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AN  
ACCOUNT  
OF THE  
EPIDEMIC FEVER  
WHICH PREVAILED IN THE  
CITY OF NEW-YORK,  
DURING PART OF THE  
SUMMER AND FALL OF  
1795.

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By RICHARD BAYLEY.

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NEW-YORK:

Printed and sold by T. and J. SWORDS, Printers to the Faculty of  
Physic of Columbia College, No. 99 Pearl-street.

—1796.—

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ACCOUNT

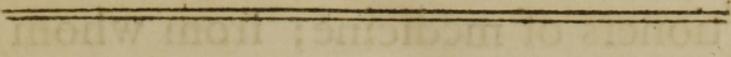
OF THE

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P R E F A C E.

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**T**HE following sketch of the probable causes of the late epidemic, as they appeared to the writer, with the treatment which proved most successful in his own practice, as well as in that of some of his friends, is respectfully offered to the perusal of his fellow citizens, as well as to the practitioners

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R. B.

*New-York, May 30, 1796.*

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AN  
ACCOUNT, &c.

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THE epidemic fever which made its appearance in this city, at the latter end of the month of July last year, and which occasioned a degree of mortality among the people never experienced in so short a space before, afforded matter of much serious conversation, and gave rise to a great diversity of opinion. An idea was entertained by some, and this idea was, by others, industriously propagated abroad, that the disease was imported from the West-Indies, and that it was *contagious*: while, on the other hand, many contended that a concurrence of local circumstances, which derived an uncommon activity from a *peculiar constitution of the air*, were alone sufficient to account for its production.

It

It is the main object of the writer of this pamphlet to lay before the public a few facts on this important subject; and in doing this, he is conscious that the chief merit of these will consist in the diligence with which they were collected, and the fidelity with which they are detailed. He shall purposely avoid attacking any particular doctrines in medicine, relatively to the nature of the fever in question; and the same temper will incline him to pass, without animadversion, the practice of those who have stood deservedly high in their profession. He will therefore hold himself responsible only for a *faithful narrative*.—It has, indeed, been thrown together under circumstances very unfavourable to regular composition; but as it sprung from no vain conceit of ability to render that clear, which has long been involved in obscurity, he thinks he may rely on the purity of his motive for publishing it, as a shield against the severity of criticism. The motive, as  
it

it first suggested itself to his mind, was none other, than a desire to point out the *real causes, as they appeared to him, of the late epidemic*, and thereby, in some degree, to moderate individual apprehension, and quiet popular alarm.

At the first appearance of the disease, the following reports were diligently circulated, and very generally credited, viz. that Dr. Treat, then health officer of the port of New-York, had visited the brig Zephyr, just arrived from Port-au-Prince; that he found the crew sickly; that several men had died on the passage; that a boy had died the morning of her arrival; that Dr. Treat had incautiously opened the dead body; that it was very generally tinged with a yellow colour; and that it was extremely offensive to the smell.

How correspondent these reports were with truth, will hereafter appear, from a statement of facts, substantiated by the testimony of indubitable authority.

A few

A few days after Dr. Treat visited the brig Zephyr, about the 20th of July, he was seized with fever. The manner of the attack, the nature and severity of the subsequent symptoms, attended with a yellow countenance, and a similar tinge of the skin generally, were supposed to constitute the disease the *yellow fever*.

About the same time that Dr. Treat became indisposed, a fever, resembling that of which he died, made its appearance on board the ship William, said to be then lying at Fitch's wharf, nearly opposite Dover-street. Shortly after, August 1st, the family of Mr. Jenkins, living in Water-street, near Dover-street, was attacked with fever, which was supposed to have been communicated from the ship William.

At first it seemed rather extraordinary, that the ship William, which had sailed directly from Liverpool to this place, and whose men had been healthy during the passage, should have contained matter of

a contagious nature, which only operated upon the crew in producing fever several weeks after her arrival.

This difficulty, however, was soon made to vanish, and the explanation became easy, when it was alledged that the brig Zephyr, on board of which no one was supposed to doubt that the yellow fever existed, had hauled along-side the ship William, and thus communicated the disease to the sailors.

This account, plausible in appearance, obtained almost universal credit, and though highly erroneous, as will hereafter be proved, was in a hasty and unauthorized way conveyed to Philadelphia, and, no doubt, afforded a considerable ground upon which the regulations that took place in that city, relative to this, were founded.

At this period the public mind laboured under great apprehensions. A new disease was supposed to have made its appearance. Several deaths had already happened, the

nature of which, judging from the adventitious circumstance of colour, had an aspect extremely formidable. The progress, also, of the complaint, was supposed to be such, that to those who took things for granted, there remained but little doubt that the city would soon be overspread with contagion: and it cannot be sufficiently regretted, that the supposed contagious nature of the disease was too much urged by those who ought to have been more reserved in their opinion: for as yet no circumstances had really occurred to countenance or justify the violent and exaggerated accounts which were circulated upon this subject.

In this state of affairs the torrent of opinion became irresistible. Fear and dismay pervaded every mind; and those of the inhabitants who were most alarmed, as well as many of those who had no particular motive for remaining in the city, sought refuge in the country.

In all situations in which our safety becomes a matter of considerable doubt, it is natural for us, after the panic, with which at first we are apt to be seized, has a little subsided, to enquire what the chances are that we escape the danger. Accordingly, those who remained in the city, and were at the trouble of investigating the subject, found, that many examples had offered, where the sick had been attended with impunity: neither physicians, nor friends, nor attendants had imbibed any infection: and the circumstances attending the very few instances which were supposed to favour the idea of contagion, were so extremely obscure and doubtful, that nothing could be collected from them, of a nature at all satisfactory. In confirmation of this, we have the declaration of the Medical Society, in answer to a letter from Governor Jay, dated 24th of September, 1795:—"The  
 " collective opinion of this Society, as the  
 " result of attentive observation, is, that  
 " the

“ the fever is not specifically contagious ;  
 “ and we are confirmed in this opinion  
 “ from the following powerful considera-  
 “ tions, that neither relatives, nurses, nor  
 “ physicians have, save in one or two  
 “ doubtful cases, been infected by attend-  
 “ ing on those who have either recovered  
 “ or died of the disease.”

Much was daily urged from these facts ;  
 and finally, the terror with which the sup-  
 posed contagious nature of the disease had  
 filled people’s minds, was in a great mea-  
 sure done away : and the confidence which  
 took place, between the patient and phy-  
 sician, as a consequence of this conviction,  
 was, I have no doubt, in many instances,  
 a mean which greatly contributed to the  
 recovery of the sick.

Thus it would appear, from what has  
 already been said, that a difference of opi-  
 nion had existed, as well among the citizens  
 as the physicians, with respect to the real  
 origin and character of the late epidemic.

The

The object I have in view is to reconcile those opinions, as far as that can be effected, by bringing into one view all the facts I have been able to collect upon the subject. These shall form the principal data upon which any future reasoning may be founded; and if the sentiments I may advance are found to differ from the opinion of others, I hope that a liberal and candid communication may tend to our mutual information, and that the public may be benefited by our attempts to arrive at truth.

We shall, therefore, in the next place, proceed to examine the validity of the opinion, that the brig Zephyr introduced a contagious fever into this city. And the following letters from Messrs. Armstrong and Barnwell, and Miller and Hoope, are, in my mind, very explicit.

*New-York, 20th Oct. 1795.*

SIR,

‘ The brig Zephyr, Capt. Frederick Bird,  
 ‘ arrived from Port-au-Prince on or about  
 ‘ the 19th of July last, loaded with sugar  
 ‘ and coffee. The cargo came to our ad-  
 ‘ dress. She hauled first to the Old-flip,  
 ‘ where her cargo was unloaded. The  
 ‘ vessel leaked much on her passage from  
 ‘ Port-au-Prince, which damaged twenty-  
 ‘ two hogheads of coffee in the ground  
 ‘ tier: in consequence of which the vessel  
 ‘ was ordered into the stream, where the  
 ‘ damaged coffee was thrown into the wa-  
 ‘ ter, under the inspection of the Wardens  
 ‘ of the Port. One boy died on board the  
 ‘ day of her arrival, who had been sick all  
 ‘ the passage. The captain, mate, and  
 ‘ one seaman, were taken sick at Port-au-  
 ‘ Prince, and continued so during the pas-  
 ‘ sage; but were perfectly restored to health  
 ‘ soon after their arrival. Dr. Treat visited  
 ‘ the

‘ the vessel on her arrival. The day was  
 ‘ extremely hot, and he used uncommon  
 ‘ exertions in the middle of it, to find the  
 ‘ commanding officer on Governor’s Island,  
 ‘ to obtain permission to inter the boy there.  
 ‘ He complained on his return, that the  
 ‘ day and exercise had almost overcome  
 ‘ him.

‘ The vessel, after she was unloaded, put  
 ‘ up for freight for Baltimore, and took  
 ‘ on board her cargo for thence at the Coffee-house slip. She was never near the  
 ‘ ship William, which laid at, or near  
 ‘ Fitch’s wharf. During the delivery of  
 ‘ the inward cargo we were on board every  
 ‘ day, as were also the Wardens of the  
 ‘ Port; and we have not learned that any  
 ‘ person has been taken ill in consequence.

‘ We understand that the captain pro-  
 ‘ ceeded to Baltimore in the vessel, and  
 ‘ the mate to Boston. However, as they  
 ‘ were more immediately under the direc-  
 ‘ tion of Messrs. Miller and Hoope, to  
 ‘ whom

' whom the vessel was consigned, we refer  
 ' to them for particulars in that respect.  
 ' We were informed by Capt. Bird that it  
 ' was sickly at Port-au-Prince when he  
 ' was there in June and July, which is ge-  
 ' nerally the case at that season, but that  
 ' it was scarcely known among the French  
 ' inhabitants, and fell chiefly on the Bri-  
 ' tish and Americans. He also told us that  
 ' the place was growing more healthy when  
 ' he left it.

' We are, Sir, &c. &c.

' ARMSTRONG & BARNWELL.'

---

' *New-York, Oct. 20th, 1795.*

' SIR,

' The brig Zephyr, of Boston, Capt.  
 ' Bird, came addressed to our house from  
 ' Port-au-Prince; her cargo, consisting of  
 ' sugar, coffee, and hides, was addressed to  
 ' Messrs. Armstrong and Barnwell. The  
 ' brig hauled to the east side of the Old-  
 ' slip, and there discharged her cargo, ex-  
 ' cept

‘ cept a quantity of damaged coffee, which  
 ‘ was thrown into the East-river. The  
 ‘ brig was then hauled to the end of Jones’s  
 ‘ wharf, below the Coffee-house, and took  
 ‘ in her cargo for Baltimore.

‘ Capt. Bird and all his crew were sick  
 ‘ leaving Port-au-Prince, and one of them  
 ‘ died the day or day after the brig arrived.

‘ The captain was in good health when  
 ‘ he sailed for Baltimore, and we believe  
 ‘ the crew recovered soon after their ar-  
 ‘ rival in this city.

‘ MILLER & HOOPE.’

The foregoing letters afford an unequivocal testimony of the condition of the crew of the brig Zephyr, on her arrival in this port. They afford, also, a complete refutation of the assertion, that the Zephyr communicated a contagious fever to the ship William, the two vessels having never been near one another: and, in short, they shew, that, excepting the death of the boy,

the reports circulated concerning the *Zephyr*, at the first appearance of the fever, and indeed believed by many during its continuance, were altogether without foundation.

When it was discovered that the brig *Zephyr* had not been nearer the ship *William* than half a mile, so wedded were individuals to the idea of imported contagion, that they fixed on the brig *Active*, which had just arrived from Martinique, as the contagious vessel. But the following letters from Messrs. Lawrence and Van Zandt will be found to contain facts as little favourable to the opinion, that contagion had been communicated from the *Active*, as has been proved with respect to the brig *Zephyr*.

---

‘ SIR,

‘ It affords us sincere pleasure to furnish  
 ‘ you with such facts as came within our  
 ‘ knowledge, concerning the brig *Active*,  
 ‘ supposed

‘ supposed to have been one of those vessels  
 ‘ which introduced a contagious disease in-  
 ‘ to this city. The said brig sailed from  
 ‘ this port on the 9th of April last, bound  
 ‘ to the West-Indies, navigated by Capt.  
 ‘ Mathew Rogers, a mate, and five hands.  
 ‘ After touching at several islands for a  
 ‘ market, she finally arrived at Martinique,  
 ‘ where the captain disposed of her cargo,  
 ‘ and received in payment thirty-six hog-  
 ‘ sheads of molasses, and the residue in bills  
 ‘ of exchange on this city. He also re-  
 ‘ ceived on board, on freight, and consigned  
 ‘ to Messrs. Concklin and Loyd, merchants  
 ‘ here, one hundred and thirty-four bales  
 ‘ of cassia, commonly called wild honey.  
 ‘ This and the molasses constituted the  
 ‘ whole of her return cargo. The said  
 ‘ brig sailed from Martinique on the 30th  
 ‘ of June, bound for this port, and arrived  
 ‘ here the 22d of July. Seventeen days  
 ‘ previous to her arrival, she lost one man  
 ‘ by sickness, and from information receiv-  
 ‘ ed

' ed from the captain, he died with a fever,  
 ' the nature of which he could not ascer-  
 ' tain, but supposed it was brought on by  
 ' the use of liquor, of which the deceased  
 ' would, previous to his sickness, drink  
 ' large quantities. After his body was  
 ' committed to the waves, the captain, for  
 ' three successive days, had the birth, bed-  
 ' ding, and every thing belonging to the  
 ' deceased, carefully cleaned, under his  
 ' own inspection. The residue of her crew  
 ' enjoyed a full state of health during the  
 ' voyage, and were all perfectly well on  
 ' her arrival in this port. Her cargo was  
 ' landed at Fitch's wharf, partly by her  
 ' crew and partly by labourers: nor do we  
 ' know an instance of any one of them  
 ' being sick after their discharge from the  
 ' vessel. She remained at Fitch's wharf  
 ' about three weeks; at which time we  
 ' disposed of her to Mr. Orange Webb,  
 ' merchant of this city, who immediately  
 ' loaded her and sent her to sea.

' The

‘ The above is a true and perfect account  
 ‘ of the brig Active. If you can draw any  
 ‘ information from it that will aid you in  
 ‘ your laudable undertaking, we shall enjoy  
 ‘ the pleasing reflection of having, in a  
 ‘ small degree, served the cause of huma-  
 ‘ nity.

‘ We remain, &c.

‘ LAWRENCE & VAN ZANDT.’

—

We are indebted to Mr. Strong for the following:—

‘ SIR,

‘ In pursuance of your request, I yester-  
 ‘ day saw Capt. Rogers, late master of the  
 ‘ brig Active, who tells me he hauled along  
 ‘ side of Fitch’s wharf on Friday the 24th  
 ‘ of July last, and that he began to break  
 ‘ bulk the next day, being Saturday the  
 ‘ 25th.

‘ He further assures me, that a number  
 ‘ of his acquaintance were on board the  
 ‘ brig every day, and that he has since seen  
 ‘ several

‘ several of them, none of whom have been  
‘ taken with the late disorder.

‘ I was repeatedly on board, and in the  
‘ cabin: once in particular, before she  
‘ hauled along side the wharf, I was in the  
‘ hold of the brig, and examined the cargo;  
‘ but as I was not taken with the disorder  
‘ until the 5th of September following,  
‘ (although I lived near Peck-slip, where  
‘ the disease first began to rage) I am confi-  
‘ dent I never took it on board Captain  
‘ Rogers’ brig.

‘ I am, Sir, &c.

‘ BENJAMIN STRONG.’

—

The preceding letters leave little doubt with respect to the healthful state of the brig Active. It appears that she arrived in port on the 22d of July: on the 23d she laid on the outside of a vessel at the end of Fitch’s wharf: on the 24th she hauled into the slip; and on the 25th of July she broke bulk.

Hitherto

Hitherto it has been supposed, that the ship William also laid at Fitch's wharf; but the truth is, that this vessel did not, at any period this season, lie at that wharf. Her situation, at first, was at the wharf of Lawrence and Kipp, about fifty yards westward of Fitch's; and on the 24th of July she removed to Rutgers' wharf, distant about half a mile from her first station.

Upon a comparison of these statements it will appear, 1st, that the vessels above named were never nearer one another than fifty yards; and, 2dly, that the day before the Active began to unload, the William was removed to the distance of half a mile. Thus it is shewn how little foundation there was for a report of a fever being communicated from the brig Active to the ship William.

The next subject of suspicion was a parcel of cotton, which had been imported in the brig Caroline, and which was deposited in the store of Lawrence and Mott, at the  
foot

foot of Dover-street. It was reported that a man had thrust his arm into a bag of damaged cotton, and that, when he withdrew it, the arm, from the virulence of the contagion, was of a livid colour. However extravagant this declaration may seem, there were not wanting those who subscribed to its credit. In short, so infatuated were some of the inhabitants with the belief of imported contagion, that they suspected every vessel, which had arrived from the West-Indies previous to the late epidemic, to have brought contagion in her.

With regard to the suspected cotton, the following certificates will give the necessary information:—

“ I, John Church, master of the brig  
 “ Caroline, of New-York, do certify, that  
 “ the fifty-one bales of cotton, shipped on  
 “ board the said brig Caroline, about the  
 “ 20th of June, 1795, was purchased by  
 “ me in the neighbourhood of Lance and  
 “ Veau, and was never on board any vessel  
 “ but

“ but the said Caroline, until landed from  
 “ on board her in New-York, about the  
 “ 22d of July, 1795.”

---

“ We, the subscribers, do certify, that  
 “ we were on board the brig Caroline,  
 “ which laid at Lawrence’s wharf, foot  
 “ of Dover-street, divers times on the 21st  
 “ and 22d of July last—that we saw a  
 “ number of bales of cotton wool on board  
 “ the said brig—that we examined the  
 “ cotton by picking it open, and running  
 “ our hands into the sacks, for the purpose  
 “ of ascertaining its quality—that George  
 “ Townsend did purchase one bale on the  
 “ 22d of July, and retailed it out of his  
 “ store—that Selah Strong was not taken  
 “ with the disorder: Benjamin Strong was  
 “ taken sick on the 5th, and George Town-  
 “ send on the 21st of September following.

“ BENJAMIN STRONG,

“ SELAH STRONG,

“ GEO. & BENJ. TOWNSEND.

“ *New-York, 16th Dec. 1795.*”

I have thus advanced such documents, upon the subject of imported contagion, as, from a careful enquiry, I have been able to collect. From this investigation the public is in possession of such information, as may be made the basis of a tolerably accurate judgment; and I have little hesitation in believing, that the conclusion naturally resulting from the premises, will be extremely unfavourable, if not absolutely against the opinion which some have so warmly embraced, that the cause of the late epidemic was imported contagion.

We must now take the liberty of recurring to a further consideration of circumstances relative to the brig Zephyr.

From the statements contained in the letters already inserted, regarding this vessel, several facts of considerable importance are made to appear, viz. that no person died on board the Zephyr, during the whole of her voyage, except the boy already mentioned; that all those of the crew who had  
 been

been taken sick at Port-au-Prince, and had become convalescent, soon got well after her arrival in this harbour ; and that neither the wardens of the port, the consignees, nor any other person who had been transiently on board the Zephyr, except Doctor Treat, suffered any bad consequences from their visits.—The question then occurs, Did Doctor Treat take the disease, of which he died, from the Zephyr ?

It was a circumstance well known, that the health of Doctor Treat was generally impaired. His stomach was in a state of constant disorder ; and this, independent of other effects, was, at particular periods, accompanied with such extreme dejection of spirits, that he did not, as he had often assured me, expect to live from one day to another. The Doctor had been complaining more than common for several days before he visited the Zephyr. He embarked in a small open boat at mid-day, with a black hat on his head, and without an umbrella,

brella, which he had always been accustomed to use, to defend him from the sun's rays. The day was calm, extremely hot, and the vessel at least one mile and a half from the place of his departure. It is also stated, that he was much fatigued, upon Governor's Island, in searching for the commanding officer.

Thus, then, it would appear as matter of fact, first, that Doctor Treat was indisposed at the time he visited the Zephyr: secondly, that in performing that duty he was exposed, for several hours, to the extreme heat of the sun; and, thirdly, that he encountered considerable bodily fatigue. If these circumstances are well considered, and that peculiar state of the weather, which predisposes to fever, is taken into the estimate, is it unreasonable to suppose that the fever with which Doctor Treat was attacked, might have originated from the operation of such a combination of causes? Every candid physician will give a ne-

a negative answer to the question. But we shall not be very solicitous to prove, that Doctor Treat did not contract his disease in this manner—We grant that he might have received *infection* from the Zephyr; but does it necessarily follow, that it should have caused a *contagious* fever? A consideration of the consequences, in a variety of parallel cases, will contribute much to the formation of an opinion upon this subject.—The following is considered illustrative of this point.

At the termination of the late war between the United States and Great-Britain, Colonel William Smith, of this city, was appointed, by General Washington, to reside in New-York, with the consent of Sir Guy Carlton, for the purpose of superintending the evacuation of the country, and to see that it was performed agreeably to the treaty. In the exercise of this duty, he had frequent occasion to go between the decks, and into the holds of vessels. In  
the

the course of these visits, he was seized with (what is commonly denominated a ship-fever) a bilious remitting fever. After a few days, the fever happily intermitted, and Colonel Smith soon recovered a tolerable share of strength.

It was thought proper to caution him against the danger he would incur by repeating his visits on board ship. He answered, that the duty was indispensable. The consequence was, he contracted a second fever. The first of the attack was attended with a sense of coldness, which was soon succeeded by violent pain in the head. His countenance was flushed, and his eyes were very red. The third day his neck and breast took on a yellow appearance; and in forty-eight hours, the whole of his body became as yellow as an orange. From the accession of his fever to its termination, his heat was so considerable, that on feeling his pulse, or grasping his wrist, the sensation communicated was similar to  
the

the sting of nettles, or very fine needles pricking the hand.

Colonel Smith lodged at Mr. Depeyfter's in Pearl-street, and notwithstanding the unremitting attention he received from the family, the disease was not communicated to one of his attendants.\*

I have twice, in the pursuit of my avocations, imbibed infectious fevers—once on ship-board; and again on visiting a prison. I was handled very severely in both instances, and deprived of my senses several days during each confinement. My attendants were numerous, and vigilant; yet

\* ' Sometimes only one man in a ship may be seized with the petechial, or with the yellow fever, while all the rest continue unaffected: of this the *Magnamine* afforded an instance,' &c. &c. &c.

' Another person was sent from the *Raven* sloop, in the yellow fever, of which he also died; and yet no other person on board of those two ships were, either before or afterwards, taken ill of such fevers.'

' I have frequently visited patients in fevers similar to the above mentioned, in families, where an infection was not in the least suspected.'

yet no one suffered from contact with my body, or from breathing the air of my chamber.

As favourable to the same conclusions with the above instances, and tending to illustrate the doctrine we are endeavouring to establish, we shall here introduce the history of a fever which raged among the men of *Monf. De la Motte's* fleet, in 1757.

A fleet, under the command of *Monf. De la Motte*, sailed from *Brest* on the third day of *May*, 1757, for *Louisburg*, in *Nova-Scotia*. A number of sailors (about two hundred) who had been confined in *Rochfort* hospital, with putrid fever, and had become convalescent, were embarked on board the *Glorieux* and *Duc de Burgogne*, ships of war. These ships had been two years in a state of equipment, and most of that time at sea; they, therefore, could not be supposed to have been very clean. The other ships of the fleet had lain some time in the harbour of *Brest*, and were not in a  
 very

very healthy condition. On board the different vessels were also distributed four hundred sailors, who had just returned from confinement in the English prisons. The ships' companies became sickly on their passage, particularly those of the Glorieux and Burgogne; and on the 20th of June they arrived at Louisburg. The wind was fair during the passage, blowing mostly from the south-east; and the weather was so favourable and temperate, that it was found unnecessary to shut the port-holes or close the hatch-ways.

As soon as the fleet arrived at Louisburg, the different ships had their tents pitched on shore, for the accommodation of the sick; and they were accordingly disembarked immediately. The tents were pitched too near one another, and hence the sick did not receive all the advantages which they might have derived from their situation.

The particular state of the sick during the months of July and August; their number, or the mortality which prevailed, is not mentioned. But it is observed, that the number of the sick was greatly augmented during the latter part of September. This arose from two causes; first, from the necessity they were under of collecting all their strength from the different vessels, to finish works, in order to defend the city: secondly, from a severe gale of wind, which happened on the 25th of September, and threatened destruction to the whole fleet. Several ships were in particular danger, to save which, the united exertions of officers and sailors were required; and in performing this duty, the men were unavoidably exposed to excessive labour and extreme bad weather. After this, the sick became more numerous; and by the 30th of October, the day on which the fleet left Louisburg for Brest, the sick amounted to fourteen hundred. Of this number, four hundred of

of the worst cases were left at Louisburg, in bad lodgings, and under the management of few, and those unskilful attendants.

The fleet had not been at sea more than six days, before most of those who were sick at the time of sailing, with many others, died. The passage was attended with very boisterous weather; and the sea ran so high, that the ports were obliged to be kept shut. Under circumstances so uncomfortable, the malady spread with great rapidity, and on the arrival of the fleet at Brest, which happened on the 22d of November, the number of the sick amounted to four thousand.

Fifteen days before the return of De la Motte's fleet, the two ships of war, Bizarre and Celèbre, arrived in Brest harbour from Canada. The crews of these ships were affected with a complaint similar to the one which prevailed on board the Louisburg fleet; and they had already sent one thousand men to the hospitals at Brest. The hospitals, therefore, were found crowded; and

and for the accommodation of the sick newly arrived, temporary hospitals were erected. Into these the sick were hurried from the ships, in cold and wet weather, and thrown together in heaps (*entassé pélé mélé*). Under these circumstances, little benefit was obtained from the means employed for their relief.

The disease raged, with unrelenting violence, from the 22d of November to the last of February. It began to diminish in the month of March, and ceased entirely in April. But it was remarked, that this cruel disease did not cease until it had destroyed so many men, that those who remained had, in consequence, an opportunity of enjoying all the advantages of breathing a pure air, of cleanliness, and good attendance.

The number that died in the hospitals at Brest, at this period, was not less than ten thousand, besides a considerable number in the city.

Of the four hundred men left at Louisburg, who appeared to be in a condition from which a recovery could not be expected, badly accommodated, and worse attended, three hundred and eighty were cured.

The foregoing is an epitomized narrative of a voyage from Brest to Louisburg, in which is related the prevalence and mortality of a fever, which the author of the account denominates PUTRID, MALIGNANT, CONTAGIOUS, and PESTILENTIAL.

A consideration of the circumstances attending this expedition, and the state of a considerable part of the men employed on the occasion, will readily, I apprehend, explain the fatality attending it, without recurring to the supposition of the disease being, in its nature, essentially *contagious* or *pestilential*.

It will have been perceived before this, that we have been somewhat solicitous to  
 establish

establish a distinction between diseases which are *infectious*, and those which are *contagious*. By contagion we understand something *peculiar* and *specific*, possessing properties *essentially* different from any thing else. Thus the contagion of the small-pox, the measles, &c. Those diseases do not require the concurrence of certain causes to render them contagious; they are so under *all* circumstances. But other diseases may, or may *not* be *infectious*, according to the conditional state in which they are placed. Thus a fever shall continue days, or even weeks, without giving rise to the least suspicion that it has, in any instance, been the cause of fever in any person, who may have been, either a frequent visitor, or constant attendant: whilst a fever, accompanied with the same symptoms and appearances, and not more violent in degree, shall be communicated from one to another, and extend to incalculable lengths, so long as the circumstances exist which

favour

favour its propagation. Agreeably to this definition, may be explained the slow, or rapid progress of the fever of the Louisburg fleet, at different periods.

To illustrate this more fully, we shall take a review of the circumstances attending that fleet, from the time of its sailing from Brest harbour, to its return to that port, and the after disposal of the men.

The convalescents from Rochfort hospital received on board the fleet, had been weakened by a previous disease; the nature of which we presume not to have been contagious, because no mention is made of it. They were ordered into ships which had been the greatest part of two years at sea, and in a condition, it is stated, not very favourable to the re-establishment of health. The consequence was, that most of these unfortunate men had a return of fever, and this fever became infectious. The fever, it is said, was communicated to some of the ships' company during

during the passage to Louisburg. We have no doubt of the fact. But we by no means admit this as a proof of the contagious nature of the disease. It is very common for fevers to become *infectious*, when a number of sick are crowded together in confined apartments; and on ship-board they are particularly liable to become so, from the impossibility of ventilation in some instances, and the neglect of it in others. Here, too, it often happens, that, for want of room, the well are compelled to lie with, or near the sick, and to breathe an air rendered extremely noxious from the abstraction of that part which is essential to animal vigour, and from a combination of the different effluvia arising from the sick, the dying, and perhaps the dead. Hence a cause appears why ship-fevers are often communicated with so much facility, and are a cause of so great a mortality.

But in the case now more immediately under consideration, the extension of the  
fever,

fever, beyond those who came on board in a debilitated state, did not take place in many instances; and the reason is evident:—The weather, during the passage from Brest to Louisburg, was so mild, that the port-holes (the windows of a ship they might be called) and hatch-ways were permitted to be generally open, by which means a circulation of air was kept up between decks, and thus the causes of infection were, in a great measure, carried away. The fine weather, also, allowing the men to be chiefly on deck, was another reason why the crews were not more sickly.

The narrative does not mention the state, nor the number of the sick during the months of July and August. It says, “*On a perdit quelqu’un.*”

If this fever had been contagious, ought it not to have spread more generally during the summer months? “*Il repandit tres peu.*” I presume that a contagious disease among so many people would have been so

generally experienced, that a particular account of it would have been kept, and reported in the general statement.

To promote the object of the expedition, it was thought necessary, some time in September, to collect all the men of the fleet, and throw up works, in order to defend the town. The exertions that were made on this occasion greatly augmented the number of the sick; and this effect was attributed to the contagious nature of the disease. But I apprehend the cause to have been *over-fatigue*, and of that sort to which the men had not been accustomed: to which we may add, exposure to inclement weather, and a scarcity of provisions, and those of a bad quality.

On the 25th of September, a severe gale of wind happened. This necessarily occasioned a great degree of exposure, and much fatigue. From these causes the sick became more numerous; and the number increased till the period of their departure from

from Louisburg, which was on the 30th of October, when fourteen hundred were upon the list. Of these it was thought that four hundred of the most desperate and hopeless cases should remain at Louisburg.

The fleet had not been at sea more than six days before most of those who were ill at the time of sailing, with many others, were dead; and by the time that the fleet arrived at Brest, which was on the 22d of November, four thousand sailors were confined with fever.

If we consider the circumstances of the passage, viz. the state of the men taken on board the fleet; the condition of them afterwards, owing to boisterous weather, which rendered close confinement necessary, and a proper ventilation impracticable, we need not be surpris'd that the fever should have prevail'd so generally, nor that the mortality should have been so considerable. The air between decks, in a stagnant  
state,

state, and in which so many sick were crowded together, could not fail of becoming infectious: and the heat, as well as the moisture, which must necessarily exist in such situations, would give a particular activity and virulence to the infection. And in this way we may account for the propagation and fatal tendency of the disease, without supposing it to have had any thing in its nature specifically contagious.

After the arrival of the fleet at Brest, the men were placed under circumstances as little favourable to their recovery, as they were before their debarkation. They were sent to hospitals, too small to contain them, save in a state extremely crowded; and there were not attendants in sufficient number to take proper care of the sick, and to preserve cleanliness.

In this situation, so confined was the air, and so impregnated with the foul vapours, arising from the sick, that, on entering the hospital,

hospital, it is observed, a person found himself surrounded by an air so extremely warm, and possessing a cadaverous odour, so disagreeable to breathe, that one who had not been accustomed to it, could not remain exposed to its operation but for a few minutes, without feeling a pain in the head.

When, from the great numbers who died, the hospital became so thinned, and the sick so few, that they received all the advantages of pure air, good attendance, a due observance of cleanliness, proper medicines, &c. the progress of the disease was soon arrested, and in a short time it finally disappeared.

Now, when the preceding history is well considered, together with the conclusions drawn from the facts therein stated, it will appear, that the fever of De la Motte's fleet ought to be arranged under the head of *infectious* diseases, and not that of a contagious one.

But

But if it should still be urged, that there was contagion in the case, and at the same time we admit, (which *facts* compel us to grant) that a free air, and other circumstances, will stop the progress of a contagious disease, nay, destroy its contagious property, the concession is all we wish to obtain, in order to establish our doctrine of the nature of *infectious fevers*.

As a corroborating fact to our opinion, it will be proper to remark the astonishing recovery of three hundred and eighty, out of the four hundred worst cases, that were left at Louisburg. The history of contagious disorders no where, I believe, furnishes any thing like a parallel example of so large a proportion of sick getting well.\*

We

\* 'When a malignant fever, in the late war, was brought from England into the hospital at Mahon, the house being insufficient for the reception of so great a number of patients, tents were erected in the fields for many of the men. These poor men were thought to be hardly accommodated: but it was observed, that most of those who lay in tents recovered; when the mortality in the house was so great, that, in some wards, not one in three escaped,' &c. &c.

We find upon record, numberless examples of people having received infection of the most serious nature, from going out of the healthy air of the common atmosphere, into confined places; such as dungeons, crowded prisons, or between the decks of vessels, where fevers have prevailed. But there is not an instance within my recollection or observation, where a person, having imbibed such infection, and where cleanliness, keeping the room well aired, and other proper attentions have been observed, has communicated the disease, either to occasional visitors, nurses, friends, or relatives: and the particulars of Doctor Treat's case will furnish another analogous fact.

He went on board the Zephyr, and, as his duty required, descended into the hold, or between decks, to ascertain the state of the vessel, as it regarded infection. In doing this, we will suppose that he exposed himself to foul and stagnant air, rendered particularly

particularly noxious by the exhalations which passed off before and immediately after the boy's death.

A day or two afterwards he began to complain. Where he resided, there was a family about him. His sister, particularly during his illness, was a constant attendant at his bed-side. His numerous friends were pressing around him to his last moments. Several of them assisted in the execution of the means prescribed for his relief, when they had direct contact with his body, and were more immediately exposed to whatever arose from it:—Yet the fever was in no instance communicated to a second person.

If, then, the Doctor's disease had been *specifically* contagious, ought we not to have expected an unequivocal manifestation of it, in some of those who were placed under circumstances so favourable for receiving contagion?

Many

Many people were confirmed in the opinion, that the fever was contagious, from the vague reports of examples having occurred, where persons were infected with fever in the country, in consequence of having had a communication with those who had carried the disease from the city. Now, I believe, there are not any well authenticated cases of this sort: and if a few solitary instances are offered in support of the contagious nature of the disease, which, however, are very obscure, they prove very little when compared with the uniform confinement of the disorder to those who were immediately exposed to the first causes which produced the complaint.

We have already admitted that the air of a room in which a person is lying with a bilious remitting fever, may become infectious, if ventilation is not performed, if all excrementitious matter is not speedily removed, and if the bedding and clothing of the patient are not in due time changed.

And if the fever has arisen in the country, in the manner the reports above stated express, I presume infection has been the cause, and not contagion; for all that has hitherto been alledged is, that one or two instances have happened, where people have taken the disease, from the many of those who have sickened in the country after leaving the city; not that the disease has spread through a neighbourhood or a village.

I presume it is sufficiently proved by this time, that the late epidemic fever was not brought here from abroad; and, also, that there exists in nature, and that there ought to be made, a distinction between *infectious* and *contagious* disorders. Much more might be said upon these subjects, and a variety of testimony added; but, without fatiguing the reader, by entering into a farther discussion of these questions, I shall proceed to enquire into those causes which may, with

with great probability, be considered as productive of the late epidemic.

During the months of January and February, 1795, the weather was unusually variable; the lowest degree to which the thermometer fell was five degrees of Fahrenheit's scale, and it rose as high as forty-six degrees.

The weather of the succeeding spring, during the months of March and April, was also very variable, and was attended with a greater degree of cold and wet than common. This was remarkably evidenced by their effects upon vegetation. Trees put forth their buds, and blossomed later, than is usual in ordinary seasons.

As the season advanced, the weather became warmer; but the moisture of the air was in no degree diminished. This state of the atmosphere continued during the summer months. The accession of heat was slow, but by the latter end of July it became excessive, and continued so generally

generally during August and the first part of September. The effects of this hot and moist air was remarkable in the production of mould.

It was a very common complaint, that hardly any thing could be kept without becoming mouldy. Books, which had remained for years in libraries and other places, became covered with this substance. Shoes and boots, thrown aside only a day or two, contracted an abundance of mould; and the wooden floors, and papered walls of family rooms which were closed a few days only, and even in some instances where the rooms were daily exposed to a free access of air, which before had always remained perfectly dry, now generated a great quantity of mould.

The prevailing constitution of the air produced remarkable effects upon cabbages. It was observed, that this vegetable grew with uncommon rapidity to its usual size, and with the appearance of  
great

great health and vigour; it would then suddenly assume an unhealthy aspect, which, on examination, was found to depend upon some disease at the juncture of the head with the trunk; and this, on many occasions, proceeded so far as to cause a complete separation, and the head would fall to the ground. It was also a common observation, that the cabbages which were brought to market, were found damaged about the center: and, further, that some species of cabbages would not form into a head as usual.

The effects of a peculiar season were shewn also upon different kinds of fruit. It was remarked that cherries did not come to that perfection in which we commonly have them, and that they very soon shewed a disposition to decay. Early in the season the apple-trees were very generally extremely productive, and promised a large supply of their fruit in the autumn; but the expectations of the husbandman on this  
 head

head were greatly disappointed: the apples began to fall at least a month before the usual time, and in a very imperfect state; and those which came to maturity could not be kept so long as it is common for them to be preserved.

In a letter from John Kemp, Esq; professor of natural and experimental philosophy, &c. &c. in Columbia college, dated April 12th, 1796, it is stated, “ that in his observations upon the state of the atmosphere during the last summer, the mercury in the thermometer was, on an average, three degrees of Fahrenheit’s scale higher than it has been, at the same season, during the ten preceding years; that the moisture, as indicated by the best hygrometers, was much greater than usual; that the quantity of active electricity was so small, as to be frequently imperceptible by very sensible electrometers, connected with an exploring rod; that the quantity of rain was much greater than usual, and thunder storms less frequent;

frequent; and that, for the most part, the wind was between south-east and north-east."

The first being established, that the state of the air, during the winter of 1794—5, and particularly during the succeeding spring and summer, has differed very materially from its usual temperature and disposition, can there be any good reason assigned why the diseases to which our climate is liable in a greater or less degree, every season, should not receive a *particular character*, or be variously modified by a peculiarity of weather? The influence of climate upon the human constitution has been remarked in all ages; and not a year passes that we do not hear of particular diseases, being attended with some uncommon appearances, arising from peculiarity of season.

At a meeting of the Medical Society of the State of New-York, held on the second Tuesday in July, it was remarked by one  
of

of the members, that he had seen several cases of angina trachealis, which were attended with anomalous symptoms, and also a few cases of dysentery in adults, which proved obstinate: and as these diseases were not unusual at that season of the year, he concluded that they would become epidemic, or be found the forerunner of one. He was led to this opinion from the history of epidemics; diseases of that kind being almost always anticipated by some particular previous disorder: and he further remarked, that there was something in the state of the air which predisposed to complaints.

At the same time it was observed by another member, that he had also seen several cases of angina trachealis, and he found the disease attended with less danger of suffocation than usual. Bleeding served rather as a check to the symptoms than to afford that manifest advantage which is its effect on common occasions. The disease yielded

yielded to emetics, warm bathing, moderate bleeding, and liberal bowels.

It was further remarked, that febrile complaints had occurred more frequently than usual at that season, and especially among children; and that in the use of antimonials, the evacuations were extremely bilious in their appearance. From what had been observed, therefore, there would remain little doubt that there was some circumstance in the season, which predisposed to complaint, and on many occasions attended with a superabundance of bile.

Several members of the society had met with instances of cholera, and also with obstinate constipation of the bowels. It was also noticed, that the diarrhoea and dysentery, to which children are so liable here in the summer season, and which is sometimes a cause of great mortality among them, were very rare diseases.

The Medical Society came to a resolution to be particular in noticing the diseases

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which

which might take place in the interval between the then present meeting and their next monthly meeting. But the report of a *contagious yellow fever*, which began to prevail in the city about the 25th of July, was a cause of so much hurry and hasty declaration of opinions, that a comparison of notes, and a friendly discussion of a question of so much importance, at the time appointed, was entirely superseded. But, however widely individuals differed in sentiment on this interesting occasion, it is but justice to mention, that no exertions were wanting, on either side of the question, to lessen the calamity with which our city was threatened.

If we carefully peruse the history of diseases, we shall find, that those which have proved most fatal to the human race, have proceeded, either directly or indirectly, from some acknowledged peculiarities of the state of the air.

Of this truth, every author, who has written on epidemic diseases, bears abundant testimony: and notwithstanding that some countries are more exposed to changes than others, few have been found altogether exempted. Nor can it be expected, from the nature of things, that the people of North-America, who inhabit a climate which may be said to participate of all the climates in the world, should not, in their turn, experience the operation of similar causes.

In order the better to understand why the fever arose in a particular part of the city, and was more prevalent, as well as malignant, in that part, it will be necessary to take a general view of the situation of New-York, and the disposition of the ground.

New-York is situated in north latitude forty degrees and an half, longitude seventy-four degrees west from the meridian of London. It is built on a south-west point  
of

of land, the highest elevation of which, above the level of high water mark, is near forty feet, and which is continued, through the city, near a mile lengthways. From this elevation in the original state of the ground, there was a pretty bold descent continued, in opposite ways, to the water's edge. But it has been the policy of the corporation of this city, at different times, to make *new ground*, as it is called, or to sell to others the privilege of doing so; which has considerably increased the dimensions of the city, both on the east side, and on the north.

The new made ground is nearly a level, or the descent is so gradual, that it is drained with difficulty; and we may add, that the level of the new made ground is but very little above the mark of high water. Indeed, it is sometimes entirely overflowed by the spring tides; and from the loose nature of the ground, the water frequently finds its way into the cellars of the houses

in

in Front and Water streets, and sometimes even into those of Pearl-street.

The new made ground from Whitehall to Catharine-street, along the East-river, is, on an average, four hundred feet in breadth, creating, if one may so speak, fifty acres of ground, all of which is built upon. The ground made on the west side of the city is about ten acres. The consequences of this mode of extending the city are, no doubt, extremely injurious to the health of the inhabitants; and it is much to be regretted, that measures are not taken to prevent an increase of the evil: for we shall presently see, that the late epidemic was rendered particularly malignant and fatal, from causes arising in this plan of enlarging the city. To render this apparent, we must take a more particular survey of that part of the city where the epidemic first made its appearance.

We shall begin at the river on the east side of Peck-slip: from thence to Water-street

street the ground is nearly a level: proceed up the slip, and after leaving Water-street a few paces, the ground ascends until you arrive at Pearl (late Queen) street: from this to Dover-street the ground is rising, but gradually descends again as you proceed along Cherry-street as far as Roosevelt-street: from this to the New-slip it is nearly a level. The ground at the top of Dover-street may be considered as the highest spot in the range between Peck and the New-slip, by the way of Pearl and Cherry streets, and extending east and west, maintains a general height, which may be computed at fifteen, twelve, ten, &c. feet above the level of Water-street.

The houses on the high grounds are principally three stories high, and built of brick, between which and those lowly situated on the north side of Water-street, there is a space of ground constituting the different yards of the above houses, measuring about one hundred feet.

Water-

Water-street, extending from Peck to New-slip, in many places has been raised two feet, or more, above the ordinary level of the ground on the north side of the street. From those grounds to the river there are no drains to convey off the water, &c. which renders an accumulation of filth, in the rear of the houses upon those lots, almost a necessary consequence. Water will frequently become stagnant, and this containing animal and vegetable matters, exposed to a hot sun, must prove a fruitful source of noxious vapours. Under these circumstances, it is natural to expect that those who are exposed to the influence of such foul air, should feel its effects, especially in a state of predisposition, arising from a peculiar constitution of the air.

The grounds on the south of Cherry-street are so arranged, that they are more immediately exposed to the sun; for they may be considered as on the south side of a considerable hill; and no one is ignorant  
of

of the powerful effects which the sun produces on a surface of this exposure.

In a very correct map of this city, by Benjamin Taylor, it will appear, that a line drawn from Whitehall to the bottom of Dover-street, will run in the direction of north-east; and from the bottom of Dover-street to Corle's-hook, the course is nearly east. An attention to this fact, also, is of consequence, if it produces the effect upon the tides it is said to do, viz. that of creating different eddies, which furnish a vast quantity of floating, perishable matter, to the slips in the vicinity of the ground which we have been describing.

From this arrangement of the shores along the East-river, the salutary effects of those winds which blow during the hot months, from the different points of the compass, between south-west and north-east, and which so often afford refreshment to the inhabitants of the elevated situations, and at the west end of the town, are little

or not at all experienced by those who reside at the east end: for the air is so changed in its temperature and qualities, before it arrives there, by passing over a large part of the city; that it loses that vivifying principle so essential to health.

From all these circumstances it is plainly discoverable, that the south-east part of the city is placed under circumstances not very conducive to the health of its inhabitants; especially as a great number of them are of the poorer kind, and in many places very much crowded together in small confined apartments. To strengthen this opinion, I will give an extract of a letter from a gentleman of great candour and respectability in the neighbourhood of Doverstreet:—"Although the docks in the vicinity of the store which I occupy may be less offensive than in many other parts of the city, yet many of them are in a very exceptionable situation. The pond-

“across an unfinished dock, and leaving  
 “the vacancy, for several years, to be  
 “filled with every species of filth and pe-  
 “risable matter, is an object worthy the  
 “attention of the police. The situation  
 “of the grounds between Water and  
 “Cherry streets is rendered very noxious,  
 “by Water-street being raised above a  
 “certain level, and thus preventing those  
 “grounds from being drained. The effect  
 “of such a nuisance on the health of the  
 “inhabitants of a crowded part of the city  
 “cannot be imaginary.”

It is not to be understood, that the lati-  
 tude of a place is always to determine its  
 temperature; nor is it uniform in giving a  
 similar character to the diseases most pre-  
 valent under a similar parallel. Local cir-  
 cumstances will have a much more power-  
 ful operation, and, in general, are found  
 to produce the characteristic distinctions  
 which exist between the prevalent diseases  
 of

of countries upon or near the same line of latitude.

The country bordering upon the sea-coast, from the Province of Main to the Neverfink, or Highlands of Shrewsbury, is rough and irregular, and almost every where covered with hardy oaks and hickories; and the soil is generally as irregular as the face of the country. Most of the different capitals, on the coast, are situated upon eminences, or high ground, and so near the sea, that the rapid currents which wash their harbours, may be considered almost as pure as the sea itself; and this is particularly the case with the harbour of New-York.

The nearness of New-York to the sea, the ready access which the tides have to its harbour, and the elevation and boldness of the shores, must doubtless be a great security to the health of the inhabitants. I believe it may be said, with great truth, that few cities enjoy so many natural advantages,

vantages, arising from situation, as New-York; and I make no doubt, that a vigilant and determined police would render it as healthy a city as any under the sun.

The country, on the sea-coast, for many hundred miles to the west and south of the Highlands of Neverfink, is low, with very few elevations, and those not considerable. The principal cities are mostly situated at a distance from the sea, and on the margin of some river, the navigable waters of which are a mixture of fresh and salt water; and the freshets which take place in those rivers, at particular seasons of the year, often overflow their banks, and have, no doubt, a considerable agency in producing the epidemic diseases which so often prevail in those climates, of which Doctor Jackson has given a very particular and interesting description. “ We learn from  
 “ experience (says the Doctor) that fe-  
 “ vers are little known in rough and hilly  
 “ countries, where waters flow with a rapid  
 “ course:

“ course: while we also know, that they  
 “ are common in low and champaign  
 “ countries, where water stagnates, or has  
 “ only a sluggish motion. Independent of  
 “ which, those situations which are in the  
 “ neighbourhood of large swamps, or near  
 “ the oozy banks of large rivers, have  
 “ always been observed to be particularly  
 “ liable to such diseases.”

Winterbotham, on the climate of North-  
 Carolina, remarks, that “ in the flat coun-  
 try, near the sea-coast, the inhabitants, dur-  
 ing the summer and autumn, are subject to  
 intermitting fevers, which often prove fa-  
 tal, as bilious or nervous symptoms prevail.  
 These fevers are seldom immediately dan-  
 gerous to the natives who are temperate, or  
 to strangers who are prudent. They, how-  
 ever, if suffered to continue any length of  
 time, bring on other disorders, which  
 greatly impair the natural vigour of the  
 mind, debilitate the constitution, and ter-  
 minate in death. The countenances of the  
 inhabitants,

inhabitants, during these seasons, have generally a pale yellowish cast, occasioned by the prevalence of bilious symptoms. They have very little of the bloom and freshness of the people in the northern states."

The plague, which often rages in Egypt, appears, upon good authority, to be occasioned by similar causes. "En Egypte ou"  
 "la peste est trois, ou quatre mois l'année,  
 "a cause des débordemens du Nil. Leur  
 "mauvais effet, se fait surtout sentir,  
 "quand un vent chaud & humide, souffle,  
 "ou bien quand il est mêlé avec des  
 "vapeurs corrompues." The effect of low situations, attended with moisture, in producing fever, is well illustrated in the following detail:—"In the year 1748, upon the breaking up of the British camp in Flanders, the cavalry were cantoned upon the unhealthy ground, about Bois le Duc, and were soon after attacked with a general sickness, occasioned by a late inundation of that part of the country. Doctor Horne,

Horne, then surgeon to Cope's dragoons, observes (Dissertat. Medica. Inaug. de Febre Remittente) that the troops suffered in proportion to their proximity to the marshes; and that, universally, the nearer to Bois le Duc, the more violent was the distemper; the number of sick, by very accurate observations, being found exactly to correspond with the dampness of their situations and of the air.

To put the matter beyond all doubt, this ingenious gentleman provided himself with a good *hydroscope*, by which he carefully measured, every day, the degree of moisture and dryness of the air.

Upon comparing his tables with the register he kept of the sick, he found that the progress of the disease kept an exact pace with the humidity of the air.

On the 29th of June they left the camp, and from that day to the 12th of July, the air being dry, not one soldier was affected with an ailment.

On the evening of the 20th, the *hygrometer* indicated a great degree of moisture in the air; and that very night the epidemic sickness (viz. the remittent fever) began among the troops, three dragoons of Cope's regiment being seized with it.

During eight days afterwards the air continued extremely moist, and the number of the sick was proportionably increased. The ten following days being dryer, the number of the infected visibly diminished: but two very moist days succeeding, the patients were again greatly increased.

In a word, the same quality of the air which differently affected the instrument, did also, every day, in like manner, affect the health of the men.

Sir John Pringle, on the diseases of the army, has also the following observations. Speaking of the diseases of the low and marshy parts of the Netherlands, which are considerably to the northward of our situation; "It is to be remarked, (says he) that

that the sickness never begins till the heats have continued so long as to give time for putrefaction, and evaporation of the water; the commencement, therefore, of the epidemics, may be dated from some time in July, or the beginning of August, under the canicular heats; their sensible decline about the falling of the leaf; and end when the frost begins."

Speaking of the garrison of Ghent, he observes,—“ The battalion of the guards was a remarkable instance of the difference of quarters: two of its companies were stationed on St. Peter's hill; the remaining eight in the lower part of the town, in rooms so very damp, that the men could hardly keep their shoes and belts from moulding. In the month of July, the sick of this one battalion amounted to about one hundred and forty; of which number only two men belonged to the companies on the hill, and all the rest to those in the lower town. But in the middle of August,

upon changing the barracks, the sickness suddenly abated.”

Can any thing shew more satisfactorily, than this short description of Sir John Pringle, the unfailing influence of situations in determining the extent of diseases under particular constitutions of the atmosphere? And might not any one suppose, that Doctor Horne’s hydroscopical observations were made in New-York, during the prevalence of the late epidemic? For my part, I cannot refrain from comparing Broadway, and the higher situations of New-York, to St. Peter’s hill; and the upper end of Waterstreet, to the lower part of the city of Ghent.

It is a fact, then, well established, that while an epidemic has raged among the inhabitants of flat and low situations, those who have lived on high grounds, in the neighbourhood, have not, in the smallest degree, felt its influence: but they need only descend to the low ground, and they will

will there sicken in common with the inhabitants.

If the preceding circumstances are considered, they afford a sufficient explanation why the effects of the late epidemic were so partially felt by the inhabitants of this city.

It will be proper to remark here, that the epidemic of last year is not a new disease. It is established upon respectable authority, that a disorder, in every respect similar to the one which made its appearance in this city in July last, and in one instance attended with the symptom of black vomiting, occurred in Water-street, in the neighbourhood of Dover-street, four or five years ago, and more or less every year since; and was particularly confined to that part of the city: but being unaided by a particular state of the air, and under the influence, perhaps, of exciting causes of a less active nature, it was neither so generally felt, nor so fatal in its operation.

Agreeably to this opinion is the declaration

tion contained in a letter we before have had occasion to quote; the author of which observes,—“ I am convinced that the disorder has originated from local causes, because it has appeared in this quarter of the city, at the same season, for several years past.”

Nor has this disease been confined to New-York. It is a fact beyond controversy, that during the warmer parts of the year 1795, a fever, in all essential circumstances resembling the epidemic of this place, appeared in many places in this state and in the state of Connecticut. The same causes, we should naturally expect, would produce similar effects. Accordingly, we have it upon the evidence of several very respectable characters, that a peculiar constitution of the air, the sensible qualities of which were *excessive heat and moisture*, was generally prevalent. This state of the atmosphere, operating with the exhalations arising from the decomposition of dead animal

animal

animal and vegetable matters, in low and damp situations, were a frequent cause of bilious remitting fever.

In confirmation of this truth, we are fortunate in being enabled to present our readers with the following interesting communication from Doctor Williams.

---

*Philadelphia, 19th Dec. 1795.*

‘ SIR,

‘ As near as I can recollect, there are at  
 ‘ Whitehall, formerly called Skeensbo-  
 ‘ rough, about two hundred and eighty fa-  
 ‘ milies; out of which, and transient per-  
 ‘ sons, there died, from the first of July to  
 ‘ the last of October, about twenty of a  
 ‘ bilious fever.

‘ In the town of Hampton, which lies  
 ‘ south-east, and adjoining Whitehall,  
 ‘ containing about one hundred families,  
 ‘ five died of bilious fever. In Westfield  
 ‘ and Greenfield about twenty-four died,  
 ‘ two thirds of a bilious fever.

‘ That

‘ That part of the town of Whitehall  
 ‘ where the deaths in general happened,  
 ‘ is by the side of Wood-Creek, where  
 ‘ there are low marshy grounds and dead  
 ‘ waters. New comers to this place are  
 ‘ commonly attacked with bilious or inter-  
 ‘ mittent fevers. But the last year, by  
 ‘ reason of continued hot and dry weather  
 ‘ succeeding an uncommon wet spring,  
 ‘ some of the old settlers were likewise  
 ‘ attacked with these complaints.

‘ It was observed that the lowness of the  
 ‘ waters had exposed, more than common,  
 ‘ dead vegetable matter to the action of  
 ‘ the sun; and thus the exhalations did not  
 ‘ consist of watery vapours only, but of a  
 ‘ putrid effluvia, arising from the decom-  
 ‘ position of dead vegetable matter, and  
 ‘ innumerable insects, which are always  
 ‘ found in such situations.

‘ About the year 1788, at the town of  
 ‘ Hebern, south and adjoining Grenville,  
 ‘ a mill was erected on a dead creek. The  
 ‘ waters

‘ waters in consequence spread over the  
 ‘ flat grounds for near three miles in length.  
 ‘ This caused, in the hot seasons, a fourth  
 ‘ of the inhabitants adjoining this water,  
 ‘ to be attacked with bilious fever.

‘ About six years since, in the town of  
 ‘ Argyle, an obstruction of water was  
 ‘ caused as above, so that three hundred  
 ‘ acres of land were overflowed. This oc-  
 ‘ casioned, the first year, slight bilious and  
 ‘ intermitting fevers. The second year,  
 ‘ when part of the land before covered with  
 ‘ water became dry, and was exposed to the  
 ‘ sun, the complaints became putrid in their  
 ‘ tendency, and numbers died. The ob-  
 ‘ struction, the following winter, was re-  
 ‘ moved, and the place again became heal-  
 ‘ thy, and so remains.

‘ It is to be remarked, that the last sum-  
 ‘ mer produced more sickness than was ever  
 ‘ known in that country, except in the  
 ‘ year 1788; when, at the latter part of  
 ‘ July, there happened a great flood, which  
 ‘ was

' was followed by a great drought. The  
 ' heat of last summer was acknowledged  
 ' by all to have been much greater than in  
 ' former seasons. The water of Saratoga  
 ' lake, in Saratoga county, was very low,  
 ' and the colour exceeding green.

' From Lansingburgh, northerly, along  
 ' the banks of the river Hudson, the in-  
 ' habitants were generally attacked with  
 ' bilious fever; most of which, without  
 ' timely care, became putrid. At Schoch-  
 ' ticook, a town about a mile to the east of  
 ' Hudson river, and upon the banks of Ho-  
 ' sack river, heretofore healthy, the inha-  
 ' bitants were generally attacked with bi-  
 ' lious fever, and some died.

' Although I have attended numbers,  
 ' and frequently remained days and nights  
 ' with the sick, I never felt any bad effects  
 ' from it. But I have observed, that, if the  
 ' nurses came from situations not so much  
 ' exposed to bilious complaints, it was not  
 ' uncommon for them to be taken sick.

' I am, &c. &c.'

The

The existence of a bilious remittent fever, resembling the late epidemic of this place, at a distance from the city, is further confirmed by the testimony of a gentleman, of high estimation, and extensive practice in his profession, in the city of Hartford, in the state of Connecticut, who writes, in a letter to Doctor Wright Post, dated January 12th, 1796, as follows:—

‘ This epidemic (the dysentery) was by  
 ‘ no means a partial one; it spread over the  
 ‘ whole city, and continued until about  
 ‘ the beginning of October, when it gave  
 ‘ way to the introduction of the bilious re-  
 ‘ mittent, which has, as yet, scarcely left  
 ‘ us, though for a month or six weeks past,  
 ‘ the cases have been few and trifling.  
 ‘ This, although not so prevalent as the  
 ‘ dysentery, spread over particular parts of  
 ‘ the town, and many of the cases were  
 ‘ obstinate and lengthy.

‘ The weather, especially in August and  
 ‘ September, while the dysentery prevailed,

‘ was very singular, such as is without a  
 ‘ similar instance in the recollection of the  
 ‘ oldest persons; I mean particularly as it  
 ‘ respected the *deluging rains*, which fell so  
 ‘ frequently in the course of these two  
 ‘ months. Every two or three days, a  
 ‘ fall of rain, which generally lasted about  
 ‘ six hours, would deluge the whole coun-  
 ‘ try; infomuch that most of the vegeta-  
 ‘ bles, plants, grass, &c. in the vallies,  
 ‘ where vegetation was much the most  
 ‘ rapid, were killed and swept away, or re-  
 ‘ mained among stagnant waters. In many  
 ‘ places the air became highly offensive,  
 ‘ and wholly unfit for respiration. These  
 ‘ heavy rains were succeeded, almost  
 ‘ without an exception, by uncommonly  
 ‘ hot suns; hence the whole atmosphere  
 ‘ was impregnated with exhalations, from  
 ‘ putrid vegetables, and more especially in  
 ‘ the neighbourhood of rivers and vallies.

‘ The effect of local situation was par-  
 ‘ ticularly observable in this place; I mean

‘ as

‘ as it respects the bilious remittent.  
 ‘ Between our front street and the river, a  
 ‘ distance of about forty rods, the ground  
 ‘ is much lower than on each side. This  
 ‘ extends about half a mile in length, with  
 ‘ several interruptions, by streets being  
 ‘ built across it. It was about this place,  
 ‘ and on the banks of a little river which  
 ‘ runs through a part of the town, that this  
 ‘ disease was mostly confined; *and this I*  
 ‘ *find was generally the case in the most*  
 ‘ *sickly parts of the state.*

‘ I will relate to you the situation of one  
 ‘ family, which was the most remarkable  
 ‘ of the whole. Some time in the month  
 ‘ of September, I was called to visit a young  
 ‘ man, about eighteen years old, in a fami-  
 ‘ ly in the skirts of this town. He was  
 ‘ violently attacked with most of the cha-  
 ‘ racteristic symptoms of the yellow fever,  
 ‘ as described by Rush. The next day a  
 ‘ second was taken in the same manner;  
 ‘ and on the morning of the third day,  
 ‘ three

‘ three more were taken sick. This led  
 ‘ me to suspect some particular cause. I  
 ‘ searched for it in vain at that time. The  
 ‘ next morning, on passing through the  
 ‘ kitchen, I smelt something that was very  
 ‘ offensive, which none of the family had  
 ‘ noticed. On opening the cellar-door, I  
 ‘ found that it proceeded from the cellar.  
 ‘ Two persons went down to examine,  
 ‘ and found in one corner of a small tight  
 ‘ room, a quantity of June cabbages, on  
 ‘ which the sun had shone about three  
 ‘ hours in the day. They had rotted, and  
 ‘ sunk down into a lump of putrefaction.  
 ‘ They run a stick under them, and lifted  
 ‘ them up, and there immediately issued  
 ‘ such an intolerable stench, as obliged  
 ‘ them instantly to leave the cellar. A  
 ‘ vomiting was brought on at once, which  
 ‘ lasted them nearly an hour. Notwith-  
 ‘ standing that the doors and windows of  
 ‘ the cellar were thrown open, it was two  
 ‘ days before they could clear it out. No  
 ‘ other

‘ other person in the family was taken  
 ‘ afterwards, and those who were already  
 ‘ seized, all recovered.

‘ Here was the same disease, excited by  
 ‘ the same cause which produces it else-  
 ‘ where, and that cause detected. Why  
 ‘ may we not suppose, that if this circum-  
 ‘ stance had taken place in a thickly inha-  
 ‘ bited neighbourhood, prepared by predif-  
 ‘ position, and aided by all those causes  
 ‘ which generally exist during the hot sea-  
 ‘ son, in populous places, that it would  
 ‘ have spread with the same rapidity it  
 ‘ did in New-York or in Philadelphia? I  
 ‘ confess the conjecture appears to me a  
 ‘ rational one, and ought, at least, to ex-  
 ‘ cite our attention.’

We cannot forbear to remark on the  
 facts contained in the above letters, how  
 analogous the circumstances were, under  
 which the bilious fever arose in different  
 parts of the country: and by comparing  
 these facts, more especially as they relate  
 to

to the city of Hartford, with what happened in this place, we see a very strong analogy indeed. Now, were it necessary to inlarge any further upon the subject of imported contagion, we might, with great propriety, adduce the existence and prevalence of a fever at Hartford, and especially in the family so particularly mentioned, the same as our late epidemic, which no one ever entertained a suspicion to have arisen from any causes than those *perfectly local*.

It would be difficult to ascertain with accuracy, what proportion the different descriptions of people bear to one another, who were attacked with the late epidemic fever. It may be taken for granted, however, upon the testimony of those whose opportunities best enabled them to judge, that the number that were taken sick, living on the new made ground, particularly at the south side of the city, and in other low places, compared with those residing

residing in more elevated situations, may be computed as twenty to one; and if we were to make a calculation of the number of inhabitants who died, compared with visitors, or transient persons, we might say five of the latter to one of the former.

This disproportion may be accounted for: firstly; visitors, especially those from the northward, where the air is generally purer, are more susceptible of an epidemic influence than the inhabitants, who are accustomed to the circumstances of their situation: for there cannot remain a doubt, that the human constitution acquires, by habit, the power of resisting, to a certain degree, the effects of those causes which have a tendency to produce disease.

We find this fact particularly noticed by most writers on the bilious or yellow fever, which so commonly makes its appearance on board the shipping in the different harbours in the West-Indies. It is described as most fatal to those lately from the north-

ern latitudes. So, in New-York, the first appearance of the fever was on board the ship William, from Liverpool, the 25th of July, four of whose crew died. On the 26th of July the fever appeared in the ship Connecticut, from Liverpool: she also lost four of her men. These vessels, it must be remarked, laid at the wharfs in front of that part of Water-street, where the disease first appeared among the inhabitants. Their men, without doubt, were frequently on shore, and having lately arrived, were more susceptible of the causes producing the fever, than the residents of that situation, who had become gradually habituated to its action.

The men of many other vessels from the northward, which were stationed at different wharfs in the east river, felt more or less the effects of the epidemic influence: whereas the crews of those vessels which arrived during the summer months from the West-Indies, and other

warm

warm latitudes, all remained well ; and such individuals among them as had been sick on their passage, recovered very soon after their arrival in this harbour.

Secondly ; of the visitors who were seized with the epidemic fever, a great proportion were emigrants from England, Ireland and Scotland ; and they were more exposed to its effects from the very crowded and confined situations in which they were unavoidably placed.

The miserable condition of that class of unfortunate people, is well shown in a candid and very interesting communication from the Rev. Mr. O'Brien, pastor to the Catholic congregation in this city, from which the following is an extract :—

‘ As soon as the above causes had produced their malignant effects in the part of the city which was previously disposed to receive them, I was constantly employed, in so much that I might with some truth say, that I lived in the centre of the disease ;

‘ and for nearly two months, never laid in  
 ‘ bed one whole night. I found in most pla-  
 ‘ ces, a total want of every necessary of life.  
 ‘ Numbers of poor sufferers, confined in  
 ‘ subterraneous apartments, which admit-  
 ‘ ted no light, but from their hatch-doors;  
 ‘ so that when shut down at night, it might  
 ‘ literally be said of them that they were  
 ‘ buried alive. In the progress of visiting  
 ‘ the sick, I was much disgusted at the abo-  
 ‘ minable, uncleanly state of their misera-  
 ‘ ble habitations, and a total want of ne-  
 ‘ cessaries: for in most places, they had  
 ‘ not even a stool to sit on, nor a bed to lie  
 ‘ upon. On inquiry, I found the much  
 ‘ greater part of them to be emigrants of  
 ‘ that very summer; infomuch that out  
 ‘ of four hundred and sixty-two of my con-  
 ‘ gregation, who sunk under the disorder,  
 ‘ nineteen twentieths were totally un-  
 ‘ known to me.’

To this deplorable condition of the poor  
 emigrants who arrived in this city during  
 the

the prevalence of the epidemic fever, is to be ascribed, humanly speaking, the extent of its mortality. It is a circumstance, moreover, well known to many, that numbers of them were obliged to remain on board ship for some time after their arrival in this port, as well from their want of means to procure comfortable lodgings, as from the very crowded state of the city; and at last they exchanged their confined holds for those subterraneous apartments which have just been so emphatically described by Mr. O'Brien. This may account for the fact, that out of nearly eight hundred persons who died, not more than one hundred and fifty were citizens of New-York; and of this number but a small proportion until the disease had prevailed a considerable time, perhaps one half during the last four weeks.

If the above statement be true, what a lesson does it convey, as well to the people as to the magistracy! Ought it not  
to

to inspire the citizens with a proper degree of confidence, and stimulate those who have the regulation of our city police to adopt such measures as are within their authority, in order to obviate, as far as possible, the fatal effects of another visitation?

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I shall now dismiss this part of the subject, in order to lay before my readers the symptoms which served to characterize the fever in question, as far as they came under my observation.

The first and the most constant of these, as well as the most severe, was a pain ordinarily fixed in the fore part of the head; and this was usually attended with a diffused redness of the eyes, and a pain in the back. These symptoms have been known to exist, in a moderate degree, several days previous to the attack of fever.

A sense of coldness did not always take place at the beginning of the fever; and  
 much

much less frequently was any thing like rigors experienced. The loss of strength, also, in the beginning, was very variable. Many did not complain of any particular weakness; whilst others felt so great a degree of prostration, as to be unable to support themselves.

The patients sometimes complained of a general foreness of the muscles, and particularly those of the thighs and legs; and in some this affection continued a troublesome symptom.

It did not frequently happen that the stomach was much affected at the commencement of the disease; yet instances occurred where the fever was ushered in with great sickness, frequent retchings to vomit, oppression and pain about the præcordia, with excessive anxiety and restlessness.

The tongue often at first appeared natural, but it most commonly looked white. After the fever had continued some days,  
the

the matter collected upon its surface, assumed a brown colour, but continued moist. At length it became dark, sometimes black, dry, and rough.

The pulse was generally frequent at the beginning of the fever, but varied, as to fulness and strength, according to the habit and constitution of the patient. It sometimes happened, after the fever had made considerable progress, that the pulse remitted, and was commonly a symptom of great danger. A rare pulse, also, was in some instances met with. In a boy who had had the fever six or seven days, and in whom the number of pulsations in a minute had been, for the most part, about one hundred and twenty, the frequency was suddenly diminished, and did not exceed fifty-five strokes in a minute. In this state they continued, with very little variation, for two days, while the patient appeared to be getting well. The pulse then suddenly became as frequent

as

as before, and two days after the accession, he died. It happened also in the instance of a gentleman, whose attack was very violent; whose pulse was frequent, full, and strong, and who had been freely and repeatedly bled; that after eight days, the number of pulsations were reduced below the usual standard, and seemed to be attended with a general change for the better. These appearances, however, were fallacious: a recurrence of violent symptoms soon put a fatal termination to the disease. The same circumstance we find taken notice of by Doctor Hunter and others.

Yellowness of the skin was by no means a constant concomitant of the disease. Sometimes it appeared partially about the face and neck; at other times a little tinge of the eyes was the only yellowness to be observed. In some instances it made its appearance about the third day, but more commonly not until the fifth, sixth, or seventh

venth day. When it came on early, it was generally attended with violent symptoms, and denoted danger: and yet patients recovered, whose skin was universally as yellow as saffron.

The temperature of the skin varied very considerably. In some cases it was hot and dry, and communicated a very disagreeable sensation to the touch. In others it was moist and cool from the first attack, and continued so during the disease.

Although the fever frequently ran high, it was seldom attended with much thirst; except in some few cases, where it was difficult to satisfy the demands of the sick for drink.

When the pain in the head was very considerable, the eyes were commonly a good deal inflamed, suffused with tears, and very impatient of light: and it now and then happened, that the patients complained of a sensation, as if the eyes were endeavouring to escape from the sockets.

The

The respiration was seldom much affected at the beginning. On some occasions, however, it was difficult, attended with a sense of fulness in the chest, which was sometimes a cause of great anxiety, and frequent deep sighing. Doctor Hunter observes, that “there is no difficulty in distinguishing those symptoms from laborious respiration, that depends upon a local affection of the lungs. In the latter the difficulty of breathing is uniform; whereas, in the former, both the expirations and inspirations will, for two or three times, be natural and easy, and immediately after become laborious and unequal, and so on, alternately.”

The urine, in general, underwent very little change. It was sometimes a little increased in quantity, and at other times rather diminished. But in those cases where the skin became yellow, the urine put on that dark brown appearance which is com-

mon in diffusions of bile. In some instances of black vomiting, and in two or three cases, previous to the occurrence of that symptom, the urine became exceedingly turbid, and deposited a dark coloured matter.

These were the ordinary train of symptoms, which attended the fever, we have endeavoured to describe; and though in particular cases, no doubt, some deviations might be noticed, yet it is believed there were none which could be thought to affect essentially the character of the disease.

In the treatment of the late epidemic fever, my first care was to have the patient placed in a room as large, and well ventilated as possible. The advantages arising from an attention to this part of practice, must appear obvious to all who reflect, that while a cause which may have produced a disease continues to act, or while circumstances exist, which tend very much to aggravate the symptoms, the efficacy

efficacy of our remedies is rendered, if not of no avail, at least extremely doubtful.

When the patient was placed in a situation as eligible as could be procured, the leading object was to evacuate the stomach and bowels. If this important point could be effected at the first attack, it was often found to cut short the course of the disease: and when it did not do this, it for the most part rendered the subsequent symptoms so moderate, that they more readily yielded to the means of art.

In general it was not thought of much consequence, what purgative medicine was used, except in instances where the stomach shewed signs of particular disorder. A solution of salts and manna, in such doses as circumstances seemed to indicate, was very commonly prescribed. In most cases it sat easy upon the stomach; and even when the first doses were rejected, by persevering in its use, it finally passed downwards, and, upon the whole,

was

was found to operate with more certainty and effect, than any other medicine.

The bowels being emptied, with salts and manna, it was thought expedient to continue the evacuation in a moderate degree; and for this purpose, a solution of manna and cream of tartar was employed, so as to produce its effect three or four times a day. This was a favourite medicine. It was found not disagreeable to take, and generally remained upon the stomach, without producing any sickness or other uneasiness. When the disease was extended beyond the sixth or seventh day, and purgatives were indicated, there was a manifest advantage derived from equal parts of rhubarb and magnesia, in mint-water, over any other medicine, given in small and repeated doses; or a strong watery infusion of rhubarb, with the addition of a little manna, and sp. lavend. comp. to render it agreeable to the taste. These medicines answered the purpose

pose of gentle aperients, whilst they induced no debility by their operation.

If jalap and calomel were prescribed at the beginning of the complaint, it was seldom thought necessary to repeat them. To preserve the bowels soluble, a solution of manna and cream of tartar was found better to answer the intention.

When a disordered stomach did not appear among the primary affections, but, on attempting the use of purgatives, they were thrown up again, a few grains of ipecacuanha, with a free use of camomile tea, has sometimes emptied the stomach to advantage. After allowing the stomach to rest a few hours, purgatives could then be employed with the usual success.

A disordered stomach, with frequent retchings and efforts to vomit, was now and then met with at the beginning of the fever, and sometimes, with other matters thrown up, there was an appearance of bile. Glysters, frequently repeated, very  
commonly

commonly moderated this symptom. Occasionally an infusion of camomile, or, where the patient preferred it, warm water, was used to cleanse the stomach; and as soon as there was a probability that the stomach would retain it, recourse was had to the purgative solution.

When a sense of weight and oppression at the stomach, a tenderness or soreness of the præcordia upon pressure, a vomiting of a bilious matter, of a dark poracious appearance, extreme restlessness, a dejection of spirits, were met with among the primary symptoms, the case wore an alarming aspect, and called for the utmost skill and exertions of the physician. To allay the vomiting, frequent glysters, and the application of a blister to the region of the stomach, were found most effectual; and to these was added the occasional use of effervescing draughts. If this method did not succeed, the feet and legs were wrapt in large flannel cloths, wrung very dry

dry out of hot water. This expedient, by relaxing the vessels on the surface, and inducing perspiration, sometimes relieved the distressing symptoms just enumerated.

When the vomiting could not be subdued, the patient at length threw up a dark coloured matter, resembling the grounds of coffee, and sometimes little dark coloured flakes were found mixed with it. To this affection of the stomach, succeeded coldness of the extremities, with a livid appearance of the hands and feet, intermitting pulse, excessive anxiety, oppression about the region of the stomach, and hiccough, with difficult and laborious respiration. These symptoms continuing in a high degree, commonly indicated the near approach of death, which was seldom protracted to more than two or three days. I am happy to add, however, that there were not wanting instances of the recovery of persons who had laboured under black vomiting, accompanied with all the distressing

sing

sing symptoms peculiar to this stage of the disease.

It likewise happened during the progress of the foregoing symptoms, but at no certain period, that a hæmorrhage took place from the nose, mouth, or gums, and sometimes from all three sources at once. In one instance, a friend of mine informed me, that the blood trickled from the internal parts of the ears. But in the course of my visiting the sick, I seldom met with considerable hæmorrhages, that the application of ice to the bleeding vessels, or to the neighbouring parts, did not most certainly check the discharge.

The severe train of symptoms above enumerated, according to my observation, generally occurred in what might be called the second stage of the disease, and sometimes after a free use had been made of the lancet.

At the first of my attendance upon the epidemic fever, I was impressed with an  
idea

idea that an early recourse to the bark was essentially necessary to the successful treatment of it. Under the influence of this opinion, after the contents of the stomach and bowels were carried off, I directed the bark to be used, either in powder, decoction, or the cold infusion, as circumstances appeared to indicate. In every instance it was found to disagree with the first passages. In some it occasioned a fulness and straightness about the præcordia: in others it offended the intestines, producing a fulness and soreness in the abdomen: whilst in others it excited the system, increased the head-ach, and brought on an accession of fever. Nor did I ever see the bark do good, *until an entire solution of the disease took place.* That it might not have been beneficial, I shall not assert. If, however, an opportunity of a similar kind unfortunately occurs, I shall prescribe it, under particular circumstances, in a manner very different from that in which I have before used it.

The bad effects of the bark, which so invariably followed the use of it, under my direction, were commonly removed by the use of purgatives. Whilst the patient was taking laxative medicines, I made it a common practice to give freely of *sp. minderer.* and evidently with good effects.

If the heat and fever were considerable, and the stomach retentive, small doses of antimonials, particularly James's powder, sometimes joined with camphor, were found useful. The *sp. minderer.* also, was a useful medicine in this state of the disease.

The diaphoresis which it commonly induced afforded great relief, and generally brought on a remission, if not an intermission of the fever. When a free perspiration took place on the second or third day, it was considered as a favourable event, and denoted a happy termination of the disease. But sweating did not  
always

always prove serviceable. Instances happened, where this evacuation was profuse from the first attack, without seeming to benefit the patient in any degree. When it came on thus early, the temperature of the skin generally, and particularly of the extreme parts, was so altered as to communicate a considerable sense of cold to the touch.

With respect to calomel, which many have prescribed with that freedom and constancy, as if it possessed some specific qualities, I can say little from my own experience. I never could induce my mind to believe that it possessed any advantages over many other purgatives; and from the account given of its effects by some of my friends, I am disposed to favour a belief that its operation, as a purgative, was *very limited*. It produced frequent stools, but the quantity discharged was very small; and during the use of it, the patient frequently complained of a sense of fulness  
and

and constriction in different regions of the abdomen. These feelings were commonly soon relieved by the more copious evacuations procured by either of the purgative solutions before mentioned. That calomel has nothing specific in its nature, seems pretty clearly evinced by those cases in which it has been taken as a preventive. Instances of this sort were not unfrequent during the prevalence of the late epidemic in this city. But the fever was known to attack persons under the influence of this medicine; while others, who did not take mercury, and were living precisely under the same circumstances, have escaped the disease.

Three persons out of four, of the same family, had taken mercury for some time, with a view to guard themselves against the fever; but they were, notwithstanding, seized with the epidemic. In one, a salivation had been produced, and in this situation, he was attacked with fever.

As

As soon as the fever came on, from a conviction that the mercury had not been of any service to him, he omitted the use of it, and with the assistance of mild purgatives, soon got well. The fourth person, who had not taken any calomel, and who nursed the other three, escaped the disease.

A number of other instances might be mentioned, in which calomel had been taken as a preventive, where the persons, notwithstanding, took the disease.

In the management of the late epidemic, the cold bath was frequently resorted to. As a general application, I can say nothing of it from my own observation. I have been, indeed, in the habit of washing the hands, arms, face, neck, and breast, with cold vinegar and water, in cases of fever, and always found it a very grateful refreshment to the patient. I accordingly employed it freely, and as extensively as conveniences would allow. But I know  
that

that the general bath was also employed for the late fever, with great advantage, but under what particular circumstances I cannot speak with precision. Doctor Charlton, of this city, a physician of much experience, who had in many instances witnessed its good effects, favoured me with the following communication: “ I experienced the happiest effects from cold bathing, in a variety of cases. I used river-water, and had the patient placed in a large tub, and a couple of pails-full thrown over him. It happened in one instance only, that the patient did not feel so much refreshment, as to be impatient for a repetition of it. In this case the patient grew chilly after using the bath, which I thought a sufficient reason for discontinuing it. In every other instance I found no method so effectual for relieving the extreme distress of the head and stomach, so generally attendant on that disease.”

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We find a similar practice recorded by Mr. Bruce, who says, that the inhabitants of Masuah are subject to violent fevers, which “ generally terminate the third  
 “ day in death. If the patient survives till  
 “ the fifth day, he very often recovered by  
 “ drinking water only, and throwing a  
 “ quantity of cold water upon him, even  
 “ in his bed, where he is permitted to lie,  
 “ without attempting to make him dry, or  
 “ change his bed, till another deluge adds  
 “ to the first.”

In the use of cordial medicines, or drinks of that nature, much circumspection was necessary. In the first stages of the disease, they were altogether inadmissible. They were prescribed in some instances, after considerable remissions had taken place, but manifestly to the injury of the sick. Even after complete intermissions had formed, they sometimes produced a state of excitement, which rendered the patient's situation much less comfortable.

comfortable. These observations apply particularly to those cases, where the remissions took place at an early period, or where the disease did not run out beyond the fifth, sixth or seventh day. When the fever was of longer continuance, the debility it induced made the use of cordials not only allowable, but particularly necessary.

Porter, more or less diluted, was found to agree better with the sick than any other drink of the cordial kind: but its salutary effects appeared very much to depend upon a liberal state of the bowels. When given conjointly with some mild purgative, it increased the strength, and very often superseded the use of any other tonic.

In the latter stages of the complaint an infusion of snake-root was also made use of with advantage. On many occasions it composed the stomach, supported the strength of the patient, without exciting him, and seemed productive of very happy effects.

Much

Much has been said and written respecting the use of the lancet, and the effects of bleeding in this disease. On this part of practice I shall advance nothing, but what is the result of experience and observation. In general, the indications of cure were not supposed to include this operation; it was, therefore, but seldom had recourse to. In some of those cases, in which the lancet was used, the good effects of bleeding were obvious, more especially in relieving the distressing pain in the head; whereas in other instances, and, where the symptoms seemed to render it peculiarly proper, it did not afford the relief that was expected from it; but, on the contrary, although the quantity of blood drawn was copious, and the bleeding frequently repeated, the patient sunk under the disease.

If I were to say in what cases bleeding would probably be useful, it would be where the fever seizes upon healthy, robust con-

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stitutions,

stitutions, where the pain in the head was extremely violent, and where the eyes, (to use a frequent expression of the sick) seemed ready to leap from their sockets, *and especially if such a subject had just arrived from the purer and cooler air of the country.*

In a person of this description, the attack, and all the subsequent symptoms, are commonly violent indeed; to moderate, therefore, the excessive action of the system, bleeding would probably be necessary and useful. Under circumstances like these, I have accordingly bled, and to good purpose; but I have, previously to blood-letting, directed my patient to drink freely of warm water; by which means I have observed, that not only the action of the vascular system was much abated, but also that the whole body more readily yielded to a copious perspiration. But if a person is attacked with this fever, whose body has been previously debilitated, perhaps by a sedentary manner of living, and  
*from*

*from having resided some time in the epidemic constitution of the air, it could hardly be supposed that the same remedies would be required as in the former instance.*

An attention to the above distinction of causes, as far as respects the remedy of bleeding particularly, may be of greater importance in the treatment of this disorder, than has been commonly imagined.

Opium was rarely admissible in this fever, and never in the first stage of it. But after the contents of the stomach and bowels were freely evacuated, and the excessive action of the system moderated, the use of it was justified in many instances of successful practice. Indeed, particular cases occurred, in which great irritation, restlessness, and want of sleep, could by no other means be so well alleviated. When given under such circumstances, it was commonly conjoined with some sudorific, and most frequently with sp. mind. When, also, in the advanced stage of the disease,

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the vomiting became excessive, opium was administered with the best effects.

Blisters were occasionally employed; they were found most useful in removing local affections. If the head-ach continued severe, after free evacuations, a blister, applied between the shoulders, often removed the pain. When the sickness at the stomach was great, attended with oppression and pain, a blister to the præcordia has often proved of advantage. Doctor Blane found nothing so successful in removing irritability of the stomach, as a blister applied externally to the part. When there has been a general foreness and fullness of the abdomen, which has not subsided after a free use of purgatives, the application of a blister has produced the happiest effects. A friend of mine had a young clergyman under his care, whose disease, from its continuance, had become very formidable. He was covered with petechiæ; his stomach was easily excited;

cited; his stools were generally of a dark colour, and sometimes black. The bark had been tried, but it did not agree with him. Upon examining the abdomen, it was found universally tender to the touch, but not painful. A large blister was applied to the affected part, the operation of which put an immediate check to the progress of the disease. His drink was porter, to which water was occasionally added; and with the assistance of an easy diet, such as sago, gruel, &c. his recovery was soon completed.

The drinks which seemed the most grateful to the sick, and were considered as the most proper during the fever, were lemonade, water with toast in it, water alone, molasses and water, balm-tea, &c.

The diet commonly recommended was sago, tapioca, panado, and occasionally weak broths. The latter, however, frequently produced uneasiness at the stomach, which made it necessary to desist  
from

from their use. A gruel made with Indian-meal, or oat-meal, appeared, upon the whole, to agree better with the sick than any other food; and, in many instances, it constituted the whole diet and drink of the patient.

The use of animal food was uniformly attended with bad effects; the smallest quantity, taken in the intermission, has hastened the accession of fever, and increased its violence. Even after the disease had entirely subsided, and debility only remained, a too early recurrence to animal food has brought on a renewal of fever.

I shall only add, that through the whole course of the disease, the strictest attention was paid to cleanliness, especially to the immediate removal of all excrementitious matter. The patient's linen, bed-cloaths, and often the bed itself, were frequently changed, and the refreshment it always afforded was a sufficient proof of its utility.

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The foregoing exhibits an unvarnished view of the history of the late epidemic, as far as it came under my notice; and of the practice, as far as it seemed rational, and was successful under my management: and I have purposely avoided, as much as possible, all theoretical or controversial grounds.

Indeed, I have been anxious about nothing so much as to fix upon the mind, the great and obvious distinction betwixt contagious diseases, and those which, under very peculiar circumstances, may assume much of that character.

The utility of this distinction is so well shewn by Doctor John Hunter, in his Enquiry into the Nature and Causes of the Remittant Fever, that I cannot do better than give his own observations upon the subject. “ There is hardly any part of the  
 “ history of a disease (says the Doctor)  
 “ which it is of more consequence to  
 “ ascertain with accuracy, than its being  
 “ of

“ of an infectious nature or not. Upon  
 “ this depends the propriety of the steps  
 “ that should be taken, either to prevent  
 “ it, or to root it out. It is productive of  
 “ great mischief to consider a disease as  
 “ infectious that really is not so; it exposes  
 “ such as labour under it to evils and in-  
 “ conveniences, which greatly aggragate  
 “ their sufferings, and often deprive them  
 “ of the necessary assistance: they are neg-  
 “ lected, if not shunned; and at the time  
 “ they require the greatest care and at-  
 “ tention, they have the least. I have  
 “ had occasion to observe, that the remit-  
 “ tant fever, whether with its usual, or  
 “ more uncommon symptoms, with the  
 “ yellow colour of the eyes and skin, or  
 “ without them, was never found to be  
 “ infectious. The strongest proofs of this,  
 “ in my opinion, were to be met with in  
 “ private families, where the son, the bro-  
 “ ther, or the husband, labouring under  
 “ the worst fevers, were nursed with un-  
 “ remitting

“ remitting assiduity, by the mother, the  
 “ sister, or the wife, who never left the  
 “ sick by day or by night, yet without be-  
 “ ing infected. That such near relations  
 “ should take upon them the office of a  
 “ nurse, is matter of the highest commen-  
 “ dation in a country, the diseases of which  
 “ require to be watched with greater care  
 “ and attention than can be expected from  
 “ a servant.”

Why the late epidemic, in many in-  
 stances during its destructive progress in  
 this city, wore the dreadful aspect of con-  
 tagion, may be gathered, in a good degree,  
 from the few following particulars, with-  
 in the knowledge of us all, viz. The  
 last summer, and a great part of the au-  
 tumn, were marked by an uncommon  
 degree of heat, combined with moisture.  
 The atmosphere, which, at that season,  
 is ordinarily loaded with the electric  
 fluid, seemed destitute, for weeks together,  
 of this vivifying principle. The intense

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heats

heats which we often experience in the forenoons of July and August, are generally allayed by thunder and lightning, and the refreshing rains, which follow towards the evening; but in the season referred to, this precious relief from the languor induced by a verticle sun, was seldom felt.

Now, when we reflect that a great majority of those who fell victims to the late epidemic fever were not only foreigners, but poor persons, many of whom had been only a few weeks in the country, arrived after a long voyage, and predisposed to sickness by hard and scanty fare; huddled together, in a great many instances, in the most uncomfortable apartments, and these situated in the most unhealthy parts of the city; frequently without the early attention of a physician, destitute of friends, and often without the most common comforts of life; under such distressing circumstances, notwithstanding the humanity

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nity of the citizens, were numbers placed; and what consequences, but those which followed, could reasonably have been expected?\*

\* In the former part of this essay, we enumerated many circumstances which tended to shew, that the season of the late epidemic more especially, was attended with *an uncommon constitution of the air*. Since these observations were put together, I have been favoured with a letter from Mr. Gardiner Baker, proprietor of the Museum in this city, who mentions several occurrences illustrative of the same thing. He observes, “ Books in my library, and those that were in daily use, were covered with mould. All the preserved animals in the Museum, that were not contained in glass cases, were injured very much by the long continued atmospheric moisture, and some of them quite spoiled; particularly a very finely preserved buffaloe, which had, in the course of twelve years, been exposed to every climate on the continent, without shewing the least disposition to decay. But, in the month of August last, upon applying my hand under the belly, I found it as wet as if taken out of water, and soon after this part of the animal began to fall, piece by piece, as large as my two hands, until the whole of the belly had fallen to the floor. Fish that had been well preserved for several weeks, had collected so much moisture from the air, that drops of water fell from them.

“ I have a very excellent electrical machine, and have been in the daily habit of using it; but during the sickness, when the appearance of the atmosphere was the most favourable, I could not, with all my art or industry,  
“ excite

“ excite it, so as to answer any purpose in experiment,  
 “ &c. when, in the ordinary state of the atmosphere, four  
 “ or five revolutions of the cylinder, will give as hard a  
 “ shock as a man can bear with convenience.”

The foregoing observations of Mr. Baker prove, in a remarkable degree, that there was a prevailing property in the air, viz. *extreme moisure*. The annexed table will exhibit the degree of heat, which appears, upon an average, to exceed the usual temperature several degrees.

*Meteorological Observations for 1795, made by G. Baker.*

### THERMOMETER.

Months.	High.	Low.	Weather.	No. of Rains.
January.	44 50	8	Very variable.	6 small quan.
February.	46	5	Not very variable.	2 very little.
March.	62	23	Not very variable.	9 small quan.
April.	74	28 50	Variable.	12 large quant.
May.	81	48 50	Not very variable.	14 large quant.
June.	87	57	Very variable.	6 small quan.
July.	89	63	Not variable.	9 considerab.
August.	93 50	57 50	Not very variable.	11 large quant.
September.	87	48	Not variable.	8 small quan.
October.	75	38 50	Not very variable.	8 small quan.
November	67	20	Not very variable.	9 considerab.
December.	54	37	Not variable.	8 small quan.

### BAROMETER.

Months.	High.	Low.	Months.	High.	Low.
January.	30 20	29 30	July.	30 11	29 55
February.	30 5	29 45	August.	30 5	29 50
March.	30 30	29 15	September.	30 8	29 25
April.	30 17	29 35	October.	30 28	28 80
May.	30 15	29 65	November.	30 23	28 95
June.	30 40	29 60	December.	30 6	28 85

“ It is very remarkable, that for near three years there has  
 “ been but a very small quantity of thunder and lightning.  
 “ In the month of May last it thundered and lightned three  
 “ times, and there was no more until October, when we  
 “ had a very distant thunder, and some lightning, and this  
 “ was the last for 1795.”

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# A P P E N D I X.

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## INTRODUCTION.

THOSE who have inclination, and have not perused the writings of some authors justly distinguished for their talents in medicine, and who have written professedly on the *fever in questicn*, (for I pay no regard to the various names by which it is known) may find in the annexed pages, a very circumscribed view of their opinions of right practice, as far as respects the most efficacious remedies employed against it. Those who have more leisure, and more curiosity, will, of course, consult the originals from whence they are taken; for my own part, I have by no means intended, by this selection, to strain any part of their practice, with a view to strengthen, or give consequence to *my own opinions*, or to fix a *methodus medendi*, which, it will occur to every intelligent practitioner, obtained under circumstances, in many instances, very dissimilar.

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## HILLARY.

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THE first indication of cure, Doctor Hillary observes, is “ to moderate the too great and rapid motion  
“ of the fluids, and abate the heat and violence of the  
“ fever,

fever, in the two first days of the disease. Wherefore  
 bleeding, in the beginning of the first stage of this fe-  
 ver, either to a greater or less quantity, accordingly as  
 the following symptoms and circumstances indicate, is  
 always absolutely necessary: and the quantity to be ta-  
 ken away should always be as the age and strength of  
 the patient, the degree of the plethora, and the greater  
 or less elastic state of the solids, the fulness of his pulse,  
 and the violence of the fever and its symptoms. For  
 which reason, when I have been called in time, (which  
 is too seldom the case) I generally order 12, 14, 16,  
 18, or 20 ounces of blood to be taken away on the  
 first or second day; but always, as the above symp-  
 toms and rules indicate and direct: and if the patient's  
 pulse rises after the first bleeding, or if the fever con-  
 tinues to be still high, and the pulse full, (for it is ne-  
 ver high in this fever) I repeat the bleeding once, in  
 the first or second day of the disease, if the above  
 mentioned symptoms indicate it; but bleeding a  
 third time is seldom or never required, neither is  
 bleeding on the third day almost ever required; and  
 when it is performed on that day, it ought not to be  
 advised without great caution and judgment; neither  
 should a vein be opened after the third day in this  
 fever, unless some very extraordinary symptoms and  
 circumstances require it, which very rarely or never  
 happen. I have always found that taking away a  
 moderate, but sufficient quantity of blood on the first  
 or second days, has rendered the fever more moderate,  
 and abated the putrescent diathesis afterwards. But  
 as to the quantity of blood to be taken away in this  
 case, either the first or second time, or on the first or  
 second days, it is impossible to ascertain it, since that  
 must

“ must be different, in different patients ; because some  
 “ constitutions can better bear the loss of fifty ounces  
 “ of blood than others can the loss of eight or ten ;  
 “ therefore, the only rules that can be given are those  
 “ laid down before.”

The irritable state of the stomach, Doctor Hillary says, forbids the use of emetics ; but to carry off the contents of this organ, a liberal use of warm water is recommended, which greatly relieves the patient. In the next place, “ in order to gain a truce, and some  
 “ respite from the anxiety, and almost continual  
 “ reaching, vomiting, and sickness, which are not in-  
 “ creased, but somewhat relieved by drinking the warm  
 “ water, I usually give extract. thebaic. g. ʒ. 1 vel. g. ʒ. ʒss.  
 “ and order them to take nothing into their stomachs for  
 “ two hours after it, that they may retain it ; and it be-  
 “ ing in so small a compass, they scarce ever reject it.  
 “ By this method the poor distressed patient gets some  
 “ rest and respite, and all the symptoms are generally  
 “ considerably abated, the reaching and vomiting ei-  
 “ ther totally ceases, or do but seldom return ; so that  
 “ other medicines may be given and retained on the  
 “ stomach, which it would not retain before ; such as  
 “ cooling acid juleps, or other antiphlogistic and anti-  
 “ septic medicines.”

The evacuation of the bowels is the next circum-  
 stance to which Doctor Hillary directs our attention.  
 He attempts this first by glysters, “ and after six or eight  
 “ hours rest and respite, he orders a gentle antiphlogis-  
 “ tic and antiseptic purge.

“ Or if the patient has a purging before, which  
 “ sometimes, though very seldom happens, I order a  
 “ gentle dose of toasted rhubarb to be given, and an anti-  
 septic

“ tiseptic anodyne, after it has operated, to abate and  
 “ check the too much purging, but not to stop it, as I  
 “ have always observed it to be of service in this case,  
 “ provided that it is moderate, and not too violent: and  
 “ I observed that all those who had this purging, gene-  
 “ rally did well with it, if the patient’s strength was  
 “ but properly supported with suitable nourishment,  
 “ and proper antiseptic medicines, which last are al-  
 “ ways absolutely necessary in this fever.

“ And though purging in many other fevers, may be  
 “ deemed bad practice, yet in this fever, as nature in-  
 “ dicated it, I have always found it of singular service,  
 “ and the patient not only greatly relieved by it, but the  
 “ disease always rendered more moderate and manage-  
 “ able afterwards.”

Doctor Hillary not only purges in the beginning of  
 the disease, but, says he, “ and I most commonly find  
 “ it necessary to repeat this purging every second or  
 “ third day, for two or three times, and sometimes,  
 “ when the symptoms are very bad, and have not  
 “ much abated upon taking the first and second purge,  
 “ and the patient has not been treated in the method  
 “ before described, or I have not been called in till late  
 “ in the disease, I have found it necessary to repeat the  
 “ gentle purging every day, for four or five days suc-  
 “ cessively, and with the desired success too.”

In the latter stages of the disorder, when, (according  
 to Doctor Hillary) it might be supposed that antiseptics  
 “ were necessary to put a stop to the putrescent dispo-  
 “ sition of the fluids, and prevent gangrenes coming  
 “ on,” our author found the cort. peru. though a  
 medicine of the nature indicated, “ so disagreeable to  
 “ most palates, and the stomachs of the sick, in this  
 disease

“ disease, are so much affected, and so weak, and so  
 “ subject to reject every thing, even the most pleasant  
 “ and innocent, that they can very rarely take it in any  
 “ shape, and still much fewer can retain it, when they  
 “ have got it down.”

As a substitute for the bark, Doctor Hillary used  
 an infusion of snake-root, to which Madeira wine  
 and elixir of vitriol was added, “ and with much bet-  
 “ ter success than he could hope for, or dare expect.”  
 If this medicine required “ more warming,” the quantity  
 of rad. serpent. was increased, or vin. croc. or confec.  
 cardiac. or some such medicines were added.

Those symptoms, viz. “ low pulse, coma, delirium,  
 “ coldness of the extreme parts, tremors, convulsions,  
 “ spasms, &c.” which might be supposed to indicate  
 vificatories, “ have not only not been relieved by their  
 “ application, but have been increased thereby, and the  
 “ hæmorrhage which usually attends this fever has been  
 “ hastened on, or if come on before, it has been in-  
 “ creased by their application..”

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### HUME.

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“ The first patient I was called to, was one An-  
 “ drews, a plethoric, muscular man, about twenty-five  
 “ years of age; he had not complained three hours  
 “ when I saw him, about ten in the forenoon; yet the  
 “ oppression on the præcordia, and the bilious vomit-  
 “ ings had already seized him. His pulse was full and  
 “ strong, and I took sixteen ounces of blood from his  
 “ arm immediately, and ordered a laxative clyster to

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“ be

“ be injected as soon as it could be got ready, and en-  
 “ joined him to drink plentifully of barley water, acidu-  
 “ lated with the juice of the lime. I called upon him at  
 “ noon, and was much disappointed to find the ardent  
 “ symptoms, and the oppression on his breast both in-  
 “ creased: his vomitings were almost continual, and  
 “ he complained much of distress on breathing, and of  
 “ the burning of his eyes. The reasons for bleeding  
 “ him still continuing, I took fourteen ounces of blood  
 “ from the same orifice, and ordered him, the same  
 “ evening, a scruple of ipecacuanha at six o’clock, and  
 “ at ten applied a large blister between his shoulders,  
 “ in hopes of relieving his chest.”

“ He continued to vomit, with but short intermis-  
 “ sions, from the time he took the emetic, although he  
 “ discharged a great deal of bile by stool. He had a  
 “ very restless night, and continued through the se-  
 “ cond day, vomiting, and labouring under the oppres-  
 “ sion of his breast, till about twelve at night, when  
 “ he died; about forty hours from the time of his be-  
 “ ing first seized.

“ At this time the practice in Barbadoes was, to use  
 “ large and repeated bleeding, vomiting, and blistering,  
 “ as recommended by Doctor Town, which method I,  
 “ as a stranger, thought myself obliged to follow.

“ Before Andrews died, several others were taken  
 “ ill, and, except the second bleeding, which was omit-  
 “ ted, they were treated the same way, with no better  
 “ success.”

Doctor Hume next relates the morbid appearances  
 exhibited upon opening the bodies of the two first men  
 who died. There were an enlarged liver, and “evi-  
 “ dent marks of inflammation on the lower extremity  
 “ of

“ of the stomach, and likewise on the superior part of  
 “ the duodenum.

“ No marks of mortification were found on the in-  
 “ ternal or external surface of the stomachs of either of  
 “ these men; but I opened two not long after, who  
 “ died in a more advanced state of the disease, and found  
 “ one of them, who had vomited the black matter, in a  
 “ state of mortification every where, and some coagu-  
 “ lated blood in it; the internal coats of the other were  
 “ covered with livid spots of different sizes, and, exter-  
 “ nally, towards the bottom, there were large black  
 “ spots of the size of a crown piece.”

“ Having observed, with much regret, the bad suc-  
 “ cess I had from bleeding and vomiting, and that the  
 “ first man who died evidently sunk after the first  
 “ bleeding, I bled the rest but once; and when the pa-  
 “ tients were not plethoric, I have frequently omitted  
 “ the operation altogether, as I sometimes did when I  
 “ had not seen them within twenty-four hours of be-  
 “ ing taken ill.”

“ I have seen some subjects opened, on whose sto-  
 “ machs no marks of inflammation could be discover-  
 “ ed, yet even these had excessive vomitings.”

“ The state in which I found the stomachs of the  
 “ two first men who died, deterred me from giving any  
 “ more vomits; and I have ever found that bowel so deli-  
 “ cate and irritable, that I have never since ventured to  
 “ give any emetic whatever. There seems, however,  
 “ a necessity to evacuate the bile by the stomach, by the  
 “ intestines, and by the skin, when there is a tendency  
 “ to sweat.”

“ After bleeding, I used to order a clyster of &c. and  
 “ for common drink, I ordered a pleasant sherbett made  
 “ of fresh, ripe limes, &c.”

“ I found

“ I found this not only a pleasant drink for the sick,  
 “ but looked upon it as the most powerful antiseptic,  
 “ and antiemetic I could give them. It is true that  
 “ on first using, it was thrown up as fast as water,  
 “ when an emetic is given; but such as had resolution  
 “ to persevere in drinking it, soon found their sick fits  
 “ less severe; and, after the first three or four draughts,  
 “ every succeeding one remained longer on the stomach  
 “ than that before it, so that, in a few hours, the inter-  
 “ missions between the fits of vomiting came to be so  
 “ lengthened, that I could attempt giving some mild  
 “ purgative medicine. I commonly ordered two ounces  
 “ of manna, and one of cream of tartar, dissolved  
 “ in three pints of lemonade. Of this I gave them  
 “ a few spoonfuls, or a tea-cup full, at such dis-  
 “ tances of time, as I thought their stomachs could  
 “ bear.”

“ Manna and cream of tartar was continued occa-  
 “ sionally, through the whole course of the disease, on-  
 “ ly it was sometimes changed for tincture of rhubarb,  
 “ drawn in weak cinnamon-water, to render it more  
 “ grateful to the stomach. When these failed of pro-  
 “ ducing frequent bilious stools, glysters were injected;  
 “ but the heat, frequency, and acrimony of these bi-  
 “ lious stools, often deprived me of this resource, for  
 “ the extremity of the rectum, many times, became so  
 “ tender as not to be able to bear the introduction of  
 “ the smallest and smoothest pipe.”

“ When I observed any tendency to sweating, I al-  
 “ ways discontinued the laxative medicines, and gave  
 “ six drachms, or an ounce of the sp. mind. and re-  
 “ peated the dose in five or six hours, if the sweat con-  
 “ tinued so long, encouraging the sick to drink a weak  
 “ infusion

“ infusion of sage, acidulated, if they desired to have  
“ it so.”

DoCTOR Hume recommends the application of blisters to the thighs, to relieve the severe vomitings. “ When,” says he, “ the sick complained much of the blisters of their thighs, the vomiting usually began to abate, and to cease entirely, as the irritation and inflammation increased.”

“ This fever, like some others, often ends in scabby eruptions about the mouth and nose, and sometimes I have seen small biles, from the size of a common pea to that of a horse-bean, break out on the breast, sides, shoulders, or hips, and prove critical.”

“ There is one critical appearance, which I do not remember to have seen taken notice of by any writer on the bilious fever, and which, I believe, has been observed by few practitioners; (it sometimes happens in the third stage, and sometimes in the course of it) which is, one or more clusters of small florid eruptions on or near the pit of the stomach, not larger than measles, and from three or four to seven or eight in a cluster.”

“ In whatever state of the disease the sick are relieved, whether by sweats, bilious stools, biles, eruptions, or by blisters, and it is evident from the cessation of the vomiting, from the load at the breast being removed, and from the respiration becoming easier, that the fever is giving way, we should attempt to give the bark: sooner would be to no purpose, for it would hurt the patient, by exasperating the symptoms.”

To the infusions of bark, used by DoCTOR Hume, snake-root was added.

Speaking

Speaking of opiates, Doctor Hume says, “ it does not seem probable that they can be of any use in this disease, if it is considered, that the principal intention of cure is the evacuation of the offending bile, by every outlet; and to attempt confining it by opiates, is to counteract that intention.”

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## DOCTOR JACKSON

ON THE FEVERS OF JAMAICA, &c.

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Doctor Jackson, after dividing the yellow fever into three species, and giving the symptoms attending each form, proceeds to the method of cure.

### *Treatment of the first species.*

“ The species of the yellow fever,” says he, “ which I have now described, is universally allowed to be a terrible disease; and there are few, I believe, so uncandid as to boast of general success in the manner of curing it. A road is, therefore, left open, not only for improvement, but almost for total innovation. The only author I have read on the subject, or the practitioners with whom I am acquainted, do not seem to have extended their views beyond the symptoms of the disease. There are some, who, from observing that there is pain in the head, and flushing of the face, recommend bleeding; others, from the presence of nausea, or inclination to vomit, make trial of emetics; and many, from various causes, insist on the indispensable use of cathartics. My views, I must confess, are different from those of preceding authors. Bleeding was employed occasionally; emetics were  
“ cautiously

“cautiously avoided; but time appeared to be too pre-  
 “cious to be spent in attending to the effects of ca-  
 “thartics, which cannot often be known in less than  
 “twenty-four hours; and which at best are precarious  
 “and feeble. Instead, therefore, of attempting to eva-  
 “cuate redundant bile, or to correct it when supposed  
 “to be vitiated, I exerted myself from the first moment  
 “that I was called to the patient, to change the genius  
 “and natural temper of the disease; or, if I may be al-  
 “lowed the expression, to take the business, as speedily  
 “as possible, out of the hands of nature.”

“I remark, in the first place, that I generally began  
 “the cure of this species of the yellow fever with bleed-  
 “ing. Bleeding was employed in the present case,  
 “chiefly with a view of paving the way to remedies  
 “of greater efficacy. It was, however, found to mo-  
 “derate the violence of local pain, particularly the  
 “violence of the head-ach, and to be not altogether  
 “without effect in retarding the usual rapid progress of  
 “the disease. It has hitherto been thought necessary,  
 “indeed almost indispensable, to empty the first passa-  
 “ges in this species of fever; but time is short, and the  
 “good which accrues from such evacuations, is not  
 “very certain, and often not essential. It was, there-  
 “fore, thought sufficient to trust this intention, for the  
 “most part, to laxative glysters; after the employment  
 “of which, (bleeding having been premised in such  
 “quantity as was deemed proper) the patient was wash-  
 “ed clean, and bathed in warm water, in as complete  
 “a manner as the circumstances of situation would  
 “permit. It is needless to mention that this was done  
 “with a view to increase the mobility of the system,  
 “and to remove spasmodic stricture from the extreme  
 “vessels

“ vessels of the surface; in consequence of which,  
 “ greater benefit was expected from the application of  
 “ cold salt water, which was dashed suddenly from a  
 “ bucket on the head and shoulders. This practice  
 “ may appear hazardous to those who argue without  
 “ experience; but I can vouch for its general safety,  
 “ and bear testimony to its good effects. Sweat, with  
 “ perfect relief from all the feelings of anxiety and dis-  
 “ tress, was generally the consequence of this mode of  
 “ treatment. If employed within the first twelve hours  
 “ from the attack, it seldom failed of removing all the  
 “ symptoms of danger; or of affecting a total and com-  
 “ plete change in the nature and circumstances of the  
 “ disease; but if the progress was more advanced, though  
 “ the same rule of practice might still be proper, the  
 “ execution required more boldness and decision. It  
 “ is only possible to judge from the circumstances of the  
 “ case, at this period, of the necessity or propriety of  
 “ bleeding, and of emptying the lower intestines, by  
 “ means of glysters; but when this business shall  
 “ have been accomplished, in such manner as shall  
 “ have been deemed right, or conducive to the main  
 “ view, it will be advisable to shave the head, to bathe  
 “ the whole body in warm water, and instantly to dash  
 “ cold water from a bucket on the head and shoulders.  
 “ I have even sometimes, where there was an appear-  
 “ ance of greater obstinacy, ventured to wrap the whole  
 “ body in a blanket soaked in sea-water, or in water in  
 “ which was dissolved a large portion of salt. If anx-  
 “ iety was great, or nausea and vomiting troublesome,  
 “ I have also observed benefit from the application of a  
 “ blister to the epigastric region. Opiates, joined with  
 “ remedies which had a tendency to determine to the  
 “ surface,

“ surface, were found to be serviceable; and wine, with  
 “ a supply of fresh and cool air, in most cases was high-  
 “ ly necessary. This method of proceeding will, per-  
 “ haps, be thought unwarrantable, but I can speak con-  
 “ fidently of its safety; and I may further add, that  
 “ unless some decided steps are taken to change the  
 “ nature of the disease, during the continuance of this  
 “ stage, our future endeavours to do good will gene-  
 “ rally be in vain. I have hitherto promised success in  
 “ the cure of this fever, with a good deal of confi-  
 “ dence; but if it should so happen, that we are not  
 “ called to the patient till the yellowness has spread  
 “ over the whole of the body, or till the black vomiting  
 “ has begun to make its appearance, the prospect, I  
 “ must confess, is then very dark. The ordinary re-  
 “ sources of our art are feeble; and if good can be  
 “ done at all, it can only be done by means, which, in  
 “ the common opinion of practitioners, border on  
 “ rashness. In this latter stage of the complaint, so  
 “ great a degree of torpor overwhelms the powers of  
 “ life, that remedies do not produce their usual effect,  
 “ and our labour is often the same, as if we attempted  
 “ to resuscitate a corpse. I have, however, seen in-  
 “ stances of such unexpected recoveries, from the most  
 “ hopeless state in fevers, that I seldom totally despair  
 “ as long as life remains: I know that death may be  
 “ prevented, even after black vomiting has appeared,  
 “ with all its terrors, if a remedy can be found power-  
 “ ful enough to excite the action of the extreme vessels,  
 “ and to recall the determination to the surface of the  
 “ body. For this purpose, I have employed alternate-  
 “ ly, warm and cold bathing, with success. I have  
 “ even wrapt the body, as I mentioned before, in a  
 S “ blanket

“ blanket soaked in water, in which a large portion of  
 “ salt was dissolved, or which had been steeped in bran-  
 “ dy or rum, enjoining, at the same time, the liberal use  
 “ of wine, or even more powerful cordials. I have  
 “ heard of some well attested instances, where plenti-  
 “ ful draughts of rum and water have checked the vo-  
 “ miting, and apparently saved the lives of patients, af-  
 “ ter the medical people had given them up for lost.”

*Treatment of the second species.*

“ The cure of this species of the disease, though by  
 “ no means easy, was less difficult, upon the whole,  
 “ than that of the former. Instead of the torpor and  
 “ insensibility, which prevailed in the latter periods of  
 “ the proper yellow fever,” (for Doctor Jackson con-  
 “ siders the first described species as the true yellow fe-  
 “ ver of Jamaica) “ the mobility of the nervous system  
 “ was so much increased in the present species of dis-  
 “ ease, that remedies seldom failed of producing sensi-  
 “ ble effects: and wherever remedies produce effects, it  
 “ is generally in our power to manage the business in  
 “ such a manner, that some good may arise. It may be  
 “ observed in the first place, with regard to the cure,  
 “ that bleeding, which frequently was useful in the for-  
 “ mer species, was generally hurtful in the present; and  
 “ that, instead of retarding, it oftener accelerated the  
 “ progress of the disease. Emetics were employed,  
 “ very commonly, by the practitioners of the West-  
 “ Indies, in this as in other cases of fever; but I can-  
 “ not help remarking, that languor and debility, fre-  
 “ quently yellowness, and sometimes a continual vo-  
 “ miting, which no remedies could restrain, were often  
 “ the consequence of antimonial emetics of severe  
 “ operation; and I have no doubt in saying, that the  
 “ approach

“ approach of death was actually hastened, in several  
 “ instances, by this method of treatment. Laxatives  
 “ were occasionally of service; but the stronger purga-  
 “ tives frequently hurtful. Blisters were often ex-  
 “ tremely beneficial; but it requires care and discern-  
 “ ment to apply them in the proper circumstances, so as  
 “ to reap the full advantage. Opiates were sometimes  
 “ serviceable; and bark and wine, in most instances,  
 “ were remedies of great value; but the principal trust  
 “ was placed in warm and cold bathing, which, under  
 “ proper management, seldom failed of answering every  
 “ expectation completely, or speedily of removing the  
 “ chief symptoms of danger. Sometimes it appeared  
 “ to cut short the course of the disease abruptly.”

In the next place, as introductory to the symptoms  
 and method of cure, of the third species of yellow fever,  
 Doctor Jackson observes, “ I have now described two  
 “ species of fever, which seem to be, in some degree,  
 “ peculiar to the natives of northern regions, soon af-  
 “ ter their arrival in the West-Indies. In the one, a  
 “ determination to the alimentary canal and biliary or-  
 “ gans, with marks of putrescent tendency, in the ge-  
 “ neral mass of fluids, was discoverable at an early  
 “ period; in the other, the brain and nervous system  
 “ were more particularly and principally affected;  
 “ while the species of which I now attempt to give  
 “ some account, exhibited strong marks of vascular ex-  
 “ citement, with a very high degree of apparent in-  
 “ flammatory diathesis. This was more irregular in  
 “ its appearances, and more complicated in its nature,  
 “ than the others. The marks of inflammatory diathe-  
 “ sis were generally very apparent in the beginning;  
 “ but they usually gave way, or became complicated  
 “ in

“ in the latter stages, with symptoms of putrescency or  
 “ nervous affection.”

Speaking of the cure of this species, he says, “ if we  
 “ proceed on the first obvious view of the disease, we  
 “ shall often do irreparable mischief, by copious and  
 “ repeated evacuations; yet there will not be less dan-  
 “ ger, on the other hand, if, regardless of the present  
 “ degree of excitement, we indulge freely in the use  
 “ of stimulants. It is necessary to observe a middle  
 “ course; and, I must confess, that it is sometimes dif-  
 “ ficult to do any thing without doing harm. Bleed-  
 “ ing was frequently employed in the cure of this dis-  
 “ ease, and, in most cases, it was an useful remedy,  
 “ though less perhaps from its own effects merely, than  
 “ from paving the way to other more powerful appli-  
 “ cations. It is, however, capable of being easily  
 “ carried to excess; and ought not to be trusted to  
 “ wholly for the removing the irritability, and high  
 “ degree of excitement, which prevail so generally in  
 “ the beginning of this disease. After bleeding, eme-  
 “ tics and cathartics are employed very freely. I have  
 “ always professed myself an enemy to the practice of  
 “ giving emetics in the fevers of Jamaica; yet I must  
 “ confess, that antimonials were not only safer, but of  
 “ more particular service in this, than in any other spe-  
 “ cies of fever where I have seen them tried. Among  
 “ the great variety of forms which have been recom-  
 “ mended by practitioners, for the purpose of empty-  
 “ ing the first passages, I have not found any one an-  
 “ swer so well, as a thin solution of the sal catharti-  
 “ cum, given at different intervals, with a small por-  
 “ tion of emetic tartar, and sometimes with the addi-  
 “ tion of laudanum. The operation of this remedy

“ was

“ was extensive. It might be so managed as to pro-  
 “ mote nausea, or vomiting, sweat, or moderate evacu-  
 “ ations downwards; at the same time, it proved very  
 “ powerfully sedative. I may likewise add, that I have  
 “ sometimes found benefit from nitre, camphor, and  
 “ opium, given in pretty large doses, and accompani-  
 “ ed with plentiful dilution. But though these reme-  
 “ dies were often serviceable, and contributed, in many  
 “ cases, to moderate the high degree of irritability;  
 “ yet the chief dependence of the cure was much  
 “ better trusted to cold bathing. After the surface of  
 “ the body had become sufficiently relaxed, by the pre-  
 “ vious use of warm bathing and fomentations, the ef-  
 “ fects of cold bathing were wonderful. The exces-  
 “ sive irritability was moderated or removed, and the  
 “ powers of life were invigorated, in a very singular  
 “ manner, in consequence of it.”

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## MOSELY

### ON TROPICAL DISEASES.

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“ It is unnecessary to fill many pages with a long  
 “ catalogue of prescriptions and medicines in the treat-  
 “ ment of this fever, for it is comprised in a few words,  
 “ and almost as few medicines; and requires only care  
 “ and attention, that those moments do not slip away,  
 “ that the occasion is forever lost, when

“ Bleeding,	Diaphoretics,
“ Purging,	Blisters, and
“ Baths,	Bark,

“ ought to have been timely used, for the salvation of  
 “ the patient’s life; and that afterwards they are not  
 “ untimely employed for its destruction.”

“ If

“ If a person, newly arrived in the West-Indies, has  
 “ subjected himself to any of the causes which may  
 “ produce this fever, previous to the attack he has suf-  
 “ ficient warning given him, if he will attend to it, and  
 “ time enough, in general, to cure it by anticipation.  
 “ For, as soon as any heaviness, or restlessness, or lassitude,  
 “ or stretching and yawning is perceived, he has  
 “ reason to expect that they are the harbingers of this  
 “ tragedy, and he should immediately be bled, and  
 “ take a dose of salts, and dilute plentifully, and keep  
 “ himself quiet and cool; and after the operation of the  
 “ salts, he should take small doses of *James’s powder*,  
 “ live low, and drink barley-water. After the body  
 “ is well evacuated, and cooled, it is always prudent  
 “ to take the bark.”

“ In the first stage of the fever, when it has made a  
 “ regular attack, when these precautions have not been  
 “ used, or when they have failed, and the patient is no  
 “ longer able to abstain from his bed, he should be kept  
 “ in a large room, as cool as possible, covered lightly  
 “ with bed-clothes, with a circulation of air admitted  
 “ into the room, but not directly upon or near the bed:  
 “ and this must be observed through the whole of the  
 “ disease.”

“ Bleeding must then be performed, and must be re-  
 “ peated every six or eight hours, or whenever the ex-  
 “ acerbations come on, while the heat, fulness of  
 “ pulse, and pains continue; and, if these symptoms be  
 “ violent and obstinate, and do not abate during the  
 “ first thirty-six or forty-eight hours of the fever,  
 “ bleeding should be executed *usque ad animi de-*  
 “ *liquium.*”

“ The

“ The blood taken away in the beginning is very florid, and of the arterial blood colour; and the surface never fizy, and seldom contracted.”

“ The intention of bleeding can be answered only by performing it immediately, and in the most extensive manner, which the high state of inflammation, and the rapid progress of the disease, demand. Taking away only six or eight ounces of blood, because the patient may faint, which is a symptom of the disease, is doing nothing towards the cure. Where bleeding is improper, no blood should be taken; where it is proper, that quantity cannot relieve—and it is losing that time which can never be regained.”

“ Bleeding, it is evident, must not be performed in any other stage of the disease than the first, or inflammatory stage; but this has been injudiciously done, which has given rise to the notion, that a patient will seldom bear more than two bleedings.

“ Many practitioners have been deterred from bleeding their patients from the depression of the pulse, and from the faintness which sometimes accompanies the very first onset of this fever; but here the pulse always rises, and the faintness disappears, as the heart is relieved from its oppression by the loss of blood.”

“ Faintness and depression of the pulse here are not to be considered like those circumstances where putrefaction has commenced, or where there has been long and fatiguing illness: they are symptoms here of *plethora*, the reverse of inanition; and bleeding is advised for such syncope by two of the greatest physicians the world has produced.”

“ Nor

“ Nor is fainting, during the operation, any reason  
 “ for not repeating it, in the first stage of the fever; for  
 “ I have often cured it by bleeding only: and it has  
 “ frequently happened in the West-Indies, that acci-  
 “ dental bleeding from the orifice, when a patient has  
 “ fallen asleep, to far greater quantities than has ever  
 “ been directed to be taken away, has carried off the  
 “ fever entirely; and the surprize on discovering a pro-  
 “ fusion of blood in the bed, has been changed to joy  
 “ for the alteration it has produced in the patient.”

“ The effects of nature would be oftener successful  
 “ than they are, were not her powers totally overcome  
 “ in hot climates. Bleeding at the nose, in the first  
 “ stage of this fever, has sometimes removed it; and it  
 “ is as certain a solution of this fever, as it is of the  
 “ *causus* in Europe.”

“ In the early part of the disease spontaneous hæ-  
 “ morrhage is always critical, and should never be sup-  
 “ pressed; afterwards it is symptomatical, and if not  
 “ stopped, the patient soon sinks under it.”

“ Eruptions about the lips and nose, painful biles, or  
 “ phlegmons about the body, which always suppurate  
 “ unkindly, or an abscess forming, are also critical, and  
 “ generally terminate the disease.”

“ Sweating, in the first stage of the disease, is seldom  
 “ critical. Whenever sweats are critical, which may  
 “ happen very early in the disease, if the patient has  
 “ been well evacuated, they are accompanied with a  
 “ cessation of vomiting, and a change in the appearance  
 “ of the urine; the sweating is then to be assiduously  
 “ promoted, and if preceded by a bleeding of the nose,  
 “ it is a complete crisis.”

“ The

“ The sickness of the stomach, and disagreeable taste  
 “ in the mouth, indicate the quality, and not the quantity  
 “ of the offending secretions. The vomiting is from  
 “ irritation in the stomach, and not from plenitude ;  
 “ therefore vomits are never to be given, though  
 “ strongly advised by Towne : no, not so much as warm  
 “ water, recommended by Hillary, for fear of exciting  
 “ and stirring up that terrible operation, which, when  
 “ once begun, no art can sometimes allay.”

“ When a sufficient quantity of blood has been taken  
 “ away, which is never done, let the patient’s habit be  
 “ what it may, while the heat, reiterated exacerbations,  
 “ flushings in the face, thirst, pains in the head, and  
 “ burning in the eyes remain, the step is to evacuate  
 “ the contents of the bowels, and turn the humours  
 “ downwards.”

“ But if large and repeated bleedings, during the two  
 “ first days, should not remove the thirst, pains, flush-  
 “ ings, and heat in the eyes, and the state of the sto-  
 “ mach should be such as to reject every thing that is  
 “ taken, so that there is no chance of procuring eva-  
 “ cuation by stool, the patient should have repeated  
 “ purgative glysters, and be put in a tepid bath.”

“ The bath should be composed of a very weak de-  
 “ coction of camomile flowers, in which a little nitre  
 “ may be dissolved, and a little vinegar added.”

“ This will often remove every symptom at once,  
 “ and dispose the patient to a *diaphoresis*, which must  
 “ be promoted until a sufficient quantity of some pur-  
 “ gative medicine can be taken, so as to make an effec-  
 “ tual operation downwards.”

“ There is seldom a necessity to repeat the bath, as  
 “ the strictures and tension generally yield to the first

“ immersion. The patient should not remain long in  
 “ the bath, nor should it be deferred till late in the dis-  
 “ ease, for it can be of no use when the stomach is de-  
 “ stroyed.”

“ Soft, smooth drinks, free from any stimulating  
 “ tendency, such as barley-water, always answer best  
 “ for common drink, and are no impediment in the way  
 “ of medicine.”

“ Glysters are to be frequently given in the beginning  
 “ of the disease, particularly where the patient is cos-  
 “ tive, and to precede the use of cathartics, and assist  
 “ their operation.”

“ The purging medicine to be used in the yellow fe-  
 “ ver, is the *tartarum, vitriolatum chrysalifatum*, or  
 “ *sal polychrestus*, dissolved in equal parts of *simple cin-*  
 “ *namon* and *common water*, or in simple *cinnamon-*  
 “ *water* alone. It must be given in small doses every  
 “ hour, until it operates; and the patient is to dilute  
 “ copiously while it operates, with very weak chicken  
 “ broth. The quantity of the salt is four drachms, to  
 “ six or eight ounces of water, (as much as the water  
 “ will dissolve) and the dose of it may be two table  
 “ spoonfuls. In defect of this medicine, soluble tar-  
 “ tar, or *sal catharticus amarus*, or manna and cream  
 “ of tartar, must be used. But let me caution practi-  
 “ tioners against adding tartar emetic, in order to  
 “ quicken the operation of their medicines; which,  
 “ however useful it may be in bilious diseases, may be  
 “ fatal in this.”

“ Purging generally completes the suppression of the  
 “ fever, and carries off the vomiting; but it must be  
 “ continued while the stools remain bilious, or foetid,  
 “ otherwise the fever will rise, and the vomiting return.”

“ In

“ In case the fever still continues, the stomach settled, and the bowels well evacuated, recourse must be had to sudorifics: repeated doses of James’s powder, effervescent draughts, and plentifully diluting with barley-water, or balm, or mint-tea, generally soon remove it.”

“ An intermission being procured, bark, in substance, is immediately to be given, and repeated every hour, in drachm doses, if the stomach will bear it, until twelve drachms have been taken; which is generally a sufficient security against the progress of the disease: but it must still be continued, at longer intervals, for many days; interposing mild cathartics, such as an infusion of rhubarb and tamarinds, with, or without a small quantity of sal polychrest, or by keeping the body from a costive state by glysters.”

“ In the second stage, or *metaptoses* of this fever, which I believe will seldom happen, where the preceding directions have been faithfully pursued, we must draw a distinct line, or boundary, in the very beginning of it, and put a final period to bleeding. In this alarming state, all the skill and power of physic must be summoned up, and quickly too, to oppose the various breaches which the disease is now making, for the entrance of death.”

“ The strength now begins to fail; the pulse is sinking; the suffusion of yellowness is perceived in the eyes, neck, and breast; the vomiting incessant, and the stomach rejects every thing that is swallowed. A coldness here, not succeeded by sweat, or bilious discharges, is almost a certain mortal symptom.”

“ In this state nothing but purging can remove the vomiting, and save the patient’s life. Here the cor-  
ruption

“ ruption of the humours begins, and the stools are  
 “ acrid, corrosive, and foetid, to an extraordinary  
 “ degree.”

“ The misfortune here is, that the stomach, retain-  
 “ ing nothing, without great difficulty, opposes all our  
 “ attempts. The tartarum vitriolatum, or sal poly-  
 “ chrest, is a nauseous medicine: but there is no other  
 “ proper medicine, of which a small quantity will  
 “ purge, which is the objection against tamarinds,  
 “ cream of tartar, and manna; nor is there any other  
 “ that I have ever found equally cooling and attenuat-  
 “ ing. It must be given; and though part of it will  
 “ be returned, yet some of it will remain; and by re-  
 “ peating a very small quantity every hour, stools will,  
 “ in time, be procured, and generally urine, plentifully.  
 “ If the patient have five or six stools, the vomiting  
 “ will cease. He must dilute with weak chicken  
 “ broth.”

“ Glysters may assist, with warm fomentations fre-  
 “ quently applied to the region of the præcordia, which  
 “ sometimes bring out a crop of acrid eruptions about  
 “ the pit of the stomach, on which the vomiting gene-  
 “ rally ceases; but in case these attempts fail, the pa-  
 “ tient should be put into a tepid bath, and have a blis-  
 “ ter applied to his back, or to the inside of his thighs,  
 “ or, what is more effectual, to the region of the sto-  
 “ mach; and a diaphoretic treatment adopted, with  
 “ *James's powder*, in order to relieve the internal irri-  
 “ tation by revulsion, and enable the stomach to bear  
 “ purgatives, which alone can carry off the offending  
 “ humours, and remove that perversion, as it were, of  
 “ the peristaltic motion, which is the ungovernable  
 “ symptom, and, by its continuance, the most certain-  
 “ ly mortal symptom of this fever.”

“ As to what is called fever, there is nothing after  
 “ the first stage of the disease that deserves that name.  
 “ Therefore, after the first stage, bark is always to be  
 “ given, when the stomach will bear it. The worst  
 “ evil that generally attends the giving of bark here a  
 “ little too early, is oppressiion and load at the stomach;  
 “ which, if glysters do not remove, the purgative solu-  
 “ tion, or a watery infusion of rhubarb, will; or the  
 “ uniting some purgative medicine with the bark.”

“ Sometimes, soon after the first attack of the fever,  
 “ an abatement of every symptom is obtained; and those  
 “ who are not well acquainted with the pulse, and  
 “ the extensive evacuations this fever demands, con-  
 “ clude that a remission, or an intermission, or a solu-  
 “ tion of the fever is decided. But when this happens  
 “ before the third day, a strict attention to the pulse,  
 “ and the excretions, will discover the deception, and  
 “ shew, by their disagreement with those symptoms  
 “ which appear favourable, that they appear so with-  
 “ out a proper cause, and cannot be lasting.”

“ They who unfortunately make any dependence  
 “ here, desist from further evacuations, and proceed to  
 “ giving bark, and cordial nourishment. Every body  
 “ about the patient is filled with flattering hopes of his  
 “ recovery. But the evacuations have been disconti-  
 “ nued too soon, and have not been sufficient to extin-  
 “ guish entirely the inflammatory disposition of the dis-  
 “ ease; which, now aggravated, breaks out and rages  
 “ with redoubled violence, and hurries the patient into  
 “ the second stage of the disease, and then soon out of  
 “ the world.”

“ A yellow suffusion may be either critical, or symp-  
 “ tomatical. Critical, as Towne supposes; but it must  
 “ be

“ be when there is a tranquil cessation, without languor,  
 “ of all the other symptoms, with warm perspiration;  
 “ and symptomatical, as Hillary supposes, when accom-  
 “ panied with lassitude, nausea, or vomiting, colliqua-  
 “ tive sweats, and sunken pulse.

“ Great disputes have arisen in this part of the dis-  
 “ ease, concerning the application of blisters.” Blis-  
 “ ters, however, according to Doctor Mosely, “ are found  
 “ to be a safe and powerful remedy. Natives, and  
 “ long residents in the West-Indies are seldom disturb-  
 “ ed by inflammatory diseases, and blisters can scarcely  
 “ ever be applied amiss. They give a stimulus to the  
 “ languid vessels, and form a drain for the acrid serum  
 “ of the blood, which often keep up disorders from de-  
 “ bility, obstruction, and irritation.”

“ If bleeding, purging, baths, and diaphoretics, do  
 “ not remove the fever in its first stage :

“ If purging, baths, diaphoretics, and blisters, do not  
 “ remove it in the second stage :

“ If the vomiting cannot be suppressed, and the bark  
 “ retained :

“ The last stage of the disease appears with its dire-  
 “ ful vomiting; which at first has generally the ap-  
 “ pearance of the grounds of coffee; then that of a slate  
 “ colour, and then dark, thick, and grumous. The in-  
 “ terior surfaces of the body are oozing out blood into  
 “ their cavities. Every excretion is corrupted blood.”

“ I have seen people recover after the vomiting has  
 “ resembled coffee grounds, when any purgative medi-  
 “ cine, united with a decoction of bark, could be made  
 “ to pass downwards.”

“ I should not have thought it necessary to mention  
 “ even the name of *opium* in this fever, had not Hillary  
 “ advised

“ advised it, and others rashly followed his advice in  
 “ giving it, to check the vomiting in the beginning of  
 “ this disease.”

“ In a fever so highly inflammatory, with the sto-  
 “ mach in a constant state of inflammation, and the  
 “ contents of the whole alimentary canal so hot and  
 “ acrid, it must be, what I believe it often has been, a  
 “ fatal medicine.”

“ In regard to regimen, during the first three or four  
 “ days, thin, soft, cooling drink, emulsion, and chicken  
 “ broth, besides the medicines, will be as much as the  
 “ stomach can sustain, even were any thing else neces-  
 “ sary. After the crisis, or after the first stage of the  
 “ disease, panado, sago, and gruel, are the most proper  
 “ articles of nourishment, with the addition of a spoon-  
 “ ful of Madeira wine, where the patient is weak,  
 “ languid, and exhausted. Wine cherishes the sto-  
 “ mach, and acts as a cordial, mixed with these nou-  
 “ rishments; but if it be given in any other way, it af-  
 “ fects the head, and heats the patient. Wine, where  
 “ it is necessary, should be used in the same manner  
 “ in all fevers.”

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## THE CURE OF THE REMITTENT FEVER.

By JOHN HUNTER, M. D.\*

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“ In treating of the cure of the remittent fever, I  
 “ shall give an account of the remedies, in the order in  
 “ which they were administered when the fever had  
 “ its most usual appearance; and shall afterwards enu-  
 “ merate

\* Observations on the Diseases of the Army in Jamaica.

merate the means that were found most successful  
 in removing, or palliating particular symptoms, &c.

“ No disease requires more speedy assistance; for the  
 efficacy of the medicines employed depends, in a  
 great measure, on their being given early.”

“ If I see a patient during the first fit, I direct an  
 ounce of Glauber’s salt, or the same quantity of the  
 bitter purging salt, to be dissolved in half a pint of  
 water, to which two drops of the oil of peppermint  
 being added, four table spoonfuls of the solution are  
 given every half hour, till it operates, or be all taken.  
 As there is generally much sickness at the stomach,  
 it is given in small doses, lest it should excite vomit-  
 ing. The essential oil covers the taste of the salt,  
 and renders it less offensive to the stomach.”

“ It is probably of no great consequence, what kind  
 of purgative medicine is given, provided it operates  
 effectually, and without violence.”

“ After a few stools having been procured, the patient  
 generally feels himself much easier, and a remission  
 often ensues. This is to be carefully watched for, and  
 immediate advantage is to be taken of it; for adminis-  
 tering the Peruvian bark. The common dose of this  
 medicine is a drachm, which may be repeated every  
 second hour; and as a general rule in giving it, this  
 is perhaps the best; but both the quantity and inter-  
 val must often be varied, according to circumstances.  
 Where the preceding fit has been uncommonly se-  
 vere, and there is reason to fear that the succeeding  
 one will be still more violent, and where a long re-  
 mission cannot be depended upon, the dose may be in-  
 creased to two drachms, which may be given every  
 hour. But few stomachs will bear so much, and  
 sometimes

“ sometimes the bark cannot be given at all, in substance. In such a case recourse must be had to a decoction, or an infusion.”

“ In severe attacks of the fever, in which it is absolutely necessary to watch for the remission, in order to make the best advantage of it, whenever the pulse becomes a little slower, and the heat begins to abate, a dose or two of the infusion may be given, and the powder added afterwards, as soon as the stomach will bear it. This I found the most certain way of moderating or preventing the next paroxysm.”

“ The vehicle in which the bark is given, must, in many cases, be suited to the patient’s stomach. It will sometimes sit easy on the stomach, when mixed with coffee, with wine and water, or with wine alone, if the remission be considerable; in some cases, it answers the same purpose to mix it with milk, or with a weak infusion of camomile flowers. By these expedients the stomach is reconciled to the medicine, is enabled to receive a larger quantity of it, and to retain it better.”

“ It will sometimes happen that the bark purges strongly, and passes through the body almost unchanged. This is not an unfavourable symptom, and the remedy is easy, for three or four drops of the *tinct. thebaic.* added to each dose, soon put a stop to the purging.”

“ When the method of cure laid down above is carefully put in practice from the beginning, it will, in many cases, prevent a return of the fever; in general, however, a sufficient quantity of bark cannot be given on the first remission, nor is there time for it

“ to produce its effects upon the body, so as to prevent  
 “ a second paroxysm.”

“ The heat, restlessness, anxiety, and indeed all the  
 “ symptoms usually accompanying the second parox-  
 “ ysm, are more violent than in the first, if nothing has  
 “ been done in the remission to stop the progress of the  
 “ fever; but if the length of the remission, and the  
 “ state of the stomach have admitted of the liberal use  
 “ of the bark, it has a considerable effect upon the en-  
 “ suing fit. The symptoms run high, but the strength  
 “ of the patient appears more equal to the struggle;  
 “ the paroxysm is sharp, but it is of short duration,  
 “ and the remission that follows is of the completest  
 “ kind.”

“ The medicine that I have found most considera-  
 “ bly to relieve the symptoms during the paroxysms, and  
 “ promote a remission, is James’s powder. It is given  
 “ in small doses, seldom exceeding five grains, and is  
 “ repeated every three or four hours. If the stomach  
 “ be in an irritable state, the dose is often not larger  
 “ than half the quantity just mentioned; for, as has  
 “ been observed before, no symptom of the disease is  
 “ more troublesome or dangerous than vomiting; in  
 “ the cure, therefore, care must be taken to avoid  
 “ every thing that might induce or aggravate any  
 “ tendency that way. The most salutary operation  
 “ of James’s powder is, either to excite a sweat, or  
 “ gently open the body. There is seldom occasion  
 “ to give James’s powder in the first paroxysm,  
 “ that being occupied by the purgative medicine;  
 “ but if the fit continues as long as forty-eight  
 “ hours, and the purge has been given and produced

“ the

“ the full effect, and still there is no remission, James’s  
 “ powder may be given in the manner just mention-  
 “ ed, and by exciting a sweat, or further gently open-  
 “ ing the body, it promotes a remission of the fever.”

“ In subsequent attacks, the same course is to be  
 “ followed; that is, small doses of James’s powder are  
 “ to be given during the paroxysm, and the bark in  
 “ remissions.”

“ If James’s powder does not keep the body open,  
 “ which it seldom fails to do, laxative glysters are of  
 “ use; for it is to be observed, that one or two stools  
 “ in the twenty-four hours, greatly relieve the sick,  
 “ and promote the good effects of the bark. This  
 “ is particularly the case in the fevers subsequent to  
 “ the rains in September and October, which are of  
 “ the worst kind. In such it is frequently advanta-  
 “ geous to join four or five grains of rhubarb, to each  
 “ dose of the bark, in order to procure two or three  
 “ motions in a day.”

“ I have had occasion to mention, that no symp-  
 “ toms are more dangerous than violent retching and  
 “ vomiting, and nothing can be more pernicious than  
 “ the use of emetics in such circumstances. If there  
 “ be sickness and vomiting at the beginning of the  
 “ disease, camomile-tea, or warm water, are sufficient  
 “ to cleanse the stomach. If the vomiting or retch-  
 “ ing still continues after making use of them, which  
 “ they will often do, and harrasses the sick, even dur-  
 “ ing a remission of the other symptoms, saline  
 “ draughts, in a state of effervescence, repeated every  
 “ hour, or oftener, will frequently allay this distressing  
 “ symptom. The stomach is also relieved by open-  
 “ ing the body, which further tends greatly to check  
 “ the

“ the vomiting; but as cathartic medicines would be  
 “ immediately thrown up, purgative glysters are the  
 “ only means that can be employed for that purpose,  
 “ and it is necessary sometimes to repeat them several  
 “ times. In this way the vomiting is often quieted, and  
 “ the stomach enabled to retain the bark.”

“ It will sometimes, however, happen, in the worst  
 “ fevers, that the retchings are not abated by the effe-  
 “ vescing draughts, which are themselves thrown up.  
 “ In such cases I have had recourse to opiates, and  
 “ generally with success. From fifteen to twenty  
 “ drops of the *tinct. thebaic.* may be added to an  
 “ effervescing draught, or given in a little Bristol  
 “ water, and repeated in two or three hours, accord-  
 “ ing to the exigency of the symptoms.”

“ The vomiting being overcome, the bark must be  
 “ given with diligence, yet with caution at first, by be-  
 “ ginning with the infusion, or decoction, and adding  
 “ the substance as the stomach will bear it.”

“ During the accession of fever there is commonly  
 “ more or less of head-ach, which sometimes becomes  
 “ extremely violent, and greatly distresses the patient.  
 “ A blister, applied between the shoulders, seldom or  
 “ ever fails either to relieve, or entirely remove this  
 “ symptom.”

“ In the very low state that was mentioned some-  
 “ times to succeed violent paroxysms, especially in  
 “ those fevers that were attended with yellowness of  
 “ the skin, nothing was so useful as cordials; for,  
 “ though the bark was not entirely laid aside, yet the  
 “ quantity the stomach would bear, in any form, was  
 “ so small that little could be expected from it. Wine  
 “ and nourishment were the best cordials,”

The

The nourishment which Doctor Hunter recommends, consists of chicken broth, panado, sago, falop, thin gruels, and tea, in which bread has been soaked.

“ To all these, except the broth and tea, wine may be added, with sugar and nutmeg, or any other spice that is more agreeable. It is of the utmost consequence in giving both nourishment and wine, that it be repeated often, and that only a little be swallowed at a time; for the stomach is easily overloaded, and provoked to vomit.”

“ When the sick are greatly reduced, after two or more paroxysms of fever, wine and nourishment become more essential than medicine.”

“ In treating the sick, I have supposed the method of cure to be put in practice from the beginning of the disease; but this cannot always be the case, as, for various and obvious reasons, a first, or even a second paroxysm may have passed before any thing is done towards the cure. In this situation, if there be a remission, and the preceding fit has been violent, and there is reason to believe that the succeeding one will be more so, it is not advisable to lose three or four hours in giving an opening medicine, which must therefore be omitted, and the bark administered directly. In order, however, to prevent any sense of fulness, either in the stomach or bowels, which might arise from that medicine, and likewise to promote the operation of it upon the constitution, some opening medicine is joined to it, so as to procure three or four stools in the twenty-four hours. With this view, four or five grains of rhubarb may be added to each dose of the bark.”

“ If

“ If a delirium, with a considerable degree of wild-  
 “ nefs and agitation, which sometimes prevail during  
 “ the paroxyfm, continue after the ufual evacuations,  
 “ an opiate, given in a moderate dofe, and repeated  
 “ after two or three hours, will, in fome cafes, have a  
 “ good effect in quieting it, and thereby promote a re-  
 “ miffion of the fever.”

Doctor Hunter, in his obfervations on the effect of  
 remedies, remarks; “ Blood-letting well deserves to be  
 “ confidered. In fuch cafes as feemed moft to require  
 “ it, for example, where the patient was young, ftrong,  
 “ of a full habit, and lately arrived from Europe; where  
 “ the pulse was quick and full, the face flufhed with  
 “ great heat and head-ach, and all thefe at the begin-  
 “ ning of the fever, bleeding did no good. It neither  
 “ diminifhed the fymptoms for the time, nor procured  
 “ a fpeedier remiffion. I cannot fay, however, that it  
 “ did that mifchief that has been imputed to it by fome;  
 “ for, provided it were a moderate quantity, it could  
 “ hardly be faid to produce any ill confequences. But  
 “ if it were copious, or repeated a fecond time, it was  
 “ always hurtful, and rendered the recovery of the pa-  
 “ tient extremely flow, if not attended with worfe con-  
 “ fequences. This effect it had in the inflammations  
 “ of the lungs that sometimes happened, in which it  
 “ was neceffary to bleed freely. It will not be confi-  
 “ dered as a recommendation of bleeding to fay, that  
 “ there were fome cafes in which it did little or no  
 “ harm, if ufed moderately; yet fuch is the conclufion,  
 “ to which the obfervations I had an opportunity of  
 “ making lead me.”

IT will be recollected that I set out with a resolution, from which I am unwilling to depart, to make no comments on the doctrines, or method of cure, of those authors who have written largely and learnedly on the bilious remittent fever; but I cannot forbear making a remark or two on the practice of administering of bark. My own experience authorizes me to say, as in page 105, that I never knew it *safe or useful, until an entire solution of the disease took place*; or at least when no symptoms of importance remained, except the *consequence* of severe fever, viz. *mere debility*. That the bark is too indiscriminately given, and without due regard to the condition of the first passages, cannot have escaped the notice of the most inattentive; and to me it appears evident, that in those cases where it is given in the early stages of the disease, unless it acts as a gentle purgative, it seldom fails to do mischief, particularly if the pain be considerable in the head, or any tension or sense of fulness remains in either of the larger cavities. To *throw in the bark*, as the phrase is, after the first obscure remissions in fevers of the bilious sort, *particularly in these northern climates*, is a practice, in my judgment, if not calculated to endanger the life of the patient, at least such as to protract, in many instances, the continuance of the most formidable symptoms. This fact is correspondent with the observations and experience of several practitioners of medicine in this city, who stand deservedly high in their profession. The celebrated traveller Bruce, who was also a physician, informs us, that in Masuah, on the coast of the Red Sea, a certain species of fever prevails, which, in that country, is called *nedad*, and which, when it terminates fatally, is generally on the third day.

In this fever there is no remedy so sovereign as the bark; but he positively asserts that it does not succeed unless *it acts as a purgative*.

“ The second or third dose of the bark, (says he) if any quantity is swallowed, never fails to purge; and if this evacuation is copious, the patient rarely dies, but on the contrary, his recovery is generally rapid.”

He further adds, “ bark, I have been told by the Spaniards, who have been in South-America, purges always when taken in their fevers. A different climate, different regimen and habit of body, or exercise, may surely so far alter the operation of a drug, as to make it have a different effect in Africa to what it has in Europe. Be that as it may, still I say bark is a purgative, when it is successful in this fever,” &c.

### E R R A T A.

Page 29, line 3, for “ did not contract” read *did contract*.

Page 43, between the word “ thought,” at the end of the third line, and “ that,” at the beginning of the fourth, insert the word *proper*.

Page 55, line 4, for “ first” read *fact*.

Page 56, line 6, for “ unsual” read *usual*.

Page 57, line 9, for “ would” read *could*.

Page 102, line 11, for “ poracious” read *porracious*.

Page 115, line 6, for “ causes” read *cases*.

Page 124, line 6, for “ that there was a” read *one*.

Page 129, line 10, between the words “ required more” insert *to be*.

Page 130, last line but one, for “ There” read *These*.

Page 133, line 6, for “ of” read *on*.

Page 144, line 11, for “ effects” read *efforts*.





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