPECTOR.

REPORT OF THE

COMMISSIONERS OF THE

LAND OFFICE OF THE DISTRICT OF COLUMBIA
IN A MESSAGE OF THE GOVERNOR OF THE DISTRICT OF COLUMBIA
TO THE BOARD OF PUBLIC WORKS, PASSED BY THE BOARD
ON THE 15TH DAY OF FEBRUARY, 1891.
ON THE HISTORY AND PROGRESS OF THE DISTRICT OF COLUMBIA
CITY. AFTER WHICH, THE BOARD RESOLVED UNANIMOUSLY
COMMITTEE OF THE WHOLE, TO BE COMPOSED OF THE
THE CHAIR, WITH THE FOLLOWING MEMBERS, WHOSE
REPORT WAS ADOPTED.

WHEREAS, THAT THE BOARD OF THE DISTRICT OF COLUMBIA
HAS BEEN ADVISED BY THE CHAIRMAN OF THE BOARD, IN A
LETTER DATED THE 15TH DAY OF FEBRUARY, 1891, THAT
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REPORT, &c.

GENTLEMEN—

The sickly season having terminated, I trust it will not be inappropriate or unacceptable to lay before you a history of the Strangers or Yellow Fever of Charleston, and to enquire into the various causes, which have been supposed to have an agency in its production, together] with some circumstances connected with it, which I deem important, and also the number of deaths which occurred among strangers and natives as far back as we have records up to the present year. Before proceeding, it may be proper to remark that the Yellow Fever was denominated Strangers Fever, (it being the same disease,) because while it attacks strangers, or those who are not acclimated, and children, as will hereafter be shewn, the native adult, and those who are acclimated are exempt, and the nomenclature, though deviating from the ordinary term Yellow Fever, as the following passage from Dr. Good will show, is not peculiar. As, says he, every country in which the fever, hereby produced, has committed its ravages, has given it a new name, it is as gorgeously arrayed with titles as the mightiest monarch of the East. From the depredations it has committed in the West Indies, and on the American coast, it has been called the St. Domingo, Jamaica, and American Fever, and from its visitations on the Guinea coast, and its adjoining Islands, the Bulam Fever. In British India it is designated by the name of the Jungle Fever, the Hooghly Fever, or the Endemic of Bengal, and still farther to the East by that of *Mal de Siam*. Nearer home, (in England,) in the waylands of Hungary, and along the South of Spain, it is called the Hungarian, or Andalusian pestilence. From its rapid effects on ships crews, that are fresh to its influence, the French denominateed it *Fievre Matilotte*, as the Spanish and Portugese call it *Fievre Amarilla*, and still more frequently, *Vomito*

Prieto, or Black Vomit, while, as its ordinary source is from marsh lands it has been frequently called *Paludal Fever*. "Its more proper name," as GOOD further remarks, "is Yellow Fever."

The first account of Yellow Fever which we have, is its occurrence in Barbadoes, in 1647, and from thence it spread in the West India Islands. It occurred in Boston, in 1693, and in Lisbon, in 1723. Its first appearance in Charleston was in 1699, or 1700, and it was called by Dr. HEWAT the infectious distemper, and considered by the inhabitants as a plague. In 1703 it again occurred. It also made its appearance in 1728. That summer was uncommonly hot and dry; the beasts suffered from the want of water, and the fever raging with violence, swept off an immense number of whites, and some blacks." The state of the city was truly deplorable, as the town (says Dr. HEWAT,) depended entirely on the country for fresh provisions, the planters would suffer no person to carry supplies to it, for fear of catching the infection, and bringing it to the country. The physicians knew not how to treat this uncommon disorder, which was suddenly caught, and proved suddenly fatal. The calamity was so general, that few could grant assistance to their distressed neighbours. So many funerals happening every day while so many lay sick, white persons sufficient for burying the dead, were scarcely to be found. Though they were often interred on the same day they died, so quick was the putrefaction, so offensive and infectious were the corpses, that even the nearest relations seemed averse from performing the necessary duties." In 1732, and 1739, it raged with so much violence, that when at its height, from ten to twelve whites died a day. It did not reappear until 1745 and 1748, and was then comparatively mild. A few cases occurred in 1753, and 1755, and a cessation took place until 1792, with the exception of a few sporadic cases, which occur more or less every year. "In the year 1792," says Dr. RAMSAY, "a new era of the Yellow Fever commenced. It raged in Charleston in that year, and 1794, 1795, '96, '97, '98, '99, 1800, 1802, 1804 and 1807. A few cases occurred in the years 1803 and 1805, in both years its victims did not exceed 59. In the years 1793 and 1808, the disease is not mentioned at all; and in the year 1806, it is only mentioned as having occurred in a very few cases, under particular circumstances. In its visitations it extended from July to November, but was most rife in August and September; with a very few exceptions, chiefly children, it exclusively fell on strangers. The unseasoned negroes were not exempt from its ravages, but they escaped oftener than the white strangers; and when attacked, had the disease in a lighter

degree, and if properly treated, were more generally cured. Persons, both black and white, arriving from the West India islands, enjoyed similar exemptions from the Yellow Fever of Charleston. In the years 1796 and 1798, it raged with the greatest violence; but since that time, has considerably abated, both in frequency and violence."

From 1807 to 1817, we have no records of the existence of this disease. In 1817, it prevailed with great malignancy. It again occurred in 1819, 1824, 1827, 1828, 1832, 1835, and 1839. From the statements I have brought to your view, it will be seen how irregular are the visitations of this disease.

I will now present you with the number of deaths in these respective years, as far as we have any records and remarks upon them. In 1699, the fever which prevailed swept off a great part of the inhabitants, and a number of families. It was then considered to be a plague, "though afterwards," says Dr. RAMSAY, "supposed to be the Yellow Fever." "In 1720," Dr. HEWAT says, "the physicians knew not how to treat the disease." In 1732, when the population must have been very small, from 8 to 12 whites died a day, which exceeds any mortality in our city since that time, although our population has greatly increased. The following facts I take from Dr. DAVID RAMSAY :

In 1799, there were 239 deaths.

In 1800, 184 deaths.

In 1802, 96 deaths.

In 1804, 148 deaths.

In 1807, 162 deaths.

From 1807, we have no account of the existence of the fever until 1817, which I will now submit as I have taken it from the records of the Board of Health.

In 1817 there were 268 deaths : adults, male, 164, adults, females, 56—220 ; natives under 18, 48 ; blacks, 19 : 14 males, 5 females.

In 1819 there were 172 deaths : adults, male, 130, adults, females, 24—154 ; natives under 18, 18 ; blacks 5 : males 3, females, 2.

In 1824 there were 236 deaths : adults, males, 160, females, 32—192 ; natives under 18, 44 ; there were no blacks this year.

In 1827 there were 63 deaths : adults, males, 40, females, 3—43 ; native children over 14, 4 under 14 ; 10 strangers, children 6 ; blacks, 2 males.

In 1828 there were 26 deaths : adult males, 21, females, 3 ; native children, 1 ; strangers' children, 1. There were no blacks. This year, a disease having many of the incipient symp-

toms of Strangers Fever, viz. the Dengue, prevailed, as an epidemic, affecting every one, but proving only in a few instances fatal; only the effects in many cases afterwards were painful, and ultimately in some old persons were the cause of death. It is probable, that the prevalence of this epidemic, caused the cessation of the Strangers Fever, and limited its extent.

In 1830 there were 29 deaths: male adults, 23, female, 1; native children, 1; strangers' children, 4: blacks, 1.

In 1834 there were 46 deaths: male adults, 28, female, 10; native children, 1; strangers' children, 5; no blacks:

In 1835 there were 26 deaths: male adults, 16, female, 5; native children, 4; blacks, 1.

In 1838 there were 353 deaths: adult males, 281, females, 30; native children, 17; strangers' children, 11; blacks, 4 females. This year, 1838, our city suffered from an extensive fire, leaving an immense surface, upon which the sun had to act, with a vast quantity of decomposed matter, which could not be entirely removed, and depriving the city of a great quantity of smoke, which is believed to be highly salutary; and did time permit, I could give abundant evidence from medical writers, of its value, in counteracting the pernicious influence of Malaria.* Independently of this, a great number of workmen, who were strangers, thronged the city, and were exposed by their avocations to the sun, and not unfrequently to the dew, and from the scarcity of accommodations in consequence of the fire, were crowded together in small and confined situations; hence the great mortality among strangers. Among the natives, it will be observed, there were only 17 native children, of whom only 1 was over 14; while 281 males died among strangers, of whom there were only 30 females.

In 1839 there were 134 deaths: adult males, 104, females, 14; native children, 8; strangers' children, 7; blacks, 1 female. This present year the fever occurred earlier than usual. On the 7th of June, three patients were admitted into the Marine Hospital, from the ship *Burmah*, which had arrived from Havana, of which I was informed by the Physician of that institution. The pilot, contrary to the requisitions, that all vessels having sickness on board, should be brought to quarantine, improperly brought in this vessel. The remainder of the seamen on board, that were sick, were sent to the Lazaretto, and the ship was thoroughly cleansed and ventilated, being in ballast: she was in the stream,

* On Malaria, I refer to McCulloch's elaborate and interesting work.

and did not come to the wharf for some weeks after, and had no communication, as far as could be ascertained, with other vessels. On the 17th, and 19th, cases were admitted into the hospital from the ships Chatham, Leonore, and Elizabeth Bruce. The Chatham and Elizabeth Bruce were lying at Fitzsimons' wharf; the Leonore was lying in the stream, opposite these vessels, and had never been to the wharf; the Burmah was lying in the stream off Roper's wharf: the distance from each of the vessels was therefore considerable, and there were a great many vessels between, on board of which no sickness had as yet occurred. The Chatham arrived here from Boston, on the 5th of June, in ballast; the Elizabeth Bruce arrived in Charleston, from New York, 7th of June, in ballast; and the Leonore sailed from Boston, and arrived on 7th June, in ballast—all of the crews were well. Subsequently, the disease occurred in different vessels in the harbour, which it would be unnecessary here to detail. Soon after the cases of the Burmah had occurred, a proclamation was issued by the Mayor and Council, requiring all vessels, arriving from infected ports, to be brought to quarantine: the vessels were there brought, their cabins cleansed, their holds ventilated, and their rotten fruit destroyed. No single case of fever arrived from the West Indies, or otherwise, in the city, that I am aware of, after this arrangement.

The fever having occurred so early in the season, and so soon after its occurrence on board the Burmah, created suspicion of contagion in the minds of some, but I could not, upon the minutest investigation, come to that conclusion; and a Committee* appointed by the Medical Society, after making a minute and thorough investigation, came to the conclusion that the fever was not introduced by the Burmah, or by contagion, but was produced by the peculiar condition of our atmosphere: in other words, was endemic, and arose from causes among us.

The following extracts I have taken, with the approbation of the Chairman, from the report:

“By an examination instituted through reference to the captains and mates of the various vessels, whose information was given from the log books, your Committee have ascertained that they had, at the time of their sailing from the different ports, viz. Liverpool, Boston, and New York, for this port, perfectly healthy crews, with sound cargoes, incapable from their character of generating foul

* The Committee consisted of Dr. A. LOPEZ, Chairman, Drs. JAMES MOUTRIE, E. GEDDINGS, J. M. CAMPBELL, HENRY WINTHROP, and the President, J. E. HORLBECK.

air. That there was no malignant disease prevailing at the time of their departure; that their crews had not, while in this port, any communication, either direct or indirect, with the Burmah or her crew; and finally, that *that ship*, in all these instances, lay in the stream, from a quarter to half a mile from them, except for a short period, of which mention will hereafter be made.”—Page 5.

Again: “The presumption is thus fairly induced, that the cleansing and ventilation must have disinfected her (the Burmah) sufficiently of her foul atmosphere for purposes of safety, *else why none other of her crew remaining on board* THENCE TO THE TIME OF HER DEPARTURE FROM OUR PORT, CONTRACT THE DISEASE?”—Page 7.

Again: “Thus far your Committee have satisfied themselves, that the transmission of the fever through the agency of the Burmah, is neither tenable as to fact, nor in accordance with the opinions of a great majority of the medical profession in this country,” &c. &c.—Page 8.

Again: “Your Committee therefore are of opinion, that the Yellow Fever which has prevailed, and still continues this season, has its origin, not from contagion derivable from those cases imported in the ship Burmah, on 6th June last, but from local and general causes.”—Page 10.

It must be here remarked, that the month of June was uncommonly hot; and the whole of this summer was remarkable for the great drought, as well as high temperature. All our southern country experienced the same weather, and the principal cities south of Charleston have been invaded with Yellow Fever. At the latter portion of this year, a fever of the duration of twenty-four to forty-eight hours, affecting the head, the joints, the spine, very severely, occurred among natives and strangers; and as soon as it began to prevail, the Strangers Fever diminished: this fever resembled the Dengue, and from the intense pain in the joints, was commonly called the Broke Bone Fever. It in no instance proved fatal.

I have been thus particular in the history of the commencement of the disease this year, because from the coincidence of circumstances, it might be supposed that the fever prevailed either by infection or contagion: and the following reasons I offer against such a position, independently of the facts cited:

1. It is hardly possible to suppose that the disease, after the statement made, could have been introduced by the Burmah, for it would produce an intensity of contagious or infectious principle, surpassing Small Pox. For many years I have removed cases of Small

Pox from the city to the Lazaretto, whenever they occur, and there are not less than four or five occurring every winter, and yet this virulent and acknowledged contagious disease has never spread.

2. It may be said, that infection arising from the condition of the vessels, might be the cause. In reply, I say, if such was the case, why does it not occur every year? for the same causes exist every year, viz. vessels arriving from the West Indies, and especially from Havana, in Cuba, where Yellow Fever always every summer prevails among the shipping.

3. If the infectious principle was so powerful, why should it be confined so long to the shipping, when a free intercourse was had with them by laborers, and other inhabitants of the city, liable to the disease. On contagion, I will cite authority in another part of this report.

From the condensed statements, just related of the history of fever here, there are some remarks which I beg to bring to your notice.

1. That the number of native children who die during the prevalence of fever, is small, considering the great number liable to fever, in proportion to strangers, and remarkably small in comparison with those who die of other diseases, to which they are subject, as *Scarlatina*, and *Cholera Infantum*; and it cannot be doubted that many of the elder children have been exposed to the sun, and other circumstances, producing powerful exciting causes. Although there are exceptions to the fact, as far as my observations have extended, in a practice of nineteen years, I have found where children have not been allowed to expose themselves much to the night air, when the dews are heavy, and where they have not been allowed to fatigue themselves by exposure to the hot sun, that they are more generally exempt, and when taken with fever, that it is commonly mild and manageable. There is another circumstance I will now bring to your view, viz. the habit many parents have had, of estranging their children from the climate, fearing that they might take the fever and die. The number of deaths, as I have shewn, is small, in comparison to adults; and if it is intended that their children shall live in a warm climate, and in southern cities, why estrange them, and render them more liable to the disease in adult age, when they are compelled to expose themselves to greater exciting causes? If we examine the bills of mortality of our city, we shall find among our natives, adults as well as children, as small a proportion as in those

of any city in the Union.* In every portion of the earth, there are certain diseases peculiar to the climate. If we have occasionally Strangers or Yellow Fever among us, the Typhus Fever, as an epidemic, prevails in cold latitudes in an infinitely more fearful degree, as in Great Britain and Ireland, for example. In Edinburgh, while I attended the University, in one of the winters the ravages of Typhus Fever infinitely exceeded any year of Strangers Fever here; and from an investigation of a committee of the British Parliament, in relation to the fever of Ireland, a fearful exhibition of mortality will be observed. All cities are liable to the irruptions of endemic disease: and I can safely say, that to the acclimated, our city is remarkably healthy at all seasons, and in the winter it is a delightful climate to all persons, except the consumptive, being too damp and changeable for them.

To shew satisfactorily that the mortality among the native inhabitants, or children of those who are acclimated, is comparatively small, I beg leave to recapitulate the following facts to you, which I deem important, namely, the number of deaths from 1817 to 1839, the years the fever has prevailed, with the comparative number of deaths of natives, premising that none have been known to sicken or die over 18, and few, as will be seen, over 14.

In 1817 there were 268 deaths: number of native children under 14, 41; number of native children over 14, 7—total 48.

In 1819 there were 172 deaths: number of native children under 14, 11; number of native children over 14, 1—total 12.

In 1824 there were 236 deaths: number of native children under 14, 33; number of native children over 14, 3—total 36.

In 1827 there were 63 deaths: number of native children under 14, 10; number of native children over 14, 4—total 14.

In 1828 there were 26 deaths: number of native children under 14, 1; no children over 14.

In 1830 there were 29 deaths: number of native children under 14, 1; no children over 14.

In 1834 there were 46 deaths: native children under 14, 1.

In 1835 there were 26 deaths: native children under 14, 4; no children over 14.

* The following is given by DUNGLISON, as the annual mortality of some of the chief cities in this country and Europe, in 1835: Philadelphia, 1 in 45; Baltimore, 1 in 41; Boston, 1 in 41; New York, 1 in 37; Charleston, 1 in 36†—now 1 in 45; London, 1 in 40; Paris, 1 in 32; Rome, 1 in 25; Glasgow, 1 in 44; Brussels, 1 in 26; Manchester, 1 in 44.

† Charleston, except in the year when Cholera prevailed, and in 1838, in some years it has averaged 1 in 45.

In 1838 there were 353 deaths: native children under 14, 16; native children over 14, 1—total 17.

In 1839 there were 134 deaths: native children under 14, 4; native children over 14, 4—total 8.

In 1817, the number of native children for Charleston being 48, and in 1824 being 33, was very large; but I believe a more general sickness among children was never known, and under such circumstances, the number is, in comparison with epidemics in other countries, and among ourselves, not remarkable, indeed it is small—as for example, during the prevalence of Scarlatina, Sorethroat, and Cholera Infantum: yet families do not remove their children when these diseases prevail. Subsequently, the number of native children to the unacclimated have been very small: thus for example, in 1838, when there were 353 deaths from the fever, only 17 native children died; and in 1839, of 134 deaths, only 8.

These facts justify the remarks which I first made, of the injudicious plan of estranging children from the atmosphere of a city in a warm climate; and thus, at the age when they should be active and enterprising, they are liable to the disease, and many have either died, or have been subjected to great personal sacrifices.

2dly. All who have not been acclimated to Charleston, are liable, in the years when it prevails, to the fever, from which many escape; but those from southern latitudes are much less liable, than those from northern latitudes, either in America or Europe, and those of our surrounding country are less liable, than those in the upper parts. And here let me remark, that among the number of strangers who take the fever and die, there are many who have to expose themselves to the hot sun in their daily labor: all of them unnecessarily expose themselves to the night air, which is extremely dangerous and improper, and continue the habit of colder climates in their regimen and diet: facts which have been noticed by medical writers in the East and West Indies. There is another circumstance worthy of notice, the constant excitement which is kept up by conversations and enquiries about the fever, and the agitation of mind which ensues, predisposes many to the disease. The depressing influence of fear, anxiety, and apprehension, and their strong predisposing influence to disease, as well as in diminishing the vital power, and lessening the chance of recovery, is well known to every reflecting physician.

I shall not occupy your time, in pointing out what course should be pursued by those who are not acclimated, because I think it would be best for them to consult their respective physicians. But I cannot but think it highly imprudent for strangers to expose

themselves to the night dews, or hot sun ; and it were better for them to use moderation in their diet and regimen, avoiding all extremes of living, all unnecessary excitement ; and, in no instance should they change the air. I must here impress the importance upon those who are taken sick of calling in promptly medical aid, for when the disease is treated in the incipient stage, it is generally manageable, while a delay of twelve or twenty-four hours, produces oftentimes fatal results. By these means it is likely that the disease, when it does occur, will be mild and manageable. I may remark, that those who have spent many summers here during which the disease has not occurred, become in a great degree acclimated, and that those who have had the disease, are not again liable to it ; there are however some exceptions, and a proper caution should always be observed.

3dly. The number of male adults is greater than that of females. 1st. There are more males than females. 2d. They are more exposed to exciting causes, and more careless in their habits, and mode of life. 3d. The number of blacks who die is small, and the deaths are among those who have been brought from the country, and are unaccustomed to the city, but these cases are generally mild and manageable. 4th. That the fever generally occurs at the middle or end of July, and prevails in August, September, and October ; and a few cases sometimes occur in November. In 1839, as already stated, it commenced in June ; and the only instance of its occurring earlier, was in 1732, when it commenced in May, and terminated in October. The following I take from the records of the Board of Health :

In 1817, July, 3 deaths ; August, 80 ; September, 149 ; October, 33 ; November, 3, and these were in the beginning of the month.

In 1819, August, 55 ; September, 97 ; October, 20.

In 1824, August 32 ; September, 145 ; October, 42 ; November, 17. The frost occurred very late this year.

In 1827, August, 10 ; September, 38 ; October, 18.

In 1838, August, 44 ; September, 219 ; October, 77 ; November, 6, the first week of this month.

In 1839 : June, 5 cases.

July, 17 cases.

August, 73 cases.

September, 32 cases.

October, 9 cases.

There were fewer cases in September than usual, for as soon as a peculiar fever resembling the Dengue appeared, the Yellow Fever began to disappear.

In concluding this part of my report, permit me to say, that the

stranger, if he finds that our climate sometimes subjects him to disease, he finds a community full of sympathy and benevolence, always ready to offer its friendly aid, and supply, if necessary, his wants; and the physicians here sustain the high character which Dr. SAMUEL JOHNSON awarded them, of devotedness, assiduity, and attention to the sick: foregoing their convenience of rest and comfort, in the discharge of their duties, being equally faithful to the poor and necessitous, as to the wealthy. There is a sense of duty, as well as a spirit of pride and emulation, among physicians, in attendance on those with fever; and the younger members of the profession in particular, are especially deserving of commendation, having the greater burthen of duty, and being most liable to be called upon: although I am not aware of any physician, no matter what his age, or station, or practise, who has refused, when called on, to render his aid.

An interesting and important question now arises, what are the causes of the fever among us? I shall avoid entering into an enlarged discussion of the various causes which have been assigned in different places where the fever has occurred, but confine my remarks to observations made in Charleston; and I shall endeavour to be as brief as possible. At the first occurrence of Strangers Fever, in different places, it was ascribed to contagion. "The Yellow Fever," says GOOD, "as far as we have any record of its origin, was at Barbadoes, whence it spread to different West India Islands, and at length made its appearance at Boston, in North America, in 1693, to which place it was carried from Martinique, by the fleet under Admiral WHEELER." Wherever it occurred, without looking to local causes, or the condition of the air, it was ascribed to this cause. In 1793, '94, '97, it visited Philadelphia. It was ascribed by Dr. RUSH, and other physicians, to contagion; and that eminent physician strongly advocated this, led on as many before him, by the misconceptions of others who did not thoroughly and carefully review the subject, assuming a postulate, which had not been proved, and making sweeping conclusions from a few insulated facts, or accidental coincidences. But he changed his views, and I here present the same to you. In a letter addressed to Dr. MILLER, of New York, he says, "You will perceive from the facts and reasonings contained in this letter, that I have relinquished the opinion published in my account of the Yellow Fever, in the years 1793, 1794, and 1797, respecting its contagious nature. I was misled by LINING, and several West India writers. I am aware of the influence which such changes in medical opinions, as I have

acknowledged, have upon a physician's reputation ; but small indeed, should I consider the total sacrifice of mine, could it avert the evils which are connected with a belief in the importation of pestilential diseases." In the fourth volume of his medical inquiries and observations, he says : " He begs the forgiveness of the friends of science and humanity, if the publication of that opinion, (alluding to contagion,) has had any influence in increasing the misery and mortality attendant upon that disease. Indeed, such is the pain he feels, in recollecting that he ever entertained or propagated it, that it will long, and, perhaps, always deprive him of the pleasure he might otherwise have derived, from a review of the attempts to fulfil the public duties of his situation." In fact, it has been the custom, and I may add, the fashion, of physicians, to ascribe every epidemic, at first, to contagion, but after a careful investigation, those opinions have been altered, as in the case of Strangers or Yellow Fever, Cholera, &c. In Charleston, generally, the physicians, as long as I have been in practice, have regarded the Strangers Fever as endemic to Charleston ; in other words, liable to occur from a peculiar state of the atmosphere among us, as Typhus Fever, &c., are peculiar to countries in northern latitudes, and that it is not introduced by contagion or infection ; and this opinion has been long entertained. Dr. DAVID RAMSAY, in a letter to Dr. MILLER, of New York, 1800, remarks : " The disputes about the origin of Yellow Fever, which have agitated the Northern States, have never existed in Charleston. There is but one opinion among the physicians and inhabitants, and that is, that the disease was neither imported nor contagious. This was the unanimous sentiment of the Medical Society, who, in pursuance of it, gave their opinion to the government last summer, that the rigid enforcement of the quarantine laws was by no means necessary, on account of Yellow Fever." I will barely mention, in conclusion, that M. CHERVIN, who visited every portion of the United States, West Indies, and the continent of Europe, where Yellow Fever has prevailed, came to the conclusion from enquiries, experiments, and investigations, that it was not contagious, nor could it by commercial intercourse be spread in a city. In another place it has been remarked, that the Committee of the Medical Society, in their report this year, gave it as their decided opinion that the Yellow Fever arises neither from infection nor contagion.

Abundance of other testimony, equally strong, could, if necessary, be adduced.*

* I refer to BANCROFT on Fever, who, I think, with M. CHERVIN, has settled this question,

Although, such has been the medical opinion here, and generally elsewhere, quarantine regulations have always been deemed necessary, and the great object has been to carry it on efficiently without injuring commerce. For some time it was thought best to require of the pilots, at all seasons, to bring only vessels having sickness on board, to quarantine, where they were inspected, cleansed, and ventilated, and the sick sent to the Lazaretto. But since the violation of instructions by one of the pilots, in bringing in the *Burmah*, with fever on board, as already related, and some excitement having arisen, to avoid similar events, it was determined that all vessels from ports where fever prevails, should be brought to quarantine during the summer, whether having any sickness or not, and be thoroughly ventilated, and as far as practicable, cleansed, which was faithfully executed this summer. The plan now is, to issue a circular in the summer and winter, to the pilots, directly after the Mayor has issued his proclamation.* With the best exertions, some cases will elude our efforts, and some times cases have occurred that were well on arrival, who have taken sick afterwards. To the courtesy of the physicians of the public institutions, as well as those in private practice for many years, both as relates to Yellow Fever and Small Pox, I have been much indebted. For, whenever any such cases have occurred, in their practice, I have been informed of it, and have always endeavored to counteract any ill effects which might, by a possible contingency arise, by prompt and efficient measures.

We are now to consider some of the causes, which may be supposed as agents in relation to this disease, and some circumstances connected with the general health of our city: and here permit me to say that his honor the Mayor, in his very able and interesting report to Council, has fully and strongly urged some of the views which I will bring to your consideration. As preliminary to this enquiry, I beg leave to make the following observations. Wherever Strangers Fever occurs, the heat is extremely high, ranging 85 degrees on an average in the twenty-four hours, and sometimes higher. But altitude of temperature will not alone produce it, or any fever, it must be associated with moisture, at least such is my opinion, and Baron HUMBOLDT gives this as the result of his observations in South America. From meteorological observations it would seem that sometimes the disease occurs after heavy rains, and in many cases where there is great want of rain, as this season for instance, and a high temperature. Now many would be induced to suppose that the atmosphere from the want of rain is dry. But this is not so, our mete-

* See Appendix.

orological observatins give us but little light on this subject, but from my own observations, I have remarked that the dews are heavy and the air chilly at night, and that cloths and leather become mouldy. Brasses can hardly be kept clean, and steel quickly rusts. The continued solar influence in the surrounding water causes an immense evaporation, which ascends high, and after the sun declines, begins to desced in the form of dew, in which I believe malaria floats. There is another fact, that in seasons when Yellow Fever prevails, there is very little of thunder and lightning.

Having thus promised, we will now consider the local causes, and first of the docks and wharves. Our wharves are formed by the palmetto logs, and filled up with wood, stone and earth. In the docks a great deal of mud, with decomposed vegetable and other materials, are thrown up by the tide, and at low water the exhalations are offensive, independent of this in some wharves the drains pour out their contents, Now this condition of things, with the fact, that Strangers Fever most generally occurs among the shipping has induced many to believe it arises from this cause. That it may like others be a predisposing cause, for all offensive effluvia of this character must depress the nervous system and lessen the vital powers to resist morbid impressions is highly probable, but it cannot be the active cause, for if it were so, Yellow Fever should occur every year, which is not the case, and the same may be said in relation to the drains and other local causes as the formation of new streets. It is very probable that other causes than the condition of the docks contribute to the disease occurring first among seamen. Independently of the irregular habits of many upon which I make no stress, the seamen sleep on board of their vessels. Now, the holds of the vessels are so close and hot, that they prefer sleeping on deck, where they are during night exposed to the heavy dew, which is admitted is highly prejudicial, and in which it is believed the malaria creating fevers, whatever it may be, floats. In corroboration of this view, I may mention. First that all who know any thing of fever are aware that the exposure to night air, is particularly dangerous and especially to sleep exposed to that air. Thus it is well known, that we can visit the plantations, and the adjacent country in the the day time without any danger, while, if we sleep at night, there fever is the result, and we have evidence on board of ships by medical writers, that the great point when in warm latitudes, is to have awnings over the ships at night and day, to protect against the sun and dew. A very intelligent officer of our navy, after cruising in the West Indies, and frequently visiting Havanna,

and other ports of the West Indies, informed me that, he believed he kept his crew all well, by having awnings spread over his deck at night, and preventing unnecessary exposure to the sun and air.

Another cause has been agitated, viz: the interment of the dead in cities, which nothing but custom would reconcile us to, and which custom it would now be difficult to overcome. In ancient times, the Jews, and most other nations pretending to civilization, had their cemeteries beyond the precincts of the city. The modern Jews have continued the same practise. The Romans and Greeks burnt their dead, and deposited the ashes in urns, and these were deposited in cemeteries beyond the city. The Turks and Chinese likewise have their cemeteries out of their cities.

It is only since the Christian æra, and not for many years after, that the custom commenced in Europe, of having cemeteries connected with the churches, which has subsequently been adopted there and in America; the causes which may have led to it, is foreign to our present enquiry, although it is evident it is ~~but~~ *not* a part of the Christian dispensation. It has been questioned by some, whether the burial of the dead in a city is prejudicial to its health; and some ingenious reasonings, and seemingly strong facts, have been adduced, which would seem to convey the idea that animal putrefaction is not injurious. I have not the time, or inclination, to enter upon this enquiry—my opinion however is, that it must, with other causes, be injurious: and although our burial grounds are not now so crowded with the dead, as to make us yet feel its full effects, our posterity doubtless will. I believe, however, that wherever the question has been fairly examined, it has led to the conclusion, that the burial of the dead among the residence of the living is wrong, and the best works on Medical Police advocate this opinion;* and it would be a happy circumstance, if our fellow citizens would imitate the example of some of the cities of Europe and America. In this case, however, we have to contend with the feelings, not the understanding; and however desirable, it can only be accomplished through the medium of public opinion. The last resting place of those we loved while living is hallowed in our hearts, and a deep feeling is excited, which it is not easy to overcome. I shall say no more on this subject, the Mayor having ably and eloquently urged the City Council and the citizens, on the importance of the change of our cemeteries.

Again: It has been supposed, that the destruction of the trees in forming the new streets, were injurious. There are abundant evi-

* See PARIS and FARBLAQUE on Medical Jurisprudence.

dences in our pine land settlements, of the value of trees in the preservation of health, and the injurious results from cutting them down; and the same has been observed by medical writers in other countries: yet I do not believe this has had much, or perhaps any influence, in Charleston. Still they may at least be beneficial, and certainly when planted in the streets, add much to the comfort of the citizens, and will be ornamental to the city. Predicated upon this view, at my suggestion the City Council passed an ordinance, permitting every owner of a lot to plant trees; and as almost every citizen has complained of the want of them in the improved streets, it is reasonable to suppose that the deficiency will now be supplied.

Another important desideratum for the preservation, of the health of a city, is the procuring a supply of pure and wholesome water: in warm climates this is especially demanded. The water from our wells, with but few exceptions, is not fit to be drank, and our chief dependance is on cisterns. Either there ought to be a large increase in the number of our public cisterns, and inducements held out to owners of lots to build private cisterns, or the city should be provided with pure water by some other means. This subject is now under the consideration of a committee, appointed by the City Council.

It has been stated by many eminent physicians of other countries, that the Yellow Fever arises from marsh-miasma; and it has been called in some instances the Paludal Fever. It would be unsuitable for me to enquire, on the present occasion, whether the fever arising from this cause, in other places, is Yellow Fever. I will confine my observations to what is exhibited here.

From the old maps, it is evident that Charleston was intersected by marshes and creeks, which are now filled, and houses built thereon. At present the city is surrounded by marshes, through which the salt water ebbs and flows. But we find that the islands, (Morris and Sullivan's,) on which are extensive marshes, have been considered safe retreats from the influence of this disease; and in Hampstead, the settlements near the marsh have been regarded as equally exempt; the fevers also which occur in certain situations of Sullivan's Island, and near the marshes, are obviously distinct in character from the fever in Charleston, and likewise it may be said of the fevers in the country. It has been supposed that these fevers are mere modifications of each other: but this I regard as a mistake. The diagnostics between them I will give, merely with a view of sustaining the position that Yellow Fever is endemic to

warm climates ; where there is also the dense population of a city, and that it differs from the fevers arising from marsh miasma where there is not a city population. The Yellow Fever has but one paroxysm, which lasts from two to three, and sometimes four days—that is to say, the fever is continued until then : it then subsides, or rather ceases, and new symptoms present themselves. If the case is bad, black vomit ensues at this time, which is a very bad, though not always a fatal symptom ; or the patient dies without it, generally, on the fourth or fifth day, although it is sometimes of longer duration ; or the individual becomes convalescent. Again : Once having the Yellow Fever, like the Small Pox, the individual having it is not liable to another attack, as a general rule, for there are some exceptions, although rare in both cases, while of the fevers contracted in the country, one attack, in place of causing exemption, renders the individual more susceptible and liable to another. Although the marsh miasma cannot be considered as the essential cause, yet it cannot be doubted, where the tide is but partially flowed, intermingling salt with fresh water, and becomes stagnant, a very noxious exhalation, injurious to health, must result. There is besides another evil. Small houses are erected on some of these tide lots, which are but partially filled up, and then oftentimes with heterogeneous materials, is not only a serious nuisance, but must necessarily be deleterious to health. Another circumstance I may here mention, is worthy of consideration, viz. the disposal of the offals of our city.* It is obvious, that if the law requires the citizens to remove all the rubbish and offals from their residences, regarding them as nuisances, the concentrating them upon one spot, for the purpose of filling up streets made on our marsh lots, must be infinitely more pernicious and injurious, as well as improper.

How far some of the causes I have mentioned operate in producing fever, it is not my intention at present to discuss. I shall only remark, that there is a peculiar condition of the air, independently of the causes already mentioned, for these causes exist every year, but do not produce the disease regularly. The exact nature of that condition of the air we do not understand ; it has as yet eluded the researches of philosophers, chemists, and physicians, and may prove beyond the ken of human wisdom to discover. The nature of Malaria, and the laws of Epidemics, are puzzling problems in medical research ; we have had many speculations thereon, but nothing proved as yet. Thus far we do know, however,

* These, with other causes, are now under the consideration of the Health Committee of Council.

that a city atmosphere is necessary to generate Yellow Fever; and it is a wise system of medical police, that all causes, which may, by a possible contingency, prove agents in producing disease, should be removed. Hence the cleansing of the docks at a proper season, the preventing of exhalations from the drains, and the clearing them out in the winter season, or when necessary; the carrying of scavengers' offals beyond the precincts of the city, or obviating their deleterious influence by preventive means; keeping the streets, as well as the yards, clean; draining and filling up low lots; having all the cellars kept dry, and properly ventilated; prohibiting of any more cellars; burying the dead beyond the precincts of the city; and the introduction of a plentiful supply of pure water: these measures, if they can be accomplished, constitute, in my opinion, judicious and important preventive means; and having thus used all human means, according to our finite attainments, we must leave the rest to a supreme and higher power.

I have thus, in a concise manner, brought to your view some of the means, by the energetic and efficient adoption of which, our city may be improved in health. The duties of the Board of Health are peculiarly onerous, unpleasant, and oftentimes unavailing. What can a few citizens do, if all do not co-operate in the great work of improving the public health? Should not every citizen consider himself, in some measure, a conservator of the health of the city; and ought not each to do his duty, not only in keeping his own premises clean, and by removing all nuisances, but by promptly reporting to the proper authorities, all neglect of duty on the part of others? This year the duties were particularly arduous, both to the Board and to the City Inspector, as well as to the Board of Inspection, of which the Mayor is Chairman. For the reorganization of the Board took place at a late period, and hence a great deal had to be done in a short time: much has been done, and with promptness and efficiency, but a great deal remains to be accomplished. The new Board will, I trust, as soon as organized, commence their labours; and the removal of those nuisances which require abatement, effected in the winter season, instead of postponing their removal until the fever has come among us, as has too often heretofore been the case.

The propriety of our giving formal information of the existence of fever amongst us, has been questioned by some. The duties of the Board on this subject, are extremely important and delicate: while it is wrong to excite alarm, when we are not in possession of satisfactory evidence that the disease is likely to become epide-

mic; yet when, upon thorough investigation, we have reason to believe that it will be so, we are bound by a principle of humanity, as well as from mere policy, instantly to announce the fact. For a candid statement is the only means of correcting the evils arising from exaggerated rumours. I regret that, in too many instances throughout our country, greater reliance is placed on the exaggerated accounts of irresponsible correspondents, than on our responsible and official announcement, the correctness of which may be fully relied on.

In conclusion, gentlemen, permit me to return you my sincere thanks for the honour you conferred upon me, in appointing me Chairman of this Board—and to express to you my warmest thanks, for the courtesy and indulgence you have extended to me.

APPENDIX.

The following are the Circulars.

TO THE PILOTS OF CHARLESTON.

In accordance with the Proclamation of his Honor, the Mayor, the following instructions are extended :—Whenever a Pilot boards a vessel, he must obtain from the Commander of the vessel, a certificate that there is no sickness on board,—which certificate will protect him, if the Commander has any case of sickness.

If there is no sickness, the vessel can be brought up to the city. If there is sickness on board, the flag must be raised half-mast, previous to crossing the Bar, and continue until visited at Quarantine ground.

THOS. Y. SIMONS, M. D. *Port Physician.*

October 24th, 1839.

Formerly, a Circular similar to this only, was sent to the Pilots every year, but since it has been thought, as mentioned in the text, better to alter the plan : the above Circular is sent now to the Pilots, to regulate them in winter, and the following in summer :

CHARLESTON, JUNE 21, 1839.

TO THE PILOTS OF CHARLESTON.

In accordance with the Proclamation of his Honor, the Mayor, and in order that Quarantine Regulations may be more promptly performed, it is required that you would bring all the vessels, whether sick or well, from the West Indies, and other ports designated in the Proclamation of the Mayor, to the usual Quarantine Ground at Fort Johnson, and all vessels from the United States, having sickness on board, at the same place.

All vessels which are to be brought to Quarantine, must have their flags flying at half-mast while crossing the Bar, and continue so, until released from Quarantine Ground by the Port Physician.

THOS. Y. SIMONS, M. D. *Port Physician.*

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