

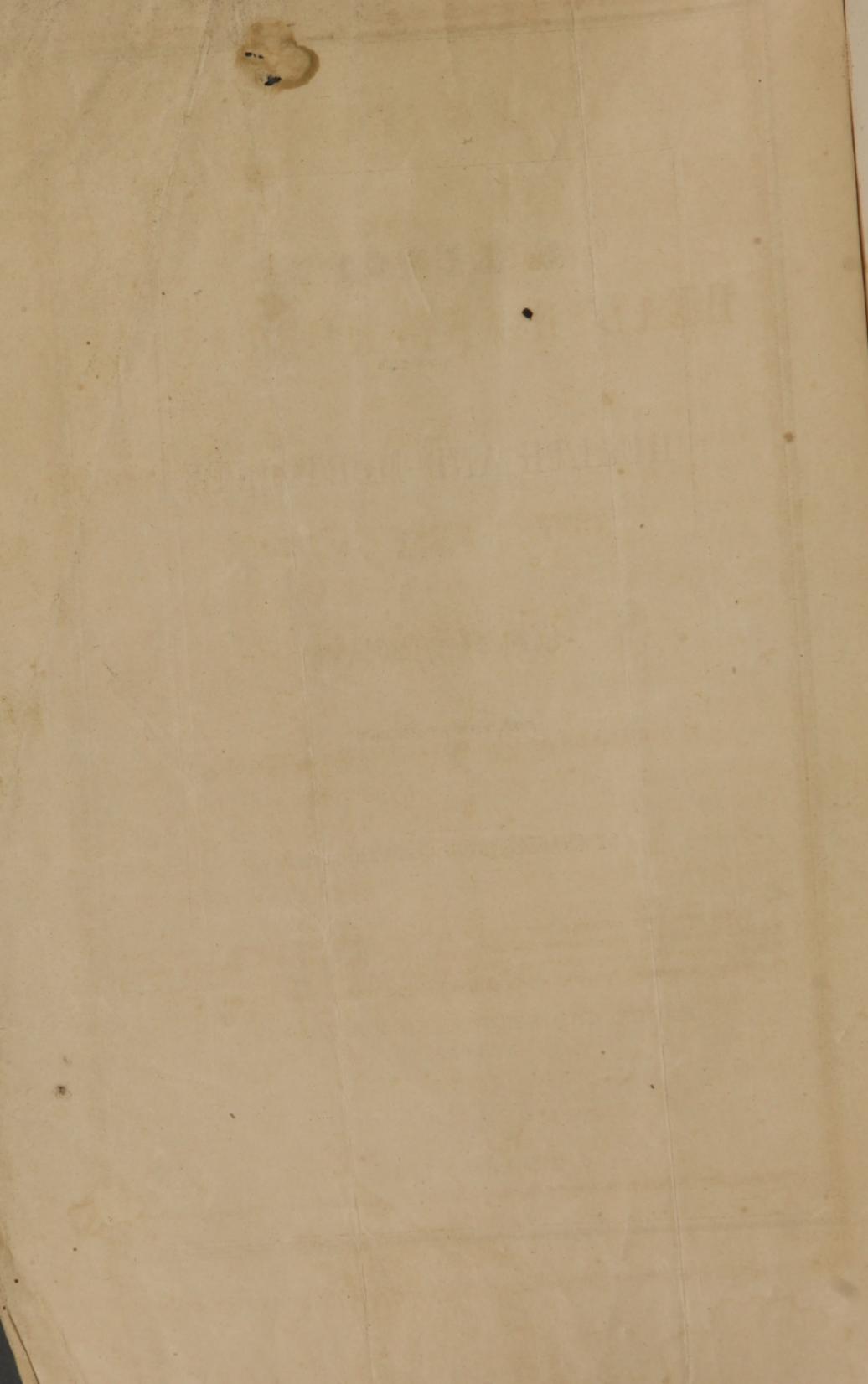
Quintard (C. J.)

A REPORT,
ON THE
HEALTH AND MORTALITY
OF THE
City of Memphis,
FOR THE YEAR, 1852.

BY CHARLES TODD QUINTARD, M. D.

Memphis:
EAGLE AND ENQUIRER STEAM PRESS.
1853.





A REPORT,
ON THE
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OF THE

CITY OF MEMPHIS, TENN.,

FOR THE YEAR 1852:

BY CHARLES TODD QUINTARD, M. D.

"I have made it my business neither to quit or follow any authority in the ensuing discourse: Truth has been my only aim; and wherever that has appeared to lead, my thoughts have impartially followed, without minding whether the footsteps of any other lay that way or not. Not that I want a due respect to other men's opinions; but, after all, the greatest reverence is due to Truth."—LOCKE.

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1853.

A REPORT

OF THE

HEALTH AND MORTALITY

OF THE



NEW YORK

1850

EXTRACTS FROM THE RECORDS OF THE MEDICAL SOCIETY OF MEMPHIS.

At a meeting of the Society held on the 10th of February, 1853, it was

Resolved—That the Address of Dr. MERRILL be referred to a Committee of Five, who, after an examination of it, shall report to the Society.

The President appointed Drs. WM. V. TAYLOR, JOHN PITMAN, C. T. QUINTARD, ZENO HARRIS and T. MCGOWN.

At a special meeting of the Society held on the 15th of March, the reading of the Report of the Committee being called for, the Chairman presented the following :

“The Committee to whom was referred the address of Dr. MERRILL in reference to the Health and Mortality of Memphis, for the year 1852, beg leave to submit the paper prepared by Dr. QUINTARD, as their report.”

Subsequently to the reading of Dr. QUINTARD'S paper it was

Resolved, That 1500 copies of the Report be published at the expense of the Society.

On motion,

Resolved, That the thanks of this Society be tendered to Professor QUINTARD for his very able and satisfactory report on the vital statistics and sanitary condition of Memphis.

The above is a true abstract of the Proceedings of the Society.

THOMPSON MCGOWN, M. D.,

Recording Secretary.

MEMPHIS, March 16th, 1853.



R E P O R T .

THERE can be no problem presented to the mind of a medical philosopher, of profounder interest, than that which relates to the conditions of man's existence.* In the constitution of external nature, adapted not less to man's moral than his physical character, the ordinary agents of life may be so modified as to act prejudicially upon his organization. There is a combination of external influences, which is most favorable to his perfect development, and there is another combination of external influences unfavorable to his existence. The determination of these influences, their nature and habitudes is the point to which all our investigations converge. Experience has taught us what some of these are, and science has added materially to the stock of our knowledge. The influence of the air we breathe, of light and heat, and electricity, though subtle, are occasionally the most powerful agents of nature, and are continually operating upon vegetable and animal existence under what form soever it may be developed. So numerous and intricate are the links that connect man

*We do not here refer to the simple *conditions of animal life* resulting from nutrition, or to the changes which are impressed upon matter in its proper passage to a state of static equilibrium in the animal economy, nor to the conditions of chemical or vital forces, but to all, and every agent that acts upon the functions and procepes of the human organism.

to the rest of animated nature, that we can scarcely contemplate him for a single moment as an insulated being. He is in one sense a cosmopolite—and yet a comparison of races teaches us that his existence is so powerfully modified by external agents, that all situations are not equally favorable to his development. Differing widely as do the Patagonians, from the Mexicans and Peruvians, yet, says Dr. Morton, “I can aver that sixteen years of almost daily comparisons have only confirmed me in the conclusions announced in my *Crania Americana*, that all the American nations, excepting the Esquimaux, are of one race.” It is a subject of familiar remark that the inhabitants of our own country are found to vary according to the physical peculiarities of the sections they respectively inhabit. While the physiology of the human race is thus influenced by external agencies, these agencies are even more manifest in the types and forms of disease that are found to prevail in different regions. Perhaps no man has more fully illustrated this fact, than our distinguished countryman, Dr. Samuel Forry, in his work on the climate of the United States. Having at his command quarterly reports of all cases of sickness and of the number of deaths, in a mean strength of 40,000, stationed in various parts of the land, during twenty years; and collating and comparing these with the calm and rigid scrutiny of a truly inductive philosopher, he succeeded in establishing some of the most splendid generalizations that have ever graced the annals of medicine. Speaking of Catarrhal diseases, he observes, “on the New England coast, as the ocean modifies the atmospheric temperature, the annual ratio treated per 1000 of mean strength is as low as 233; on the great lakes, where a similar modifying influence is in operation, it is 300; while the third class, [parts remote from the ocean and inland seas,] characterized by the extreme range of the thermometer, has a ratio as high as 552. But let us follow more narrowly the isothermal and isocheimal lines [representing the mean

temperature of summer and winter] which describe four curves within the same space, presenting alternately a mild and an excessive climate. As these lines on the coast of the Atlantic present comparatively little deviation from the terrestrial parallel, the ratio of catarrhal diseases is low; advancing into the interior, the line of equal summer rises and that of winter sinks, and the ratio increases proportionally; proceeding into the region of the lakes, the lines again converge beneath the controlling power of the waters, and the ratio of Catarrh and Influenzā is modified accordingly; again advancing into the interior beyond these ocean-lakes, the average rises in proportion as the isothermal and isochermal curves tend to opposite directions." And in regard to Pleuritis and Pneumonia he establishes the fact that the average number of cases is much lower in the cold and variable climate of our northern and eastern states, than in the middle and south-western regions of the United States. At the south-western parts the annual ratio is 92, whilst on the coast of New England it is only 41." That the relations of man to the external world in every phase of his being are very intimate, can be denied by no one—and that the laws of these relations and the modifications of them may be determined and fully and accurately established, no one can doubt who examines the history and rapid progress of the arts—of philosophy and the sciences. There is another truth that forces itself upon the mind in this connexion—and it is the fact that the insalubrity of a country or section may be diminished, or destroyed by the progress of civilization, and a proper application of the arts and sciences to the exigencies of human existence. To this we are in a great measure to refer the increased average duration of life. A distinguished professor, in a recent lecture before the Mechanic's Institute of Cincinnati, says, "that in the latter part of the 16th century, one-half of all that were born, died under five years of age, and the average longevity of the whole population was but 18 years. In the 17th centu-

ry, one half of the population died under twelve. But in the first sixty years of the 18th century, one half of the population lived over twenty-seven years. In the latter forty years, one half exceeded thirty-two years of age. At the beginning of the present century, one-half exceeded forty years; and from 1838 to 1845, one-half exceeded forty-three. The average longevity of these successive periods has been increased from eighteen years in the 16th century up to 43.7 by our last report. The readers of Macaulay's History of England will recollect evidence presented on the same point, in reference to the health of London. As some are disposed to doubt whether much, if any, of this improvement is due to the actual progress of medicine—let us refer to the following table, illustrating the progressive decrease in the per centage of mortality during a period of twenty-four years, in one of the largest and best conducted general hospitals in the world—the Hôtel Dieu of Paris. Anterior to the great French Revolution, the records of this institution show that the number of deaths to cases treated was as one in three and a half—or nearly thirty per cent. In the year 1816, they were reduced to one in four and a half, and the diminution of mortality is progressive to 1840, to which time the tabular returns are completed.

So far as we have had opportunity to examine the records of American Hospitals, they exhibit the same progressive improvement, both in the diminished per centage of mortality, and in the length of treatment. In the Bellevue Hospital of New York—with the records of which we have had every opportunity of being acquainted—having in the early part of our professional career been one of its medical staff—there has been quite as great, if not greater improvement than is exhibited in the following table:

TABLE,

Showing the number of Patients, Duration of Treatment, and Mortality, at the Hotel Dieu of Paris, from the Year 1816 to 1840, inclusive.

YEARS.	NUMBER OF AD- MISSIONS.	MEAN TREATMENT IN DAYS.	PROPORTION OF DEATHS TO AD- MISSIONS.	REMARKS.
1816....	7.090.....	40.	1 in 4.47....	
1817....	7.276.....	40.	1 " 4.42....	
1818....	7.117.....	36.25.....	1 " 5.35....	
1819....	8.796.....	29.25.....	1 " 6.07....	
1820....	10.248.....	26.54.....	1 " 6.50....	
1821....	11.163.....	26.06.....	1 " 7.10....	
1822....	10.689.....	25.23.....	1 " 6.82....	
1823....	11.383.....	26.96.....	1 " 6.54....	
1824....	11.170.....	28.50.....	1 " 7.11....	
1825....	12.583.....	23.73.....	1 " 6.95....	
1826....	11.530.....	26.01.....	1 " 6.81....	
1827....	11.485.....	23.56.....	1 " 6.88....	
1828....	17.861.....	21.29.....	1 " 6.89....	
1829....	13.649.....	24.16.....	1 " 6.33....	
1830....	14.320.....	23.36.....	1 " 6.87....	
1831....	14.559.....	24.01.....	1 " 8.53....	
1832....	15.357.....	18.37.....	1 " 5.12....	Cholera.
1833....	16.992.....	19.60.....	1 " 9.95....	
1834....	17.753.....	19.20.....	1 " 11.03....	
1835....	17.429.....	19.20.....	1 " 10.14....	
1836....	17.289.....	17.43.....	1 " 9.35....	
1837....	17.980.....	17.55.....	1 " 8.93....	Influenza.
1838....	17.467.....	19.64.....	1 " 9.12....	
1839....	17.583.....	18.06.....	1 " 9.08....	
1840....	11.130.....	17.61.....	1 " 9.13....	Being rebuilt.

This same table shows likewise, says Dr. F. Campbell Stewart, from whose writings I have taken it, that while the proportion of deaths has been diminished nearly two-thirds, the duration of treatment, or the time required for effecting a cure, has been abridged just one half; forty days being the average time in 1816, and less than twenty days in 1838. Among the manifold causes that have operated detrimentally upon the human organism, there is none that can in the least degree compare in the extent of the influence that has been attributed to it, with Malaria. Long before the time of Lancisi, it was known that various localities were affected with diseases traceable to the peculiarities of geological and physical structure. Cicero tells us that Romulus, seeking a healthy spot, built his city in a region of pestilence; "Locum delegit in regioni pestilenti salubrem."

Livy shows us how the Roman soldiers, before the invasion of Hannibal, were in the habit of contrasting the sickly and arid Campagna di Roma with the Campagna Felix of Naples. There are certain states of the earth's surface which are attended by the prevalence of periodic diseases—and, there are conditions of the atmosphere, that give origin to other forms of disease, and states of terrestrial magnetism, influencing the forces and functions of the body. Some of these are as yet very little understood; but because we are unable to comprehend the whole, it is manifestly unwise to reject that which experience and observation has demonstrated. We shall be the better able to learn what are the causes of disease, when the forms and types are thoroughly understood, and inductive science has investigated the effect of changes—electrical, magnetic, terrestrial and atmospheric. We are for the present concerned with the types and forms of disease which prevail in our city. Let us see what they are. There is, unfortunately, no way of arriving at an exact knowledge of the diseases which have prevailed in Memphis during the past year. A record of the diseases is kept by the Board of Health, but the members of the Board have no means of knowing the causes of death, as no certificate is required from the attending physician. All is vague and uncertain, and it is worse than folly for any man to pronounce upon the character of the diseases prevalent in the city, from data furnished by the books of the Board of Health. We have drawn up a table which we believe to be an exact transcript of the record as kept by the Secretary, he not being accountable for the very peculiar nosology. The following table, prepared from the records of the Board of Health, exhibits the diseases that have been fatal in and about Memphis:

TABLE.

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Cholera, - - - - -	1				6	29	16		6	3	11	12	74
Dysentery, - - - - -		2			1	3		1	3	3	5	3	15
Diarrhea, - - - - -	1		2		8	3	8	1	3	3	5	3	43
Inflammation of Bowels,		2					1	1	2	2	1	1	9
Enteritis, - - - - -				2									2
Gastro-Enteritis, - - -							2	2					4
Cholera Infantum, - - -				1		1				1			3
Cholera Morbus, - - - -				1	1	2	1			6	5		16
Cramp Colic, - - - - -	1							1					2
Ulceration of Bowels,					1								1
Colitis, - - - - -					1				1				2
Phthisis Pulmonalis,	3	3	2	3	5	2	8	8	1	6	5	4	52
Bronchitis, - - - - -		1											1
Pneumonia, - - - - -	5	3	4	3	1					2	4	7	29
Pleurisy, - - - - -	1			1									2
Pulmonary Apoplexy,	1												1
Hæmorrhage of Lungs,												1	1
Hydrothorax, - - - - -	1	1											2
Croup, - - - - -	2												2
Fever, - - - - -							1	3	1	1	1	1	6
Typhoid Fever, - - - - -	1		2	2	1	6	5	10	1	6	4	2	44
Typhus Fever, - - - - -							1						1
Billious Fever, - - - - -	1					3	2	3	2	1	1		13
Congestive Fever, - - -	1						2	1	1	1	2		8
Intermittent Fever, - -							2	2	1	2			7
Puerperal Fever, - - -												1	1
Congestion of Brain,							2		2	1	1		6
Hydrocephalus, - - - -		1											1
Inflammation of Brain,	1	2	1	1	1	7	10	2	2	2		1	30
Coup de Soleil, - - - -						1							1
Convulsions, - - - - -	1	1	3	3	4	1	1	4	1		4	2	25
Trismus, - - - - -				1									1
Trismus Nascentium,				1									1
Apoplexy, - - - - -													1
Fright, - - - - -									1				1
Congestive Chill, - - -	3	1	1	1	1	2	6	1	7	3	2		26
Intemperance, - - - - -				1	1	2							4
Hepatitis, - - - - -		1					1						1
Affection of Kidneys,		1											1
Disease of Womb and Kidneys,		1											1
Black Jaundice, - - - -									1				1
Intersuption, - - - - -						1							1
Marasmus, - - - - -												1	1
Bleeding at Naval,		1											1
Worms, - - - - -	1					2			1			2	6
Scrofula, - - - - -	1							1	2				2
Dentition, - - - - -		1	1	1	1	3	4	2		1			14
Measles, - - - - -			1	1	9	20	6	4					41
Cancrum Oris, - - - - -							1						1
Suffocation, - - - - -						1	1						1
Dropsy, - - - - -	1		1						2	1			3
Erysipelas, - - - - -		1									1		1
Gangrene of Leg, - - - -								1					1
Hæmorrhage, - - - - -				1		2		1			1	1	5
Accidental Death,				1									1
Drowned, - - - - -				1									1
Wound of Perineum,				1									1
Killed, - - - - -			1	3	1							1	6
Still Born, - - - - -		1				2			1				4
Child-Bed, - - - - -	1	2	3	1								1	7
Old Age, - - - - -							2		3			1	6
Complication of Diseases,				1									1
Rheumatism, - - - - -				1				1		1			3
Chronic Diarrhea, - - - -				1	1	1	1	2	2	6			14
Unknown, - - - - -	10	6	4	4	11	11	15	8	17	13	4	8	111
Total, - - - - -	33	32	30	35	55	119	104	58	67	64	56	47	705

This exhibit of the record of the Board of Health is evidently not reliable. We have very good reason for not believing that fifty-seven persons have died of Phthisis Pulmonalis. We may say the same of the thirty deaths attributed to Inflammation of the Brain—since both these numbers bear a disproportion to other diseases—as observed in

other localities—and from the manner in which the name of the disease is obtained by the Sextons. “In a large majority of cases,” says Dr. Merrill in a recent report, “they have given the names of diseases of deceased persons, either from their own uncertain knowledge, from common report, or from information obtained from nurses and servants—and the age, sex and color, when stated at all, have been derived from no better authority. It is not probable that more than one-half—perhaps not over one-third—of the diseases are correctly reported.” Professor Merrill goes on to say that “the only two points in the mortuary records which can be considered even as approximations to the truth, are the NUMBER and DATE of the deaths.” From a comparison of the books of the Sextons with those of the Board of health, we find that there is a discrepancy in this particular also, and there is one case recorded, in which the only record of it is as follows: “18—Typhoid Fever.”

As to the character of the diseases that have proved fatal, some indefinite idea may be formed by the table—but for obvious reasons it will be proper to produce all the information possible. We therefore append a brief report, made to this Society by Dr. W. T. Irwin, on the “Prevalent Diseases of the Quarter ending 30th June, 1852.” Dr. Irwin says, “during the earlier part of the quarter, our city was remarkably exempt from any disease of an epidemic character. The Measles, which had prevailed extensively during the preceding quarter, seemed almost totally to have disappeared; and the few cases still occurring were of the mildest character. The reports of the Secretary of the Board of Health, from the 1st of April to 15th of May, show an average mortality of from not more than 7 to 9 per week—many of them not legitimately under control of the physician—such as deaths from wounds, drowning, still-born, &c., while the diseases which proved fatal to the balance, were as various almost as the causes. About the middle of May, the Cholera made its appearance on the river,

both on the plantations and on board boats traversing its waters—while an occasional case appeared in our midst. The Measles, for awhile dormant, again raged with increased violence, and its sequelæ partook strongly of the choleroïd tendency of all the diseases of the time. From the 3d to the 5th day after the disappearance of the eruption, diarrhœa almost universally supervened, and unless met with promptitude, and treated with skill, soon assumed all the characteristics of cholera—rice water discharges—large and copious—rapid prostration and collapse. In addition to the above, there were a large number of cases of dysentery, severe in character, but manageable by the usual methods of treatment. I have come to the conclusion from my observation this season only that the dysenteries, though more painful and harrassing, are not really as dangerous in this climate during the spring and earlier part of summer as the diarrhœas prevalent at that time. Perhaps the cause may be traced to the fact that the pain and annoyance of the former induce persons to apply at an earlier period for medical aid, while the simple diarrhœa is either neglected in hopes that “it will get better of itself,” or its severity is increased by the patent or domestic remedies which every one considers himself competent to administer, until the disease reaches a stage where the skill of a physician may be rendered nugatory.”

The next table we present exhibits the mortality per month for the years 1851 and 1852.

TABLE,

Showing interments for each month for 1851 and 1852.

Months.	1851				1852			
	Males.	Females.	Black.	Total.	Males.	Females.	Black.	Total.
January,.....	12	5	5	22	12	14	12	38
February,.....	12	8	6	26	18	10	4	32
March,.....	17	8	12	37	9	14	7	30
April,.....	13	10	14	37	20	8	7	35
May,.....	34	16	20	70	28	16	11	55
June,.....	76	35	34	145	54	36	29	119
July,.....	44	32	10	86	44	37	23	104
August,.....	27	19	15	61	34	11	13	58
September,.....	46	19	8	73	36	18	13	67
October,.....	42	21	9	72	34	12	18	64
November,.....	16	15	7	38	32	14	10	56
December,.....	25	14	11	50	18	16	13	47
Total.	364	202	151	717	339	206	160	705

In reference to this table it is proper to remark that it is of necessity incorrect, since the sex of children is seldom stated on the record of the Board of Health. By comparing the mortality for the two years, it will be found that 364 males died in 1851; 339 males in 1852; or twenty-five white males less in the latter than the former year. There were four deaths more in 1852, than 1851, among the white females. There were nine deaths more among the black population in 1852 than 1851, leaving twelve deaths less in 1852 than 1851. Now although it is not at all to be relied on, it may be interesting to examine the character of diseases; and we find the following results:

Diseases located in Digestive System,.....	205
“ “ “ Respiratory “	99
“ “ “ Nervous “	66
“ “ “ Cutaneous “	44
Febrile Diseases,.....	100
Child Bed and Still Born,.....	14
Accidental Deaths,.....	15
Various Diseases,.....	51
Unknown Diseases,	111
Total,.....	705

Memphis is located in lat. 35 deg. 08m. North, and lon. 90 deg. 06m. West, on a bluff whose elevation above the surface of the river at low water, is one hundred and twenty feet, and over the gulf of Mexico, four hundred. Its site is a bed of loam, belonging to the cretaceous formation. It occupies a gently undulating plain, admirably arranged for drainage. The bayou Gayoso, which empties into Wolf river at its mouth, extending through the suburbs of the city, is a perfect natural sewer, which, with other natural advantages, is capable of rendering this the best drained city in the southern section of the Union. Dr. Drake, in his work on the Valley of North America, (page 134,) says its site is more exempt from topographical causes of fever, than many other towns on the Mississippi." The city of Natchez, which, during recent years has, we are informed, been remarkably healthy, is situated in north lat. 31 deg., 33m., 37s., and west lon. 91 deg., 28m., 22s. Its elevation, according to Mr. Nicollet, is two hundred and sixty-four feet above the sea, and one hundred and seventy-eight above the river, at low water, which consequently is eighty-six feet above the gulf of Mexico. Memphis, therefore, enjoys a much greater elevation than Natchez. While the country immediately around Natchez is high and deeply cut by ravines—which, destitute of water in dry weather, convey torrents during the rainy season, the country around Memphis is undulating. Memphis has never been visited by an epidemic yellow fever. Dr. Drake says that "it is the highest point up the Mississippi, and the greatest elevation above the sea at which yellow fever has yet occurred in the interior valley; and it has appeared here but once, which was in the year 1828, when it prevailed as a mortal epidemic." After carefully investigating the subject, we are obliged to conclude that Dr. Drake was misinformed. We have carefully searched the records at the Mayor's office—the transactions of the city council,* and a number of MSS. belong-

*It is a little singular that the only reference made to the sanitary con-

ing to the late Mr. Rawlings, and we can find no evidence that yellow fever has ever prevailed in Memphis "as a mortal epidemic." Indeed, Major Winchester, who was Mayor of the city during that year, assures us that it did not prevail, and never has prevailed as an epidemic.

The population of Memphis on the 1st June, 1850, was, according to the census, 8,840. To this, Dr. Grant, in his report of the sanitary condition of Memphis for 1851—read before this society on the 5th Feb., 1852—added 20 per cent for increase during the year 1851, or up to January, 1852—making a population of 10,608. Now, as Dr. Grant thinks this a large estimate and says "it is a rate of increase which ought to satisfy the most strenuous advocates for large estimates," we shall not add 20 per cent on Dr. Grant's total of 10,608, but shall add 40 per cent to the census returns of 1850 for the increase of 1851 and 1852—making a population on the 1st July, 1853, of 12,376. As there were 705 deaths in '52, we have a per centage of 5.7-10. If to this 12,376, we add a suburban population of 1,500,* we have a total of 13,876, giving a per centage of 5.1-10. Or if to the 12,376 resident population, we add the transient population of flat-boats, as given by Mr. Wolf, the wharf master, for 1852, we have a total of 17,530, or a

dition of the city, is one in favor of the vegetable origin of miasm. Dr. Merrill, in his address, says: "It were an easy matter to multiply cases in which periodic fevers have appeared, independent of the influence of decomposition. * * * * Many of you have observed, particularly in regions further south, that large masses of cotton seed are suffered to lie and rot near dwellings and negro quarters, and are finally carted away upon the fields for manure, without evil consequences. Negroes are seen working in these heaps of fetid seed for weeks together, without a case of fever occurring among them." On the 6th October, 1827, the Common Council passed an ordinance to the following effect: "Whereas, the practice of throwing cotton seed out from gins and exposing the same to rot and decay, is considered prejudicial to the health of the citizens of this town, Be it therefore ordained," &c.

*It is proper for us to state, that Mr. Guion, who took the last census of the county, concurs in the opinion expressed by Dr. Shanks as to the number of the suburban population, viz: that there are quite 3000.

per centage of 4 1-4. If now we add all these together, it gives us a population of 19,030, or a per centage of 3 7-10. Or adding the 114 deaths at the Hospital, it gives us a mortality of a fraction over 4 per cent. These are plain figures; and we are satisfied that there is a population of over 19000, that add to our mortuary returns—and that the true per centage of the city mortality is less than 3 per cent. It will be perceived that no mention is here made of the deaths furnished us from steamboats. Now it is certainly a little singular that Dr. Merrill in his calculations should place our population that furnish the 705 deaths for 1852, below Dr. Grants estimate for 1851, and state in his address that “in 1851 there were 197 deaths of persons whose diseases were not named at all; and in 1852, there were 106, (there were 111,) while it is probable that one-half the diseases reported in both years were incorrect. Of course,” he continues, “we can make no legitimate deductions from such a mass of error as is thus presented to us,” and yet proceed in his calculations, as though there were no “errors,” and arrive at the strange conclusion—which certainly cannot be called a “legitimate deduction”—that the diseases, whether named correctly or not, all have their origin in the one sole cause of street grading. We fully concur with our learned friend that the grading of the streets is detrimental to health, but let him examine the table more carefully, and see if the deaths have not resulted from causes incident to a river population.

In his address, Dr. Grant gives us the per centage of mortality among 1131 members of the nine Protestant churches, and it is found to be but 2.29. This, it will be perceived, supports the conclusion we have arrived at in reference to the mortality of our actual resident population. We wish here to return our thanks to Dr. Grant for his kindness in placing in our hands the replies received by him from the clergymen to whom he addressed his letter. We exceedingly regret that we have been unable to obtain satis-

factory information from all the clergymen to whom we addressed ourselves for information. Such information, however, as we have obtained, may be worth consideration. The Rev. J. H. Gray replies to the question, "How many souls are attached to your cure?" as follows: "About 500—but if you include the children and servants, the number is greater." By this we understand that there are 500 adult white persons under his pastoral influence. During the past year, three deaths have occurred among the adult whites. The Rev. Dr. Porter states that there are from 600 to 700 attached to his cure, and during 1852, there was but one death among the adult whites. To his congregation there were 85 souls added by removal during the year 1852. He has attended the funerals of 3 strangers.

The Rev. B. F. Chew says: "We estimate our whole population at 400 souls. There were 20 added by removal during 1851, and 15 during 1852. During the past year there have been 4 deaths among the adult whites—2 within the city limits, 2 without."

The following is the report furnished by Deacon Henderson, of the 1st Presbyterian church:

"Number of souls in the families of those who belong to the congregation of the 1st Presbyterian church in the city of Memphis on the 31st of December, 1851,.....	462
Number of adults who died in 1851,.....	8
Number of children under 2 years of age,.....	4
	—
Total,.....	12
Number of souls in same congregation, December 31st, 1852,.....	536
Number of adults who died in 1852,.....	3
Number of children under 2 years of age,.....	5
	—
Total,.....	8

The above is exclusive of the colored members of families." It will be perceived that while this congregation has been

increased by the addition of 74 persons, the deaths were one-third less during 1852 than 1851. One fact is evident in all the letters we have received, and it is that all the congregations have been considerably increased by the removal of families to the city. This assertion is supported by the report of the Rev. T. L. Grace, of the Roman Catholic congregation, in which the increase is reckoned by the number of baptisms. In 1842, there were 14 baptisms, and the number was gradually increased up to 86 in 1851, and to 102 in 1852.

In the Episcopal congregation there are about 500 souls; 9 deaths occurred among the adult whites, several of which were without the city limits.

These items are presented, not because they form any basis for accurate calculation, but as interesting points, well worthy the consideration of the society.

The tables we have presented exhibit an increased mortality for 1851 and 1852. As to the causes of this increased mortality:—It is an admitted fact that there is a constitutio aëris, that may be endemic or epidemic in its influence. It may be confined to a comparatively small region of country, or it may traverse lines of great dimensions. What this peculiar constitution of the air is, we cannot say; but it may exist independent of those causes which originate malaria, and independent of the minute and local, as well as the general characteristics which distinguish the geography of a country. Has there been any such vitiated state of the atmosphere to which a portion of the diseases of this city and vicinity may be traced? We believe there has, and that it has not been confined to this region, but has been diffused generally over the United States, particularly the southern and western portions of the Union. It will be remembered that in 1849 the country suffered from a fearful visitation of cholera. There both preceded and followed the epidemic a class of diseases which by general consent of the medical faculty have been attributed to atmospheric changes, or ra-

ther to vitiation of the atmosphere. Professor Jackson says of the epidemic, "a well founded suspicion may be entertained that the extensive prevalence of dysentery has had some connection with cholera." Thus in Philadelphia during 1849, the cholera year, the number of deaths from Dysentery were 578; in 1850, 432; in 1851, 386. In Alabama, in 1851, Dysentery prevailed extensively as an epidemic. "It began," says Dr. Mabry, of Selma, "in the latter part of February, and continued to prevail as an epidemic till the middle of August." He further remarks, that it is the first time the disease has ever prevailed to any considerable extent in the place. Dr. Gordon, of Perry county, says the disease began late in the year 1850, and reached its maximum in June, 1851. Dr. Pierson, of Pickens co., Ala., says: "the epidemic finally, without regard to localities, proved equally fearful and fatal upon the highest and formerly healthiest situations, impressing us with the idea that its origin depended more upon the CONDITION AND VICISITUDES OF THE ATMOSPHERE, than to any local conditions referable to malarial origin." In 1849 and 1850, Cincinnati suffered severely from Cholera, and on the 23d June, 1851, the Board of Health report a few cases, but say it does not prevail as an epidemic. On the 3d of July, the Board report 43 cases; on the 10th, 19 cases; on the 17th, 17 cases; and on the 24th, six. After this, the Board made no further report. Dysentery prevailed to a considerable extent. Cases were frequent during and following the cholera, and says the Committee of the American Medical Association on the epidemics of Ohio. "Its connection with Cholera here has been uniform, and leads us irresistably to the conclusion that they have their origin in a common cause." The experience of physicians nearer home has been to the same effect. So far as we have been able to learn—and we have consulted many of the most intelligent members of the profession in various sections of Mississippi, Arkansas and Tennessee—diseases of the same type and character have prevailed

as those which have proved fatal in this city. Nearly one-third of the diseases that have proved fatal in Memphis, are attributed to the digestive apparatus; and the facts we have brought forward force us to the conclusion that they, in a great measure, depend upon some vitiated state of the atmosphere, which both precedes and follows epidemic Cholera—that where co-existing causes are sufficiently active, epidemic Cholera is developed. To this constitution of the atmosphere, whatever it may be, we feel assured that much of the disease that has prevailed in our city is due.

But when we attribute all that the most liberal estimates will permit to non-local causes, we have still to consider how strictly local ones have affected the vital conditions of our city. The mode of life among the lower classes is such as to render them easy victims of disease. In one house that we have visited, cases of Typhoid Fever, there were sixteen beds in one room, and these sometimes occupied by double that number of persons. All manner of filth was collected in the room, the occupants not even observing the cleanliness which nature requires. The whole house, from the ground floor to attic, was impregnated with a compound of villanous smells—so pungent, that at the present moment they do not at all remind us of the sweets of Hymettus.

This is but one, of many similar abodes of poverty in our midst, that add not only to the sickness but mortality of Memphis. The want of cleanliness in such dwellings, at once strikes the observer with the conviction of its being detrimental to health. Let him turn his steps from such a place, and observe the streets of the city. Are they cleanly? Is the scavenger's cart ever met with? We are obliged to reply in the negative. Memphis is favorably located for drainage, and yet it is not drained. The streets have been so leveled and graveled that it is absolutely impossible for the water that falls to run off. It remains in the streets and gutters until it either evaporates or is absorbed. The gutters are so constructed that they readily fill up with filth and

soil, and it is an exceedingly rare thing to find running water in them. Any person who will examine our two principal streets—Front and Main—will soon be convinced of the truth of this assertion. Indeed we have all had, for some months past, evidence enough in the quantities of creamy mud, through which all pedestrians have waded laboriously on their business or pleasure. We may also refer to the fact that in the very heart of the city—on the most public street—ten livery stables add their quota to the ills our citizens are obliged to endure. It is true that some of these are admirably conducted—are very cleanly—but some of them are far otherwise—and heaps of manure, particularly about the lower market, have accumulated to such a degree as to be offensive in more ways than one.

The filth that has been so abundant in our streets, and alleys, and gutters, and by-ways must be reckoned among the local causes of disease. Indeed, the impure air thus generated in filthy lanes and alleys has always been looked upon as a cause of disease. From it may arise typhus and typhoid and bilious fevers, and, under certain circumstances, yellow fever. There is reason for the belief that the pestilential visitations, of which we read in Roman history, were nothing else than malarious epidemics rendered contagious, no doubt, by the crowded state of the city, the narrowness and filth of the streets and the wretchedness of the plebeian population. Our streets are abundantly wide, and with proper paving we should have tolerable drainage with our present gutters. The best paving is that which prevents sub-soil evaporation, and will most readily convey away the water. Both these can be secured by planking the streets. At present we are obliged to coincide with Dr. Grant, and reiterate his assertion “that abundant sources for contaminating the atmosphere exist in our city.” In the development of local causes of disease, there are two agents which cooperate in the production of a vitiated state of the atmosphere. The first essential pre-requisite is an elevated tem-

perature. A hot sun is the great operating power in the generation of a diffused atmospheric pollution. The second co-existent agent is the material to be operated on. All agree that a hot sun is essential to the production of febrile miasmata; and this general agreement among observers arises from the fact that diseases which have been attributed to a vitiated atmosphere never prevail except in tropical climates, or during the hot summers of temperate climates. As to the material upon which the solar influences operate, as we have already stated, there is still some degree of doubt. Furgurson, before quoted, says, "putrefaction and the matter of disease are altogether distinct and independent elements—that the one travels beyond the other without producing the smallest bad effect—and that however frequently they may be found in company, they have no necessary connection." The views of this distinguished writer must be received with limitation,* for if we reject the many corroborative proofs afforded by various medical writers of the greatest accuracy of observation and fidelity of narration as regards the generation and evolvment of miasmata from vegetable and animal decomposition, we must harden our minds into a state of incredulity and scepticism, amounting to an abandonment of the best established medical truths.† We

*The history of disease in the valley of the Mississippi, during the summer and autumn of 1829, is in direct opposition to the opinion of Dr. Furgurson. That season was distinguished by an abundance of rain. It was perhaps the wettest experienced in the west since its first settlement. No near approach to aridity prevailed during any portion of it. Yet it was far from being, as, on the Doctor's hypothesis, it ought to have been, the most healthy. On the contrary, it was marked by a greater amount of bilious fever, than had existed previously for many years.—*Caldwell on Febrile Miasms*.—*Boylston Prize Essay*.

†Proceeding up the Mississippi and its tributaries, a valley of secondary formation and alluvial soil, we find that malarial diseases still prevail; and on the prairies of the far west, and even the table-lands of Ohio, the summits of whose highest hills are rich in organic remains, but more especially along the margins of streams, the same class of diseases are dominant. Moreover, if further evidence were necessary to establish the connection between organic remains and what have been classed as malarial diseases

are compelled, *ex necessitate*, to admit the operation of this agency among the active causes of disease.

The bayou Gayoso, too, demands a word. This "natural sewer" is at times a source of evil. When the Mississippi continues high—as, according to Dr. Shanks, it did in 1851, till the middle of August—then the backwater in it overflows its banks and covers a large surface. This surface, with all the vegetable matter floating upon it—is acted upon by the summer sun, with a mean temperature of 85 deg.; and thus is generated local causes of disease. This, however, admits of remedy, by straightning the bayou, and thus reclaiming the low grounds that are now occasionally overflowed; and by placing a levee sufficiently high to confine the water to a proper boundary.

It is not necessary to dwell longer upon the causes of disease that we find in our streets and about our city. We may refer to one fact that increases the mortality in no slight degree, viz: imperfect medication. We find that previous to April, 1851, no record was kept of the physicians in attendance on the sick. From August, 1851, to January, 1852, such a record was kept by the Secretary of the Board of Health, and the following is the result.—Of the 250 deaths, but 110 are recorded as having been attended by physicians—leaving us to presume that 140 were without medical attendance. From January to October, 1852, three hundred and fifty-two are recorded as having been attended by physicians. Two hundred and thirty-four are recorded as having died without medical aid. Now it is certain that many of

in the foregoing pages, (*Forry on Climate of the United States*,) it is only necessary to refer to the fact that even in the malarious region of the great lakes, those posts which have a dry and sandy soil, as Forts Brady and Mackinac are almost exempt from these diseases; and so upon the Atlantic Plain, we find a similar exemption at Forts Monroe and Moultrie—each situated upon a sandy tongue of the sea coast. Lastly, the history of the Augusta, Ga., Arsenal, which was removed from the Savannah river to the "Sand Hills"—a distance of only two miles—illustrates the same law.—(*Vide "Climate of the United States," by Samuel Forry, M. D., page 363.*)

these latter were ministered to; but it is a significant fact, calling urgently upon the Corporation, the profession and the citizens of Memphis, to do something for the relief of the sick poor. A clinique is held regularly, at 8 o'clock, A. M., at the Medical College, where, during the two months that have elapsed since it went into operation, 124 cases of various diseases have been prescribed for. This clinique lasts but one hour, and that from 8 to 9 o'clock. Now, if over 100 suffering poor have been able to leave their abodes to seek medical aid, how many, is it fair to presume, have been unable to seek such assistance. There is philanthropy, and humanity and charity enough in Memphis, but it needs concentration. It is a shame and a reproach that Memphis has no city hospital—no dispensary, where the poor can command medical assistance in their need. But again the mortality of Memphis has been increased by deaths occurring among persons left here from steamboats. Now, I am fully aware that, as Dr. Grant suggests, "the same is true of every other city in which mortuary statistics are kept;" but we doubt much whether the relative mortality of any other point on the river is so greatly increased by this means, as is that of Memphis. According to the Register kept by A. B. Shaw & Co., we find that 9 steamboats stop at this point daily, making a total of 3285 per year. If we give to each of these 100 souls, which is a low estimate, we have our population increased in this way by the addition of 328,500. From the records of the Wharf-master, Mr. Wolf, I find that in 1851, 886 flat boats visited our port, containing on an average 6 persons per boat—a total of 5,316. In 1852, there were 857, with the same average; or a total of 5,154. Adding the number of persons who visit us on steamboats, with the number on flat-boats for 1852, and we have a total of 333,654. As to the fact of our mortuary returns being increased by this immense floating population, it is scarcely necessary to offer a word of proof. We may just mention however, that we have been informed by A. B. Shaw, Esq.,

that the highest number buried in any single week, during 1851, by A. B. Shaw & Co., from their wharf-boat, has been 14. That the highest number buried in any one week during 1852, has been 6. Within the past few weeks it has occurred that one corpse was landed—two men died immediately on being landed, and two others who were sent up to town died in a short time. It is true that not all these are placed on the Record of the Board of Health—but many of them are. We find names of persons recorded on the books who have died on steamboats—have been brought here for interment—and their deaths have been published by the Board of Health, without note or comment. This we have discovered by comparing the records of the Board with the books of the Sexton.* These persons died, according to the books of the Sexton, on steamboats; but, according to the record of the Board, had been for some time residents of our city. Of what use, then, is this record, in arriving at the exact statistics of the mortality of Memphis. It does indeed furnish us a goodly number of names of persons who have found a grave here; but it is not a true index, as it purports to be, of the mortuary condition of the town.

The conclusion we arrive at is, that the records of the Board of Health are valueless, as exhibiting the mortuary condition of the city. When we consider the fact of the important interests involved of a fair, candid and just exhibit of the vital statistics and Hygiene of the town—that the interests of our city are deeply involved, it becomes us to consider just what are the local causes of disease—just what will most easily and readily remove them. Memphis is just now assuming a position. It is getting to be looked upon as a point of great commercial importance, as the terminus of a Pacific Railroad; or, at all events, as a point whence must emanate a vitalizing influence. It becomes the sub-

*In the reading of the Report, a number of names were mentioned, but they are omitted for obvious reasons.

stantial men of Memphis—those who are interested in the improvements of the town to inform themselves on these subjects; and it becomes all who propose to reside in the city to make their influence felt through the ballot box. How near soever our figures may approach the true vital condition of the town, it is very evident that much may be done in the removal of filth, and in adopting very many items of importance, that one embraced in a well adjusted and effective system of medical police. There is one broad fact that should be borne in mind, and it is this:—Memphis may be rendered as healthy, if not healthier, than any town in the great Mississippi Valley; and the means of this important end are within the reach of the citizens. If the geographical position of the city is such as to open before her “a manifest destiny”—so brilliant that the mind is lost in contemplating it—it does seem that measures should be adopted that will ultimately secure to her citizens the salubrity indicated by her topography and meteorology. This is no small matter—no subject for trifling—it is a vital interest, and one which the citizens themselves should investigate. Let us have facts, and draw wise conclusions from them. “To conceal our true condition would,” as Dr. Grant has justly said, “bring down upon us the scorn and contempt, not only of the moralist and the philanthropist, but of sensible and reflecting minds everywhere; and after a few years more of suffering from existing evils, would tell upon the interests of the place with ten-fold force.” If local causes, and removeable causes of disease can be ascertained by the combined efforts of enterprize, science and wealth, whatever may be the cost, their removal will be cheap in the end; for nothing can be permanent without healthiness.

Dr. Barton, in his very admirable report to the Louisiana State Medical Society on the Meteorology, Vital Statistics and Hygiene of the State of Louisiana, says, “the insalubrity of New Orleans, is mainly owing to

1st, Bad air,

2nd, Privies, Cemeteries, various manufactories, stables, slaughter-houses, etc.

3d, Bad water—stagnant water.

4th, Bad Habits.

5th, Bad Milk.”

We might, had we time, consider how the health of our own city is affected by each of these causes of disease; but without an allusion to the others, we must content ourselves with quoting his remarks in reference to the first of these, and leave the other items to your good sense.

“BAD AIR, ETC.—The greatest sources of impurity of air, arises from privies, the offal from kitchens, stables, stores, markets, streets, manufactories, etc.

It is estimated that a population of 130,000, (that of New Orleans at the time of his writing,) produces annually 5,633 tons of night soil, 843,000 tons of urine:—these may be doubled from domestic animals, and from other sources are at least as much more:—making the frightful aggregate of about 150,000 tons, (including more than 3,000 dead bodies buried in the cemeteries of the city limits,) of organic matter, submitted to the putrifactive fermentation every year.”

“It is in vain to say that the night soil is removed to the river, urine sunk into the soil, the offals carried a mile or two in the rear, and bodies buried in vaults:—all are long enough exhumed to contaminate the atmosphere.” To show what may be done by a proper system of policing, we will refer to the statistics of some of the towns of England. In Charlton-upon-Medlock, the rate of mortality was, according to the health commissioners, in the first class houses and on the first class streets, one in fifty-one, and in the worst houses and on the worst streets, one in twenty-five, being little more than double the number of deaths in the latter in proportion to the living than the former. In York one in 47 1-2 died in the best and 28.82 in the worst, drained and ventilated parishes. The average age in the former was 35 7-8 years and in the latter 22 1-2 years. In Leicester the

average was 25 1-2 years in drained districts, and 17 years in the undrained districts.

In Preston in 1840, 1 in 14.6 died in the worst streets and only 1 in 29 through the whole town. The rate of mortality differed from 1 in 41 in the best to 1 in 23 in the worst wards—that is, for every 100 that die in one, 177 die in the other. Now are not these significant facts? Do they not appeal to the reason of every man within the sound of my voice? And to what sort of drainage is reference here made? Think you it is at all similar to the VERY peculiar kind adopted in Memphis—such as filling up gutters and all natural channels with filth, and mud and soil? Surely not. But I have already detained you too long. In conclusion allow us to suggest the propriety of the establishment of a Board of Health consisting, not of medical men solely, but of gentlemen, who appreciate the importance of the subject—of any and every profession. And in order to obtain that accuracy so necessary to the cause of human life and human progress, let it be made a penal offence for a sexton to bury any person, white or black, without having a certificate from the attending physician, and in cases where no physician has been in attendance, let the certificate be obtained from the coroner of the name, age, place of nativity, length of time in Memphis, disease, date of death, &c; this certificate to be deposited with the Secretary of the Board. This custom once established would add nothing to the labors of the sextons, indeed it would decrease them. It is a plan that has been adopted in all our large cities, and it is the only plan that promises any success or safety to this city.

In conclusion permit me to say, that I entered upon the duties assigned me by the committee, with the expectation that it involved only the examination of a few figures, but so many items, of interest to the profession and the public, came to my knowledge, I deemed it proper to draw up what I conceive to be, at least, an approximation to the true vital condition of the city for 1852. If in the prose-

cution of the task I should have arrived at results and conclusions somewhat at variance with those of some of my distinguished professional brethren, I can only plead honesty of purpose, and submit to their scalpels, satisfied that their dissections will be both courteous and scientific.

NOTE.—We are authorised by Mr. L. R. Richards, who is at present taking a census of the city, that the population is considerably over 12,000.

An excuse must be found for want of connection in this report, in the fact that after it was drawn up, the author left out some thirty pages, in order to have it as short as possible.

Meteorological Tables as kept at the Navy Yard, Memphis.

1851.	Thermometer in the shade and open air.			Barometer mean of			Weather.		Prevailing Winds, days.				Rain.					
Months.	Maximum.	Minimum.	Range.	Monthly Mean.	Maximum.	Minimum.	Monthly Mean.	Clear days.	Cloudy days.	Easterly.	Southerly.	Westerly.	Northerly.	Days.	Inches.			
January.	68	17	51	44	30	15	29	29	29	71	20	11	10	10	5	6	3	1.39
Febr'y.	76	24	52	47	30	04	29	27	29	66	10	18	4	10	6	8	8	8.77
March.	80	28	52	53	29	32	29	87	29	60	15	16	6	10	8	7	5	2.07
April.	80	32	48	58	29	80	29	24	29	53	9	21	7	9	5	9	8	3.09
May.	89	38	51	65	29	66	29	29	29	46	12	19	7	13	5	6	8	2.88
June.	91	58	33	75	29	67	29	34	29	45	24	6	6	12	5	7	3	.78
July.	93	58	35	79	29	66	29	49	29	59	25	6	6	14	6	5	3	.70
August.	95	65	30	82	29	66	29	42	29	56	16	15	7	12	9	3	7	2.32
Sept.	93	40	53	69	29	76	29	45	29	60	24	6	3	5	12	10	1	.20
Oct.	82	29	53	57	29	80	29	19	29	50	23	8	4	9	11	7	4	2.85
Nov.	74	24	50	49	29	73	29	19	29	46	12	18	7	9	8	6	8	5.70
Dec.	65	10	55	39	29	92	29	33	29	62	15	16	8	5	11	7	8	2.14
															32.89			

1852.	Thermometer in the shade and open air.			Barometer mean of			Weather.		Prevailing Winds, days.				Rain.					
Months.	Maximum.	Minimum.	Range.	Monthly Mean.	Maximum.	Minimum.	Monthly Mean.	Clear days.	Cloudy days.	Easterly.	Southerly.	Westerly.	Northerly.	Days.	Inches.			
January.	66	02	68	31	31	00	29	23	29	91	12	19	6	10	6	9	4	1.60
Febr'y.	65	32	33	59	29	79	29	21	29	52	10	19	5	8	7	9	11	6.14
March.	87	25	62	61	29	78	29	13	29	46	10	21	7	9	6	9	9	2.23
April.	85	37	48	68	29	56	29	08	29	36	11	19	5	10	7	8	9	1.68
May.	91	45	46	71	29	72	29	33	29	54	9	22	8	10	9	4	11	4.43
June.	95	52	43	79	29	75	29	42	29	59	17	13	4	14	9	3	5	2.51
July.	99	61	38	82	29	64	29	48	29	56	23	8	5	22	2	2	9	1.83
August.	97	56	41	78	29	72	29	41	29	57	17	15	4	13	9	5	8	4.28
Sept.	95	48	47	72	29	62	29	45	29	54	20	10	5	7	12	6	5	1.65
Oct.	88	40	48	67	29	71	29	26	29	49	20	11	6	12	9	4	4	1.98
Nov.	76	28	48	54	29	74	29	20	29	47	9	21	8	7	8	7	10	4.15
Dec.	70	28	42	48	29	84	29	32	29	61	11	29	9	10	8	4	10	7.65
															40.85			
															32.89			
															7.90			



