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THE

CHARLESTON

MEDICAL REGISTER,

FOR THE YEAR

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BY DAVID RAMSAY, M. D.

CHARLESTON:

PRINTED BY *W. P. YOUNG*, No. 41, BROAD-STREET, FRANKLIN'S HEAD.

1803.

INTRODUCTION.

MEDICAL facts, correctly stated and diligently compared together, reflect great light on the practice of physic. Conformable to this established principle, it must be obvious, that annual statements of the principal events, connected with the health of the inhabitants, made by physicians in different places, would be particularly useful. The more extensively this was done, the better; but in the United States, the advantages of such publications are enforced by peculiar considerations. In the old world the attention of learned men has been employed for many centuries, in applying the general principle of medical science to the local peculiarities of each particular spot. Knowledge of this kind, in America, chiefly rests with individuals. To bring it within the reach of the community, requires the joint labors of practitioners in every part. If one physician, in each of the cities and towns of the United States, and several in the country parts of each state, were to favor the public with an annual account of the state of diseases, and of the circumstances connected with them, as far as their observations extended, there would, in time, be an accumulation of materials, from which we might obtain the following advantages:

1. *More correct knowledge of the diseases of the United States.*

2. *A Comparative view of the health and longevity of the inhabitants in different places.*

3. *Authentic evidences of all changes of the climate that took place; and particularly of the effects produced on the health of the inhabitants from clearing and cultivating the soil, and from the different modes and articles of culture.*

4. *Persons laboring under any constitutional predisposition to particular diseases, might select, with precision, a place of residence, least likely to call into action the particular predisposition, under which they labored. Such is the extent and variety of climates in the United States, that this might be done, in almost every case, without changing the government or language, to which persons proposing a change of residence, were accustomed.*

5. *Physicians would be enabled to direct invalids to such a route in travelling, as would best suit their particular habits and diseases: from the want of this local knowledge, improper advice is frequently given. The longitude and latitude of places afford no certain rule. Their influence, controlled by a variety of local circumstances, is by no means uniform.*

The advantages of the proposed annual publications would not be confined to the medical department. The farmer and gardener, from an average of seasons, would be assisted in forming their opinion of the best time for their respective operations.

The enterprising agriculturist, who wished to enrich his country with some new productions, would be informed when and where to make his experiments, by comparing the observations auxility to the practice of physic, with the usual habits of the particular commodity he wished to introduce.

A facility might thus be given to the introduction of ginger, japan sago, of the almond, allspice, caper, clove, cinnamon, camphor, nutmeg, red cotton trees, and several others valuable exotics. There are, doubtless, portions of the United States suitable to the culture of these articles; but that suitableness is unknown to foreigners, and equally so to the owners of the soil. The same observation applies to the introduction of new animals, and of new branches of manufacture. Success, in both cases, must be materially influenced by the degree of heat and cold, and of the moisture and dryness of the atmosphere.

The foreigner, who wished to remove to this land of equal rights, would, also, be enabled to determine where to locate himself, in a situation least variant from his trans-atlantic residence.

With these impressions, the following contribution is respectfully submitted to the public. However imperfect the execution may be, the plan is such, that if improved by the wisdom, and carried into effect by the industry of more enlightened physicians, some considerable benefit must result to the United States.

DAVID RAMSAY.

Charleston, South-Carolina, January, 1803.

THE

CHARLESTON MEDICAL REGISTER,

FOR THE YEAR

1802.

CHARLESTON, in the year 1802, was afflicted with four epidemics. The ſmall-pox, the meaſles, the influenza, and the yellow-fever. There were caſes of the Small-Pox in almoſt every month of the year. It proved fatal to four children, though inoculated for it by ſkilful phyſicians; and alſo, to about twenty other perſons, who took it in the natural way. Theſe died under circumſtances horrid to ſee, and painful to relate. Covered with confluent ſores, they could neither ſtand, ſit, nor lie, without exquiſite pain. Their bodies, and bed-cloaths, were ſtiffened with fœtid diſcharges from every part of their ſkin. The whole emitted a ſtench intolerable to by-ſtanders. Humanity was put to the rack, while

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it discharged the offices necessary for their support. In one case, an unfortunate negro (who caught the disease, remote from help, and unknown to his owner) was so far bereft of all power to help himself, that rats devoured a large portion of his *Tendo Achillis*, some days before he died. The recoveries from the small-pox were much more numerous than the deaths. Though in many cases, the subjects of the former suffered comparatively little, there were others who escaped with difficulty, and after a painful and distressing confinement.

A considerable number, (supposed to be not less than twenty) took the small-pox in the natural way, after having been inoculated for it, and after medical practitioners declared that they had had the disease. One of these unhappy patients died, and others suffered more from it, in consequence of no pains having been taken to obviate a malady, from the attacks of which they supposed themselves to be free, till its advanced stages evinced the mistake.

The measles began early in the year, and in the course of four or five months, gradually spread over the city. A few cases also occurred in November and December. They were generally mild, excepting where they attacked persons labouring under complaints of the breast. There were very few instances of immediate death from this disease; but it proved fatal in its consequences to several who where of a consumptive habit. In persons of this description, and others who were not confined to a low diet, nor guarded against night air, and damp cold weather, the original malady was followed

lowed by conſequences more ſeriouſly alarming than itſelf. In the moſt dangerous period of the diſeaſe, bleeding and bliſtering were found to be of eminent ſervice. A careful avoidance of warm ſtimulant drinks—of heat and cold—a ſtrict conformity to a low cool regimen; together with a ſlow gradual return to a full diet, produced the happieſt effects. Convaleſcents, who continued weakly, received great benefit from changing the air; particularly from ſailing.

The influenza was cotemporary with the meaſles; but more general. In ſome, inſtances whole families were ſeized with it, nearly at the ſame time. Excepting the eruptions in the latter, the ſymptoms of both were very much alike, and required a ſimilar treatment. The influenza, chiefly attacked thoſe who had previouſly gone through the meaſles. It ſeemed, as though one conſtitution of the air favored the production of both. The influenza, though painful and diſtreſſing, was very ſeldom mortal.

The general complexion of the diſeaſes, for the firſt ſeven months of the year, was inflammatory. Pleuriſies, acute rheumatiſms, and complaints of the breaſt, were uncommonly frequent. From theſe precurſors, ſome predicted a ſickly ſummer, and a great prevalence of yellow-fever; but they were agreeably diſappointed. July, and the firſt ſeventeen days of Auguſt, were cool and healthy, there was only one day in both months, in which the mercury, in Fahrenhiet's thermometer, reached eighty-nine. The old inhabitants were generally free from diſeaſes of every kind; and only two ſtrangers died of the yellow-fever before September.

tember. Fourteen of the laſt days of Auguſt, and the twenty-two firſt of September, were ſteadily warm; but not to ſo great a degree as in ſome former years. In only three of them (the twenty-ſixth of Auguſt, and the fourteenth and fifteenth of September, did the mercury riſe as high as eighty-nine.) On the other hand, in only two of them (the fifth and ſixth of September) did it fall below eighty. In this warm ſeaſon, the yellow-fever began to extend; but was leſs mortal than uſual. More than half, who were attacked by it, recovered. The mode of treatment, which ſeldomeſt failed, was depletion, followed by a mercurial ſalivation. There were a few, and only a few caſes, where calomel produced its uſual effects, in which the patient did not recover. Where the diſeaſe proved fatal, its ſuperior excitement rendered this, and every other medicine, comparatively inert.

A few ſtrangers, though from northern latitudes, paſſed the ſummer (their firſt) in Charleſton, without being attacked with the yellow-fever. In three caſes it proved fatal to perſons, who had reſided in this city for eighteen months immediately preceding. No inſtance occured of the death of any under twelve years of age, from this diſeaſe.

The eagerneſs of the people to receive their winter goods, early in the ſeaſon, induced men in trade to order matters ſo, that ſeveral veſſels from foreign parts, arrived in Charleſton, with their unſeaſoned crews, in the months of Auguſt, and September.

To ſuch, the yellow-fever was particularly inhoſpitable.

hoſpitable. To others, arriving in the ſame ſeaſon, Sullivan's-Iſland afforded a ſafe retreat, till the danger was over. Exceptions to this, have heretofore been very rare, and generally could be accounted for from ſome irregularity; but in the year 1802, five caſes of the yellow-fever, (and two of them fatal,) occurred in one houſe on that iſland, while the other inhabitants were generally healthy.

No inſtance can be recollected, in which there was any ground to ſuppoſe, that the yellow fever was either imported, or had been contagious. No phyſician, nurſe, nor other perſon expoſed to contagion, from their intercourſe with perſons labouring under yellow-fever, caught the diſeaſe. It was excluſively confined to ſtrangers; and among them there was no evidence of its being communicated from one to another.

Having enumerated the diſeaſes, that afflicted the inhabitants in 1802, I proceed with pleaſure to point out ſome events, in the ſame year, which have a favorable aſpect on their future health.

Vaccination was introduced into Charleſton, in February, and in a ſhort time became general. It had been long known in England, that perſons who from milking cows, were infected with a diſeaſe peculiar to them, called the cow-pox, were afterwards ſecure from the attacks of the ſmall-pox. The ingenious Dr. Jenner, poſſeſſed of this fact, inſtituted experiments to aſcertain the practicability of propagating the cow-pox from one human ſubject to another, and with the ſame ſecurity from the ſmall-pox, that was acquired by perſons originally infected from the cow. The reſult

was

was favorable to his wiſhes, and eminently ſo to the intereſts of humanity.

In 1798, he publiſhed an account of his enquiries and experiments. In four years vaccination, as eſtabliſhed by him, was introduced into Charleſton, and rapidly extended from the Atlantic to the mountains.

The practice was particularly recommended by the following facts: Among many hundreds, who were the ſubjects of this new diſeaſe, none died, or were ſeriouſly ſick; and no caſe occurred where the ſmall-pox followed the cow-pox, though many who had gone through the latter, were frequently expoſed to the contagion of the former. As far as a compariſon can be made, the vaccine diſeaſe exiſted in this climate, in a milder form, than in more northern latitudes.

The ſubjects of it were ſeldom laid up, or ceaſed a ſingle day to perform their uſual buſineſs. Puſtular eruptions, to any conſiderable degree, were very uncommon, and never dangerous. The vaccinated ſpots ſcarcely ever degenerated into ſores, except were they had ſuffered violence from ſcratching, or otherwiſe. No caſe can be recollected, in which common water, or at moſt lead water, failed of ſpeedily healing the arm.

Forty years elapſed, after inoculation for the ſmall-pox was introduced into England, before it became general in this city. So little was then known of the diſeaſe, that Charleſton, though much leſs populous than at preſent, loſt five hundred of its inhabitants by the ſmall-pox, in the firſt year after the general introduction of inoculation.

The contraſt between the old and new inoculation

tion muſt afford pleaſure to every benevolent mind.

Nothing is now wanting to exterminate the ſmall-pox, but a general and ſimultaneous vaccination. This might, by previous concert, be carried into effect in a very ſhort time; not only in this ſtate, but in all countries with which we are connected. Till ſomething of this kind takes place, all new born children, and many others, are expoſed to danger from every veſſel that arrives; for it may convey to our ſhores a perſon infected with the ſmall-pox. From a ſingle caſe of this kind, that diſeaſe may be introduced, and when introduced, no one can compute the extent of its ravages: for it propagates itſelf by the agency of inviſible effluvia, and ceaſes not, as long as it finds ſuſceptible ſubjects within its reach.

Our ſituation is peculiarly expoſed. No laws forbid the introduction of the ſmall-pox, nor the ſpreading of it by inoculation. In either caſe it may find us unprovided with the ægis of Jenner.

The natural cow-pox has not yet been diſcovered among our cattle, and the artificial is likely to die away among us from the want of a regular ſucceſſion of ſubjects. Once already, ſince its introduction, it has been loſt; and there is reaſon to fear it ſoon will be loſt a ſecond time.

The year 1802 gave birth to the Charleſton Diſpenſary. The City-Council generouſly voted 1000 dollars to defray the annual expences thereof; and twelve phyſicians offered their ſervices, gratuitouſly, in attending and preſcribing for the patients of the inſtitution. It is but juſtice to add, that the truſtees have faithfully done their duty; and the ſick ac-

knowledge that they have been as carefully attended by the phyſicians, as could have been expected, in caſe of their ability to make them compenſation.

Ninety-nine patients have partaken of the benefit of this inſtitution in the firſt eight months after it was opened.

From its progreſs, an abatement of mortality, and a diminution of diſeaſes, among the leſs opulent citizens, may be reaſonably expected.

The ſame year gave life and activity to the company incorporated for the purpoſe of ſupplying Charleſton with wholeſome water. The neceſſity of this had been pointed out to the inhabitants, as long ago as November, 1797, and before either Boſton, New-York, or Philadelphia, had adopted any meaſures for the ſame purpoſe. The Charleſton water company was incorporated in the year 1799; but it was as late as the year 1802 before they adopted efficient meaſures for carrying into effect the object of their incorporation. The inhabitants had been previouſly ſupplied with water from wells and ciſterns. Againſt both, ſerious objections exiſted. In conformity to ancient cuſtom, the bodies of the dead, for more than a century, had been interred within the limits of the city.

From the moiſt texture of our ſoil, the bottoms of graves, and of the vaults of neceſſary houſes and the tops of wells, are for the moſt part nearly of the ſame depth; that is from ſix to eight feet from the ſurface of the earth.

In ſeveral ſpots of the city all three are located in the vicinity of each other. Add to this the impurities collected on the ſurface of the earth, through which much of the well water muſt have penetrated.

penetrated. Country people, complained that the city water disturbed their bowels. The citizens found that their linen, when washed in Charleston, was less white than when they resided on their plantations. Apologies founded on the qualities of the water, were brought forward to justify the too common practice of attempting to correct them, by the addition of large quantities of ardent spirits.

Objections of a different nature, were made to the use of rain water, collected in cisterns. Though our climate is moist, yet droughts from three to twelve weeks long are not uncommon. As often as such dry seasons return, they, who depend on cisterns to be supplied with rain water, must expect to drink it old and in a vapid stagnant state.

This is evident from an examination of the pluviometrical observations made last year in this city. From them it appears, that though the whole quantity of rain, that fell in the course of the year, was thirty-nine inches $\frac{1}{10}$th; yet of this nearly one third fell in the month of July, and that there fell five inches in one day (twenty-third of September,) which is more than twice as much as fell in January, February, March, October, and the first twenty-nine days of November. More than a sixth of the whole fell in one glut, about the middle of July; to which, if you add the rain on the twenty-third of September, and the thirtieth of November, it will appear, that more than one third of the whole annual amount, fell in three storms. So uncertain and irregular must be the supply of cisterns, which is derived from rain.

From experiments made in 1740, by Dr. Lining, in Charleſton, it appears that the perſpiration from his body, in a ſummer's day, equalled one hundred and thirty ounces. This amount, multiplied by the number of human beings, and other animals, in Charleſton, will yield upwards of one hundred thouſand weight of perſpirable water, thrown daily into its atmoſphere. Every drop of rain water, before it reaches our ciſterns, muſt paſs through an atmoſphere expoſed to this daily maſs of contaminated materials. It ſurely cannot bear any compariſon with water filtered through a ſandy ſoil, remote from all the offenſive matter, with which Charleſton abounds, and conveyed cool and clean to our doors.

The water company being now completely organized, and under the direction of an active intelligent preſident, and board of directors. Six hundred ſhares taken up, and the preparatory arrangements conſiderably advanced, a reaſonable hope may be indulged, that the final completion of the work is at no great diſtance.

In addition to the ſupply of wholeſome water for domeſtic uſe, a ſurpluſage for keeping the ſtreets cool and clean, and for baths, will probably be procured. In every point of view, the proſpects of improving the health of the inhabitants are very promiſing.

Nothing great, or deciſive, was done laſt year by the police of the city, for obviating the occaſional cauſes of its local diſeaſes. Nuiſances were ſlowly removed, and the ſtreets were very imperfectly cleanſed. But few trees were planted in the city, and moſt of theſe were Lombardy poplars, which drop

drop their leaves ſo early in the ſeaſon, as to be of little uſe in purifying the air when their aid is moſt wanted. Very little was done by authority for filling up the low grounds. The greateſt exploit in this way was the work of an individual. Improvements have been commenced, and conſiderably advanced by Mr. Wm. M'Leod, on the north weſt angle of new Eaſt-Bay and Water-Streets; which, when completed, will preſent a ſalutary dry ſurface in place of a vile unwholeſome quag-mire.

Though there were frequent inſtances of the deſtructive effects of thunder in the Northern States, laſt ſummer, we ſuffered nothing materially from that ſource. Its ſound was diſtinctly (and in a few caſes very loudly) heard on forty-eight days, viz. April 7, 8, 10, 30. May 6, 11, 13, 15, 22, 28. June 3, 7, 9, 14, 17, 18, 19, 22, 25, 30. July 7, 11, 18, 19, 20, 21, 22, 28, 29, 30, 31. Auguſt 3, 4, 7, 8, 9, 12, 29, 30, 31. September 3, 11, 12, 13, 14, 20, 21, 22. November 30.

One houſe, near the weſt end of Broad-Street, though defended with lightning-rods, was ſtruck, but not materially injured.

Leſs rain fell in 1802, than in any of the ſeven preceding years. The whole quantity was thirty-nine inches and a tenth; and the number of rainy days were ſixty-four; the particulars, will appear from the following table:

1802.

Days of rain.	*Inches.*	*Tenths.*
January 21, 27,	0	4
February 13, 15, 22, 25,	0	8
	1	2

	Inches.	*Tenths.*
Brought over,	1	2
March 14, 22,	0	8
April 17, 19, 30,	2	0
May 6, 11, 15, 17, 20, 28, 29,	3	0
June 3, 7, 14, 20, 22, 24, 25,	3	4
July 3, 5, 12, 13, 14, 15, 23, 24, 25, 26, 27, 28, 29, 30,	12	1
August 1, 3, 8, 9, 10, 11, 12, 13, 29, 31,	4	9½
September 3, 11, 23, 26, 29,	5	8½
October 3, 24, 31,	0	2
November 30,	2	4
December 4, 8, 12, 13, 18, 30,	3	2
Days sixty-four,	39	1

Though there were only sixty-four days in which an actual fall of rain took place, yet the index of the hygrometer, pointed to damp in all degrees, from one to one hundred and one, for three hundred and fifty-two days. As far as we can rely on this instrument, we must admit, that there were only thirteen days of a dry atmosphere in the year 1802; these were April 26, 27. May 8, 12, 18, 19, 24, 25, 26, 31. June 16. November 5, and 7. The highest degree of dryness, pointed out in these days, was fifteen, which took place on the twenty-sixth of April. That the atmosphere should be so generally damp, in a year in which there was comparatively so little rain, excited surprise. On the accuracy, of the recorder (Dr. R. Wilson,) the most implicit confidence was deservedly placed. To ascertain the sensibility of the hygrometer, the following experiment was made on the sixth

of

of January, 1803, by Dr. R. Wilſon and myſelf. Between one and two, P. M. in a ſhowery day, when the index pointed to thirty-ſeven damp, a lighted candle was held near to it for ten minutes. In the courſe of this ſhort period, the index changed its poſition forty-two degrees, that is from damp thirty-ſeven, to dry five. The candle being withdrawn, in one hour it returned to thirty damp. Eaſterly winds were very prevalent in 1802, and air holds water, both in ſolution and combination. Nevertheleſs, the reſult is ſo variant, from common apprehenſions and feelings, as to require farther inveſtigation, before the almoſt conſtant dampneſs of laſt year is admitted.* The comparative dampneſs of the different months may be ſeen in the following table :

January,	31 days	damp from	11 to 76 degrees
February,	28	do.	10—96
March,	31	do.	4—62
April.	28	do.	3—95
May,	23	do.	2—30
June,	29	do.	1—45
July,	31	do.	30-101
Auguſt,	31	do.	30—90
Septem.	30	do.	14-100
October,	31	do.	12—90
Novem.	28	do.	4—60
Decem.	31	do.	5—77

Damp days, 352. — Dry do. 13. — Total, 365.

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* The meteorological obſervations referred to in this work, were all made by an inſtrument, containing a thermometer, barometer and hygrometer, conſtructed by Dolland, and ſuſpended in a corner of an open paſſage, leading to the ſtair caſe, in the houſe of Doctor Robert Wilſon, near the weſtern extremity of Broad-ſtreet.

The weight of the atmosphere, and the direction of the winds, for the year 1802, may be learnt from the following table :

	Barometer.	*winds.*	*days.*	*winds.*	*days.*
January,	30 12 *to* 30 74	S *to* NW.	17	N *to* SE.	14
February,	30 13—30 90	do. do.	15	do. do.	13
March,	30 20—30 80	do. do.	20	do. do.	11
April,	30 30—30 75	do. do.	22	do. do.	8
May,	30 40—30 73	do. do.	26	do. do.	5
June,	30 30—30 72	do. do.	18	do. do.	12
July,	30 15—30 40	do. do.	21	do. do.	10
August,	30 10—30 54	do. do.	16	do. do.	15
Septem.	30 10—30 50	do. do.	18	do. do.	12
October,	30 20—30 90	do. do.	8	do. do.	23
Novem.	30 10—30 60	do. do.	14	do. do.	16
Decem.	30 5—30 70	do. do.	17	do. do.	11

The latest frost in the spring of 1802, was March the fifteenth; the earliest in autumn, was October twenty-sixth, or rather November first; the coldest day was February twenty-third, thermometer thirty-two; the next coldest day, was December ninth, thermometer thirty-three. The greatest and least degree of heats, in each month, was as follows :

	Greatest	Least
January,	74,	45,
February,	69,	32,
March,	74,	44,
April,	86,	61,
May,	84,	66,
June,	86,	72,
July,	87,	70,
August,	89,	72,
September,	89,	60,
October,	81,	54,
November,	74,	45,
December,	70,	33,

The

The following table, in which the days are claſſed, will ſhew the number of warm days in the reſpective months, and the degree of heat in each day; but without fractions. The firſt column ſtates the higheſt range of the thermometer, in the whole courſe of the days oppoſite thereto, in the ſecond column:

1802.

Thermometer	January. days.	Thermometer	February. days.	Thermometer	March. days.
74	29.	69	11.	74	30.
72	28.	68	8.	72	10. 19. 25. 30.
70	27.	67	3. 16. 17.	71	18.
68	3. 9.	66	21.	70	17. 20
67	16. 21.	65	4. 14. 15.	69	3. 24.
66	4. 8. 15. 30.	64	9. 10. 26.	67	9. 26. 29.
65	2. 7.	63	12. 18.	66	1. 16.
62	14. 17.	62	7. 22.	65	13. 23.
60	15. 19.	61	13.	63	2. 6.
59	18.	60	1. 28. 25	61	28.
58	11. 23.	59	27.	60	15. 21. 22.
57	20. 6	58	20. 2		12. 5.
56	1. 22. 24.	55	24.	59	4.
55	26. 13.	53	5. 6.	58	11.
54	25. 12. 10	48	19.	55	8. 27.
51	5. 31.	45	23.	54	14.
				57	7.

April.

T.	APRIL. days
86	26.
80	4. 14.
79	3.
78	30.
77	2. 10. 25
76	7. 13. 18 22. 29.
75	9
74	1.8 12.19. 27
73	21. 5.
71	28. 6.
70	17. 24.
69	23.
68	11.
67	16.
66	5.
65	20.

T	MAY. days.
84	6.
83	10.
82	5.
81	26.
80	11. 22 28
79	25. 9. 27.
78	12. 13.15.21.
77	24. 29.
76	23. 30.
75	4. 31.
74	16. 19.
73	8. 14. 20
72	1. 18. 3.
71	7 17.
69	2.

T	JUNE. days.
86	22. 23
85	13. 14
84	24.
83	3. 30.
82	11 12. 17. 20. 21.
81	10. 6.
80	2. 8. 9. 15. 16. 25. 28.
79	7. 18. 19.
78	29.
77	5. 26. 27.
76	1.
74	4.

	JULY.
87	9.
86	8.
85	10. 18. 21. 22. 30.
84	4.6.7. 19. 31.
83	20.23. 29.27.
82	1. 2. 3. 5.
81	24. 16. 17
80	11.26. 28 25.
78	15. 12.
76	14.
72	13.

	AUGUST.
89	26.
88	27.
87	25.
86	29.
85	2. 28. 24
84	30.
83	1. 20. 31
82	7.8.12.13.17 18 21.22.23
81	3. 9. 11. 16.
80	6. 19.
79	15.
78	4, 5. 14.
77	10.

	SEPTEMBER.
89	14 15.
88	7. 13.
87	11 16.
86	2. 10.17.
85	4. 12. 18. 19
84	1.
83	20. 21.
81	22.
80	3. 8. 9.
79	5.
78	6.
75	23.
71	28.
68	31.
67	25. 26. 29.
66	27.
65	24.

Thermometer	October. days.	Thermometer	November. days.	Thermometer	December. days.
81	16.	74	26.	70	27. 28.
80	13. 14. 17. 22. 23.	73	24.	68	23.
		70	16. 22. 24.	65	5. 29.
79	15. 18.	67	7. 21. 11. 30.	64	21 22. 26.
78	9. 11. 19	66	10. 17.	62	14.
77	6. 12. 21.	65	19 20. 23. 15	60	15.
76	5.	64	13. 12. 8.	58	20. 24. 30.
75	10. 7. 8.	62	14.	57	12. 4.
73	4.	61	9. 29.	55	3.
72	3.	59	3. 18.	54	6. 1.
71	2. 20. 31.	57	5. 6.	53	11. 25.
70	26. 27.	56	2. 27.	50	2. 31.
69	1.	55	4.	49	13.
67	24. 30	54	28.	48	16. 19.
66	25.	50	1.	46	7.
64	29.			45	10.
63	28.			44	8.
				42	17.
				40	9.
				39	18.

On the ninth of November, (the day of the tranſit of mercury over the ſuns diſk) the tide roſe conſiderably higher than the higheſt, that can be recollected by the oldeſt inhabitants, ſince the year 1752, in which the great hurricane took place. No alteration for the better or worſe, with regard to diſeaſes, either preceded or followed this extraordinary event; but much damage was done

to

to wharves, ſtores, and the banks of low grounds. Storms and ſhipwrecks were alſo frequent.

On the night of the ninth of October, 1802, William Withers, a horſe dealer from Kentucky, deſcended through a grate into one of the covered arched drains, that pervade the ſtreets of Charleſton, and paſſed along the ſame, till he was oppoſite to the South-Carolina Bank. He then began operations to make a ſubterraneous paſſage acroſs from the drain to the vaults, in which the caſh of the bank was depoſited. In proſecuting this buſineſs, he paſſed ninety days and nights under ground, and in a prone poſture. For the firſt twenty-two days after his deſcent, it was ſo uncommonly warm, as to be on an average nearly ſeventy-nine. For the laſt ſixty-eight days the heat varied from ſeventy-four, to thirty-three. In the firſt period, yellow-fever, intermitting, and other fevers of warm ſeaſons, were common among the inhabitants. In the laſt period pleuriſies, colds and catarrhal complaints, were, in like manner, frequent: yet, all this time, Withers enjoyed good health, with exceptions of a few ſlight head-aches and pains in his bones, which generally went off with perſpiration in the courſe of his next repoſe. His ſituation, in the drain, was diſtreſſing; but it was tolerable after paſſing through it, he was ſurrounded with earth. He had no blanket, nor covering of any kind, but his light ordinary apparel, which he never put off. His uſual time of ſleeping was, when he judged it to be day from the noiſe he heard over his head. His ſignal for recommencing work, was the receipt of proviſions, dropt by his acomplices,

plices, in the night, through a grate. He was ſometime expoſed to ſerious danger from the ſpringing of water; and his bed was earth, which was often damp. His food was moſtly bread, butter, and cheeſe, and, (with the exception of one bottle of wine) water was his only drink. Butter burning in a lamp afforded him light.

Three days frequently paſſed without diſcharging the contents of his bowels.

The enjoyment of ſo much health, for ſo long a time, under ſuch circumſtances, was, in part, probably owing to the following cauſes:

1. A ſtrong conſtitution, inured to hardſhips in every period of his life.

2. That conſtitution ſuited to the air of Charleſton, by a very recent ſeaſoning. He had but juſt recovered from a ſevere fever, when he entered the drain. Though relapſes are not uncommon, yet a new and diſtinct fever ſcarcely ever attacks ſtrangers in the ſame ſummer, in which they receive their firſt ſerious impreſſions from our climate.

3. The effects of moiſture, muſt have been in a great degree parried by his labor, and the moiſture itſelf moderated by the dry ſandy nature of the ſoil, through which he had to work, and by, the abſence of rain: For the firſt fifty days after his deſcent, the whole quantity of rain that fell, did not amount to two tenths of an inch; and in the laſt forty was only five inches eight tenths; beſides ſimple moiſture, without heat, or miaſmata, is comparatively harmleſs.

4. The abſence of ſeveral of the exciting cauſes of diſeaſes. The heat of well water, and of the earth, a few feet below the ſurface, is

generally the ſame in all countries, as the medium heat on an average of the different ſeaſons in theſe countries reſpectively. This, in Charleſton, is ſixty-five or at moſt ſixty-ſix on Fahrenheit's thermometer. Withers muſt have enjoyed a ſteady unvarying atmoſphere of this temperature, while the inhabitants above ground were panting under a heat of eighty, or diſtreſſed with the cold of thirty-three, and ſubject to all the changes of an atmoſphere, vibrating from one extreme to the other. That ſomething in the air of Charleſton, which is ſo diſtinctive to ſtrangers, in the ſummer and autumn, is too volatile to deſcend below the ſurface. Miners, and colliers, in all countries, are generally healthy.

The experiment is not recommended; but it is probable, that a ſubterranean reſidence might be ſo conſtructed, as to afford ſecurity againſt our local diſeaſes.

The great excitement of Withers's mind, from the proſpect of accumulating wealth, muſt have counteracted the effects, that otherwiſe would naturally have reſulted from his ſituation. The energies of human nature, when in purſuit of a great object, (eſpecially if invigorated with the hope of obtaining it) are beyond all calculation. The weakly wife, and the tender mother, will undergo watchings and fatigues in nurſing the objects of their affection, far beyond the power of human nature to bear, when in a ſtate of indifference. The high toned ſtate of Withers's mind, muſt have had a decided influence in preſerving his health: It is much to be regretted that it was not excited by worthy objects.

It

It was intended to have concluded with a bill of mortality for the year 1802; but this is impoſſible, as no regiſter of the dead is kept, except for the months of July, Auguſt, September, and October. Of the 18,824 inhabitants, which Charleſton contains, there died in theſe four months 333; of theſe 110 were blacks, or people of color. The white population is 1,184 ſhort of the number of colored perſons; yet the deaths among the former are two to one more than among the latter. The yellow-fever falls almoſt excluſively on the whites. The blacks are liable to it; but have the advantage of old reſidents, as few come from the country while that diſeaſe is known to be in Charleſton. After deducting all who died of the yellow-fever, the advantage is ſtill in favor of the blacks. The proportion would then be 127 deaths among the whites, and 110 among colored perſons; though there are more than ten of the latter to nine of the former.

The blacks certainly bear the climate better than the whites; and their diſeaſes are leſs complicated and more eaſily cured.

The whole number of deaths in the four months already mentioned, from the yellow-fever, was ninety-ſix. Of theſe, two took place in Auguſt, ſixty-four in September, and thirty in October. In the whole number there was not a ſingle native of Charleſton, though five of them were born in South, and one in North-Carolina, twenty-one were born in England, twenty in the Northern-States, nineteen in Ireland, eight in Germany, ſeven in Scotland, five in France, one in Spain, one in Pruſſia, and one in Madeira. The birth

place of the remaining ſeven could not be aſcertained. There was not a ſingle black, and only one mulatto, died of this fever. One of the ſubjects, to whom it proved fatal, had reſided three years partly in Charleſton, and partly on Sullivan's-Iſland. One had reſided two years; two a year and a half, and eighteen for eleven or twelve months in Charleſton. The reſidence of the remainder varied from eight months to ſix days.

Mrs. Ann Gray, a native of South-Carolina, died laſt year, in the eighty-firſt year of her age. She was born on James-Iſland, had reſided moſtly in or near Charleſton. Her teeth were good, and at all times fully equal to the buſineſs of maſtication. In the ſeventy-eighth year of her age, ſhe executed ſome ingenious needle work, which required both eye ſight and judgment; and was active and uſeful to the laſt month of her life. She roſe early, worked much, and was temperate. Water, of which ſhe drank great quantities, was her chief drink. Occaſionally, at dinner, ſhe added a little rum. Her memory and recollection of long paſt events, was minute and exact. She remembered, in particular, that her father Mr. Villeponteaux, had declined the purchaſe of Lynche's paſture (a property ſuppoſed now to be worth one hundred thouſand dollars,) though offered to him for ſeventy barrels of tar. Mrs Gray, at the time of her death, had been mother of twelve children; the grandmother of forty, and the great grand mother of twelve.

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