

A letter to the Commissioners for Transports, and Sick and Wounded Seamen, on the non-contagious nature of the yellow fever; and containing hints to officers, for the prevention of this disease among seamen / [James Veitch].

Contributors

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To Dr Jackson
with the best compliments
of the author



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A
LETTER
TO THE
COMMISSIONERS FOR TRANSPORTS,
AND
SICK AND WOUNDED SEAMEN,
ON THE
NON-CONTAGIOUS NATURE
OF
THE YELLOW FEVER.

LETTER
COMMISSIONERS FOR TRANSPORTS

LETTER

COMMISSIONERS FOR TRANSPORTS
JACK AND WOUNDED BRAKEN

THE YELLOW FEVER

*Printed by R. & R. Gilbert,
St. John's Square, London.*

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FOR THE
PREVENTION OF THIS DISEASE AMONG SEAMEN.

BY JAMES VEITCH, M.D.

*Member of the Royal Medical, and Honorary Member, and formerly
President of the Royal Physical Society of Edinburgh; Staff Surgeon
of the Navy; and lately Principal Surgeon of the Royal Naval Hospital
at Antigua.*

Rectè enim veritas, temporis filia dicitur, non auctoritatis.
BACON.

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SMITHFIELD.

1818.

LETTER

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SICK AND WOUNDED SEAMAN

ON THE

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OF

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FOR THE

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BY JAMES VEITCH, M.D.

Member of the Royal Medical and Veterinary Schools, and formerly
Professor of the Royal Hospital School of Edinburgh; and formerly
of the Army, and late Surgeon Major of the 1st West India Regiment.

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WELL

1864



ERRATA.

Page	Line	
7,	3.	For <i>it</i> read <i>her</i>
71,	22.	After <i>taken</i> read <i>although the disease was not contagious</i>
133,	13.	For <i>cording</i> read <i>according</i>
135,	15.	For <i>opmutim</i> read <i>optimum</i>

LETTER

TO THE

COMMISSIONERS FOR TRANSPORTS

SICK AND WOUNDED MEN

ARRIVAL

ALL I have said is that the...

I forward you...

I am, Sir, very...

Yours faithfully,

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INTRODUCTION.

I AM fully aware, that any attempt to circumscribe the sphere of action generally assigned to contagion, presents an intricate question; not only from its intrinsic nature, but from the prepossessions existing in favour of contagion being the cause of almost all febrile diseases.

In prosecuting legal investigations, the advantages of possession are without hesitation admitted by all; and in the discussion of the present important subject, the contagionists have firm hold not only of the prejudices of the

vulgar, but of the minds of the well informed.

In these circumstances, to separate, and to elucidate satisfactorily the causes of those pyrexial diseases that have their origin in a non-contagious source, but which have been too long, and fatally combined with contagion as their cause, becomes a task of no small difficulty; and to which I by no means feel myself adequate.

I therefore aim at nothing beyond a temperate and unbiassed comparison of opinions and facts, in order that truth may be gradually approached, and at last, brought fully into view. It happens here, as in other branches of knowledge, that in spite of the most faithful evidence, the mind will revert to habitual associations as the best means of solving present difficulties; although

such an analysis, is utterly at variance with passing events.

I feel it incumbent on me to observe, that the intricacies, as well as the importance of the investigation to humanity, have rendered me peculiarly sensible of the imperfections of the following Letter. I think I may, without the risk of affectation being in any degree imputed to me, affirm it to be a forced production; as it was written at a time, when I was by no means disposed to have voluntarily devoted myself to such a subject, had not the commands of the Board been imperative. At that period, I do not believe that I possessed a single medical book belonging to me, or memorandum on Yellow Fever to which I could refer. Besides I had, as it were, commenced a new career in my profession, having been appointed to Hoxton Asylum, containing

the insane officers, seamen, and marines of His Majesty's Navy, to whom the Admiralty were anxious to extend their utmost kindness and protection. Thus situated, with the charge of one hundred and fifty maniacs, the "Letter" became the occupation of those moments of leisure, when I could divest myself of the consideration due to the most unfortunate of the human race, and involving the most distressing exercise of medical duty. Difficulties, however, when crowned with success, shed an indescribable pleasure around that success; and in looking at the treatment of mania through prosperous events, it is certainly calculated to place the profession of medicine in the most exalted point of view. Although foreign to the present subject, I cannot refrain from observing, that I have been successful in the treatment of recent cases of this most deplorable malady,

by kindness directed to the mind, and remedies applied to the body; which precisely constitutes the mode of curing all other diseases. But some have expected from me, not only the cure of mania, but that I should prevent my patients from relapsing; a requisition which may be deemed as unreasonable, as demanding immortality by the powers of medicine,

To return to the immediate subject, the opportunities that have presented themselves, while serving in a tropical climate, may probably enable me to throw some light on the causes of Yellow Fever; and this consideration combined with the momentous nature of the discussion in a humane and commercial view to the country, have alone influenced me in publishing the following Letter, of which as a performance, no one can think more humbly than I myself do,

Executed under the circumstances just adverted to, it necessarily assumed a desultory form, and was intended to illustrate the opinions of those eminent men, who had previously laboured in this most dangerous and interesting field; and with whose sentiments and observations my own accorded.

To establish just views of the cause and of the means of cure in this most afflicting disease, the store of materials are to my mind ample; but it is the arrangement and application of these facts, in the actual presence of this fever, and under the hand of experience, that is wanted, to avert the recurrence of those errors, so strikingly exemplified in 1793, and which unfortunately still pervade medical practice. It is to obviate these direful errors from taking hold of the rising profession, that I anxiously aim at; for I have neither the vanity nor the presumption to

imagine, that I shall be able to make any impression on those, who have made up their minds to the indispensable necessity of quarantine laws, to secure Great Britain from the importation of Yellow Fever. Thus viewing the matter, and while I disavow all pretensions to discovery, I hope I shall never appear insensible to those distinctions that have been earned by the talents of those who have gone before us: as nothing can be more displeasing in the eye of candour, than ascribing to the present period, what is due to those who have preceded us in the treatment of this most dangerous disease; and where the practitioner, from the nature of his duties and situation, may often be regarded as having been placed on a species of forlorn hope. In the discussion of the subject of Yellow fever, which I have long regarded as non-contagious, the general and fatal diffusion of the disease among soldiers and seamen in 1793, was urged by

those opposed to non-contagion, as conclusively subversive of the accuracy of my opinions.

This fever, I maintain, has always been known in the West Indies, where the climate encountered susceptible constitutions; but until the period under immediate consideration, the cases were not concentrated, and therefore the deaths did not appear numerous amidst the great mass of adventurers approaching those islands.

The individuals speaking generally, who fell the victims of this disease were obscure, and therefore they did not attract public notice. At the period in question, 1793, immense armaments military and naval were conducted to the West Indies; and when I think of the gallantry of the men and officers, and contrast it with their fate, which under just views of the cause might have been in a great measure

obviated, the feelings which result are actually overpowering.

Few, comparatively speaking, perished in the field, almost all were destroyed by this most dangerous malady. Those officers who took advice before leaving England, as to the best preventive means to be followed in the West Indies, were nineteen in twenty advised to guard against debility and relaxation from climate; and you therefore often found vigorous young men, who ought to have been bled and reduced by a spare diet, swallowing bark and wine at all convenient times of the day. It is essential to our comfort during summer in this climate, to extinguish the fires, and to change the ponderous clothing and closed windows of winter, for what is open and light; and the reduction of the system of the young and vigorous European, on approaching tro-

pical climates is much more necessary in reference to his future health. This most singular and dangerous eruption of epidemical fever, was well calculated to impress with the idea of a contagious cause; but as it did not multiply its descent by contagion, to account for its general appearance in 1793, became an object of inquiry in the highest degree interesting. Many years ago, (1808) I hazarded a speculation, which subsequent observation and experience have gone a great way to confirm; that the exemption from acute febrile diseases of this nature, during former periods of our naval and military history in those regions, arose from the general prevalence of a scorbutic taint among our soldiers and seamen. The Appendix, No. 8, exhibits an extract of a letter from an officer, not a medical man, but who has been long esteemed in the service for his integrity,

his acuteness of observation, and his fidelity in relating those events that attracted his attention. This gentleman's statement is applicable to the navy at large at that period.]

By the genius of Earl Howe, who possessed talents for splendid naval achievements, combined with much discernment and sound sense, many wholesome regulations were introduced to the notice of the Department of Victualling, in 1783. These excellent foundations have been improved, and carried to an unusual state of perfection, by the humanity and exertions of the Admiralty, combined with the vigour of the present victualling department. Before that period the mode of curing and issuing the provisions were bad. The beef, pork, and biscuit were generally upwards of two years in store, before they were issued. The beef and pork as a consequence were juiceless,

and the bread a mass of maggots. The beer, I have been informed, was brewed to keep during six months, three, and one; so that there was a biennial distribution of juiceless beef, pork and bread, combined with something like consular dignity in the gradations and qualities of the beer.

From the influence of that diet, a disposition to scurvy, putrid dysentery, and fevers of a protracted nature arose; and the scorbutic taint which could not fail to predominate under such a diet, effectually precluded the ravages of fevers of high excitement*. The well known and pretty general exemption from active fevers, of those arriving in the East Indies after a long voyage is strongly corroborative of the constitution having undergone, during the pas-

* We can now account for the propriety in those days of allowing men bark and wine when engaged in the process of watering.

sage, some change tending to such a state. The Yellow Fever seldom hastens the dissolution of those who are advanced in life, or the puny, crawling human being, however youthful; it is those constitutions formed on the model of Hercules himself, full of vigour, activity and health, with whom it delights to enter the lists, and on this field it is sure to conquer, should medical aid not interpose. The disease, I have no hesitation in stating arose at the period in question, from the inordinate stimulation of climate, acting on predisposition founded in the accumulated sensibility of a northern region, united with the high health of our army and navy; such a condition being always open to the impressions of acute fever. This reasoning may appear not only singular, but opposed to truth; but health and vigour in all climates are peculiarly liable to diseases of high excitement which are rapid in their termination: and thus are the sources of dissolution as certainly

fixed over this state of human life, if not properly viewed and guarded, as over even imbecility and old age. The laws of Omnipotence when they are scrupulously examined, will be found to disclaim all partialities.

The disastrous issues attending the treatment of this fever, were to be ascribed to the disease being viewed in its proximate cause, through debility and relaxation, or as a modification of the remittent fever; so that the derangement of the stomach was often augmented by the exhibition of the bark. With these melancholy results before us, the offspring of Yellow Fever, yet it is gratifying to think that the adoption of juster views of the cause are likely to prevent their recurrence. The improved health of the officers, seamen and marines of the navy, is a subject of great consolation, and may with justice be ascribed to the liberal views of the executive combined with medical

knowledge, and the sciences connected therewith. Medical men thus aided in the diffusion of their opinions, and means of preventing, as well as curing disease, have, from the execution of their plans of prevention being committed to others, imperceptibly enlarged the force, and circle of health.

The encouragement therefore bestowed on this body of officers belonging to the navy, was no insulated act but a national benefit. Its advantages have been felt in every department of the navy, and here the name of the late Lord Melville strongly and instantaneously presents itself to the mind.

It is to this generous source, that we now owe the ability to perform one of the most grateful acts to sensibility, in making an additional provision for the unfortunate widows and orphans of our corps. The same fostering liberality has drawn into the service of the navy,

an extent of medical and surgical talents that are no where excelled; and they have proved themselves worthy of such protection in every quarter of the globe. Scurvy is now unknown, ulcers, fractures, wounds, accidents, fevers, and dysentery, have been most successfully treated. Locked jaw, so terrible after operations following actions in former periods; and under which the officer and seaman so often perished, has now almost entirely disappeared. It is gratifying to feel, that those days, the result of want of encouragement to medical men, will not be allowed to return. Thousands and thousands have been saved to their country and friends, by the influence of these salutary regulations; and in contemplating their effects in progression, and upheld by a just estimation of their importance to humanity, the benefits are incalculable. It could be wished, that the souls of those individuals, who have essentially benefited their fellow creatures during their life time, might

mingle with the effects of their measures, where the powers of detraction and other gross passions interfering with human happiness are of no avail.

Tandem venias, precamur,

Nube candentes humeros amictus,

Augur Apollo :

HOR.

A spirit of inquiry combined with extensive information, is widely diffused among all ranks of our naval officers, so that the force of liberal sentiment is now added to native courage; and it is thus, that the best feelings will diffuse themselves, and give lustre to the heroic achievements which have uniformly distinguished the Navy, which is at once the source of our wealth, our enviable security from external foes, and of our true greatness. With such a picture of the service, abounding with officers capable of estimating the value of those medical and surgical acquirements which, under the improvements just adverted to, have contributed so essentially

to their own safety as well as that of their men, the profession may look forward to further encouragement. This is the more likely, as the descendant of our great patron now presides over the navy; and particularly as the disposition to liberal views and to do good, is surrounded by so many motives which conspire to extend the fullest protection to the diseased and wounded warrior: every one of whom thus saved, will constitute a living monument of the wisdom and liberality of his illustrious progenitor, who thus averted a change likely to have been attended with most injurious consequences to the health of the navy. I must now observe, that it was not until a considerable time after the transmission of the following Letter to the Board, that I read the work of Dr. Bancroft*, which abounds with much useful and original discussion. It will probably be regarded, as in no small

* Vide Appendix No. 8.

degree unfavourable to contagion being considered the cause of Yellow Fever, when it is found that two professional men, without the knowledge of each others reasoning, have pursued almost the same course, to refute such an origin for this disease. From the perusal of this work, I perceived, page 677, that this distinguished physician admits, that the climate of Great Britain, when brought to act under particular circumstances on the pre-disposed natives, will produce fever at once dangerous and malignant. Conceiving the views of Dr. Bancroft to be correct, the contagious origin so generally assigned to that disease by others, constitutes a very striking illustration of the delusion, now existing, as to the cause of Yellow Fever. With this fact laid before us by Dr. Bancroft, he assuredly cannot be surprised to find, that the climate to which the European constitution has not been assimilated,

and often deriving aid from the most heightened intemperance, should give rise to fever distinguished by high excitement. The same train of reasoning, that applies to the sudden administration of other stimuli, is applicable to climate, an analogy which unfortunately has been entirely overlooked. It is this hurtful influence that I am so desirous to give a just picture of; because if such knowledge were intimately comprehended by officers, it would lead to prevention*. How infinitely better to obviate than to cure scurvy; and with regard to fever, the means are often equally within our reach in the way of prevention. It is an excellent measure, that

* *Impressionum morbosarum systemati magnitudo, atque varietas impressæ ex actione morbida superficie derivata, per partium consensum solum, longè majores sunt opinione. Hæc febris totam corporis fabricam citò destruit, impressionibus morborum a superficie derivatis (ut mihi videtur) ad partes internas atque vitales communicatis. Veitch de tractando et præcavendo febrem flavam. 1808.*

of ordering ships of war to the West Indies in a state of thorough repair; as such a condition has the tendency to preclude the ship's company from encountering laborious duties in the way of refitting, until their constitutions are assimilated to the climate. In conducting all fatiguing operations in the West Indies, the maxim, to hasten slowly, should never be lost sight of. I do by no means intend to discourage active habits, but on the contrary to promote them with due reference to the changed circumstances, under which the human constitution is placed. I here venture to predict, that when the influence of climate is correctly estimated by captains and medical men, that the opinions of green wood, of miasma, and of contagion, will cease as primary causes of the Yellow Fever. With regard to contagion, I am convinced that the same philosophy, which traces rigidly and correctly, the effects of climate over

human health, will circumscribe its boundaries. I am completely satisfied, from anxious attention to this subject, that if in place of quarantine laws, prohibiting the importation of Yellow Fever, a premium were offered for its introduction, the measure would be found utterly impracticable. In the West Indies, the Yellow Fever has been and may be again multiplied to a great extent, among robust and recently arrived Europeans; in such situations as utterly preclude the idea of contagion, or miasma as a cause, unless the rays of heat and light are to be considered the parent of the one, and a calcareous and in some degree basaltic soil the source of the other. Conceiving that the commerce of this country was most unwisely clogged with quarantine laws, I was therefore anxious, so far back as 1808, to bring the subject under consideration. The work of Dr. Burnet, constitutes a valuable addition to the existing proofs, of the great ad-

vantages arising from evacuation in ardent Fever.

Mercury, in many cases, when judiciously directed, not only aids in removing the immediate pressure of this disease, but it has a tendency in all fevers where it is found useful, to obviate the hurtful sequelæ of such previous morbid action. In that state of the liver following acute inflammation, medical men in general have acceded to the utility of mercury. The liver is subject to the same laws as the other organs of the body, and I am persuaded that more enlarged observation will lead to the more extensive application of this practice, where other parts of the structure of the human body have been deranged by previous acute disease. I shall here concisely advert to two of the advanced features of the fever under discussion; black vomiting, and yellowness of the skin.

When old age is presented to us, we can have no hesitation in admitting, that the person so advanced in life, must have passed through the periods of existence marked by infancy, youth and manhood. The propositions are self-evident, and the person who could deny them, would be regarded as worthy of some little attention, from regulations bearing an analogy to quarantine laws. Should a black and dissolved state of the stomach, after the death of a vigorous young man, the result of fever with high excitement, and in duration not exceeding seventy-four hours, be presented to the dispassionate and experienced physician; I am inclined to believe, that he would have no difficulty in deciding, that previous irritation, and high excitement, must have led to gangrene and death of parts; and that the most likely means of averting so fatal an event, would have been blood-letting,

proportioned to the strength of the patient. Black vomiting, with its accompanying decisive yellowness of the skin, are certainly not to be regarded as essential phenomena of this disease, as they generally will never appear where the fever is early attended to. They are effects taken conjointly, which demonstrate the hopeless state of the patient.

The formation of Pus, or of Hydrothorax, from an attack of Pleurisy, are assuredly not to be regarded as Pathognomomic symptoms of the original disease. The mortification attending strangulated Hernia, with its attendant remission, constitute another example; indeed every disease of high excitement in the young and vigorous, admonish us as to the nature of this symptom. If Hernia is early attended to, generally speaking, we shall have no mortification. If Pleurisy is met by evacuations on its first attack,

Empyema and Hydrothorax will be prevented, and the same principles extend to Yellow Fever. From much reflection on what are termed Idiopathic and Symptomatic Fevers, there does appear to be a general principle influencing all continued febrile diseases, from whatever cause arising; and thus connecting them, and simplifying their treatment. This opinion is peculiarly strengthened by comparing the effects of remedies over these diversified diseases; and also the alterations of structure uniformly induced by them, when they are allowed to proceed in their course, without being arrested by the powers of medicine. Synochus and Typhus, Small pox and Synocha, Measles and Pleurisy, Cystitis and the fever attending Paronychia, Phrenitis and the inflammatory action arising from gun-shot wounds, and injuries done to the head from mechanical causes, all tend by the phenomena they exhibit, as by the remedies em-

ployed in their cure, to establish the existence of such a principle.

The cure of Measles and of Small Pox, when compared with Pneumonia, Synocha, and Yellow Fever, become singularly illustrative of this opinion. It is this principle which regulates the conduct of the practical physician, and not the peculiarities of the fever.

It is true, these peculiarities of the disease are not to be disregarded, but it is the age, the habits of life, and the vigour of body combined with the force of excitement, that impose the extent of remedies to be employed in all febrile diseases, and not the peculiarities of the disease. In obedience to this principle of excitement, in the treatment of the inflammatory action, accompanying the venereal disease, we are obliged to abandon the means of permanent cure until it is subdued. The sthenic principle seems to influence in

one degree or other, all incipient febrile diseases; while the asthenic particularly blends itself with their advanced stages. It was by gradual steps, and repeated visits to the West Indies, often presenting this most formidable disease to me, and I must here candidly avow, often followed by unsuccessful results under insufficient depletion, that the great advantages of decisive evacuations have been forcibly and indelibly impressed on my mind. It is thus also, that I was enabled to enlarge my means of cure by mercury, of which I at one time thought unfavourably. Before this remedy is had recourse to, with the view of establishing its general influence over the system in febrile diseases, the lancet, in vigorous habits attended with high excitement, should never be neglected. If this is overlooked, mercury will hasten the fatal crisis of the disease.

LETTERS, &c.

Transport Office,
28th November, 1815.

TO DR. VEITCH.

SIR,

THE Lords of His Majesty's Most Honorable Privy Council having had under their consideration a work written by Mr. Pym an Army physician, in which the non-liability of the human frame to receive the infection of the Bulam, commonly called Yellow fever, a second time is stated; their Lordships with a view of facilitating the investigation of this interesting point, and conceiving that the prevalence of that fever in the West Indies and at Gibraltar, must have given to the officers employed in the Medical

department of the Navy, many opportunities of observing its effects and ascertaining its nature; have requested us to take such steps as may seem to us best for obtaining any facts and opinions which may throw light upon the subject; we have therefore to desire that you will furnish us with all the facts that may have come to your knowledge, either in support of, or in refutation of Mr. Pym's proposition; adding to those facts, any remarks that may have occurred to you.

We send you herewith for your information, a copy of the work in question.

We have to request that you will without waiting to reply fully to this Letter, give us a reference to any Medical officer in the service, whose experience in this disease may appear to you likely to forward our enquiry. And that you will mention the names of any

ships, the journals of whose surgeons may probably furnish some facts upon the subject.

We are, Sir,

Your most humble Servants,

J. BOWEN.

J. HARNESS.

JOHN FORBES.

6, Hoxton Square,
6th March, 1816.

TO ALEX. M'LEAY, ESQ.

SIR,

I HAVE now the honor to submit to the Board such observations as have arisen from their Letter of the 28th November, 1815, and, with a view to facilitate the examination of my opinions, which are founded on fact, experience and analogy, I here presume to recapitulate the conclusions I have formed.

1. That no such fever, as that described by Dr. Chisholm and Mr. Pym, was the cause of general fatality among the Colonists at Bulam. These gentlemen furnish us with no

proof of the existence of such a disease at that island.

2. The fever, which proved so fatal to the Colonists, was decidedly protracted in its nature, when compared with Yellow fever; and of the Remitting or Intermitting character. (Vide Extracts, No. 40.)

3. Captain Beaver laboured under fever six times. (Vide Extracts, No. 4, 15, 17, 19, 20 and 23.)

4. The Calypso and Hankey were both attacked with fever, the former, at the very commencement of June 1792, the Hankey somewhat later; but, on the 22nd of the same month, only one person had fallen a victim to that disease.

5. Mr. and Mrs. Freeman were attacked with fever, on the 4th November 1792, and they both died, the 14th of December following. (Vide Extracts, No. 24.)

6. Mr. Scott was attacked with fever, on the 6th of August; and died the 3rd September 1793. (Vide Extracts, No. 26.) This could not be Bulam fever, which terminates in two, and three days, and sometimes sooner.

7. The appearance of the fever so immediately followed their arrival in the climate, that it is utterly impossible to ascribe the disease to contagion, the result of filth; (a conclusion that Dr. Chisholm has arrived at) with the means and abilities of Captain Beaver. Besides the Colonists, and the Ships' companies of the Calypso and Hankey, he had at different periods on the island, 196 Grumetas; whom he employed as labourers. (Vide Extracts, No. 31 and 27.)

8. The Calypso sailed from Bulam, on the 19th July 1792, without the loss of a man belonging to her, and on board of which vessel, many of the colonists embarked, with fever, to return to

England; and thirty of them, men, women and children, died on board of it; but that disease did not extend to the Ship's company.

9. The Hankey, between the period of her arrival at Bulam the 22nd June, 1792, and that of her departure, 23rd November following, did not lose a man belonging to her; although holding constant intercourse with the Colonists. Of whatever nature therefore the fever may have been, I think it must manifestly appear, not to have been the Bulam fever of Dr. Chisholm, and Mr. Pym; and also, that it was not contagious.

10. The fever according to Mr. Pym, made its appearance at Martinique in March 1793; at which period, agreeably to Dr. Chisholm, it was not known on shore at Grenada.

Mr. Pym says, in speaking of its appearance, "viz. in February at Grenada" "where it was first introduced in 1793;

“ in the months of March and April
 “ at Martinique, in the 70th and
 “ Queen’s regiment; at Guadaloupe in
 “ May.” (Pym on Bulam fever, p.
 186.) Dr. Chisholm says; “ about the
 “ middle of April the disease began to
 “ appear on shore.

“ The first house it shewed itself in
 “ was that of Messrs. Stowewood and
 “ Co. situated close to the wharf; and
 “ the infection was evidently introduced
 “ by a Negro wench, (we are not ho-
 “ noured with the name of this wo-
 “ man) who took in sailors’ clothes to
 “ wash.” (Chisholm, p. 92.) Can it
 be for a moment believed that, had the
 disease originated with the Hankey, it
 would have appeared at Martinique
 before it reached the shore at Grenada?

This goes a great way to satisfy my
 mind, that the disease at Grenada was
 local; and that the fevers at Martinique
 and Guadaloupe were of the same origin.

It is peculiarly favourable to the accuracy of the conclusions of those, who view this disease as non-contagious, to find themselves supported by Dr. Rush of Philadelphia; a man of great knowledge, and of extensive experience in the treatment of this fever. He was, at a certain period, one of the most ardent of the contagionists; but on discovering his error, and perceiving its injurious tendency, he avowed it with candour: an act, which must confer additional fame on his name, as a man, a physician, and a philosopher. On his recantation, Mr. Pym makes the following brief remark; “To myself, however, the explanation is not difficult; for it is evident that, in the year 1794, he mistook the Bilious Remittent for the Bulam fever.” (Pym on Bulam fever, p. 209.) This explanation, or rather assertion, I must be permitted to remark, can satisfy no one but Mr.

Pym; as it must appear to all, who are acquainted with the writings of Dr. Rush, impossible that a man so able, and so acute on all points on which he has bestowed his attention, should commit so gross a mistake. Were any one to assert, in my hearing, that Mr. Pym during the space of four and twenty hours, had confounded Remittent fever, with the ardent continued fever, (called improperly Bulam) I should declare such an error, to my judgment, highly improbable; and assuredly, the acquirements and opportunities of Dr. Rush, were not inferior to those of Mr. Pym; whose education, as a medical man, I know to have been excellent; and whose intercourse with the school of experience, has also been great.

The confounding the Remittent fever, with the continued ardent fever of strangers in a tropical climate, is not the result of the difference between them

passing unobserved; but it often arises from an injurious tendency to generalize. Almost all the practitioners in the West-Indies, whose practice arises among the natives, adopt this opinion: and they often give bark and stimulants, to the great injury of their patients labouring under this disease.

The mode of treatment adopted by Dr. Rush, in the Remittent fever, when compared with Yellow fever, completely refutes such an opinion. (Vide Appendix, No. 2.)

The Hankey, by her log, touched at Bissao, St. Jago, Barbadoes, St. Vincent, without communicating disease.

That document, as well as the short extracts from the African Memoranda, are intended to exhibit the varied injurious causes, acting on the constitutions of the Colonists; and, when those are duly weighed, I humbly think, they will be found adequate to produce the dis-

ease in question, without the intervention of contagion. The clearing of uncultivated lands, has always been a fertile source of fevers, of the Remittent and Intermittent character, to those so employed : and such seem to have been the diseases, with which the Colonists were afflicted : and which are acknowledged by Mr. Pym, not to be contagious. And here the opinion of Dr. Rush, whose opportunities were great, indeed they stand almost unequalled, is of much importance on that head. (Vide Appendix, No. 3.)

I will now conclude by declaring, that I have had no object in view but, establishing the cause of this disease agreeably to truth ; for, until we attain some fixed point to act from, under this head, our means of prevention must ever prove vague, unsatisfactory, and hurtful. It is my firm conviction that, our men of war, by proper arrangements at home, and

due attention abroad, will lose fewer men in the West Indies, than in Europe.

I am, Sir,

Your most Obedient

humble Servant,

JAMES VEITCH, M.D.

6, *Hoxton Square*,
1816.

TO THE COMMISSIONERS FOR TRANSPORTS, AND SICK AND WOUNDED SEAMEN.

GENTLEMEN,

I HAVE the honor of your Letter of the 28th November ult. and it is a source of great happiness to one who has had so often to deplore unsatisfactory results from the powers of medicine, in the treatment of Yellow fever, now to find that this malady, so fatal to our soldiers and seamen in the West Indies, has attracted the attention of Government.

This kind and humane interference cannot fail, I am persuaded, to develop much useful information and to thus concentrate the opinions of Medical men, not only on the cause, but on the means of curing this fever. Thousands who now

live, I entertain no doubt, will be saved by such researches after truth ; and the progressive advantages likely to result to the Army, the Navy and Commerce, from a just view of the causes of this disease, which can alone lead to rational means of prevention, appear to my mind incalculable. From weighing the difficulties that present themselves, in attempting to attain such evidence as may prove clear and satisfactory, on a point so interesting in its nature ; and on which, unfortunately, so painful a diversity of opinion exists among Medical men, equally eminent for their professional acquirements, for their candor, probity and honor, and who in the midst of this conflict of opinion have written, although pursuing different paths, under the laudable impression of being useful to their fellow-creatures, I determined for a time to abandon medicine and even my own opinions, and to reach the fountain head, by tracing back on those occur-

rences connected with the attempt to colonise the island of Bulam; and to ascertain if possible, by such examination, the actual sources of those diseases which afflicted the unfortunate colonists *in question*.

Under this impression I have perused the African Memoranda; and I have extracted such parts of Mr. Beaver's work (who afterwards died a Captain of His Majesty's Navy) as are likely to enable the Board to form their opinion on this important subject, without even reference to mine. The character of Captain Beaver in the service is well known; and his memory stands *highly* recorded, as an excellent officer and a brave man. To his views, therefore, of the means of preserving health by cleanliness and ventilation, and of its importance among the Colonists, I have to beg particular attention; as they are entitled to great weight in discussing the question of the importation of fever from

Bulam; particularly as he gave no orders that he allowed to be neglected; and, with him, precept and example were invariably united. My reasons for appealing to the work of Mr. Beaver, scarcely require explanation. Mr. Pym agrees with Dr. Chisholm, as to the nature and importation of the disease by the ship Hankey. If the fever, with which the Colonists were afflicted, corresponds with the description given by Dr. Chisholm and Mr. Pym, it will support their conjectures, on the subject of the importation of contagion; but should it prove otherwise, and that they fell victims to a disease, dissimilar to that described by Dr. Chisholm and Mr. Pym, and by them admitted not to be contagious; the frightful, the malignant pestilential fever from Bulam must find some other origin. Bulam, according to the African Memoranda, is in " 11 degrees north latitude, and " seems to have been produced in one

“ of nature’s happiest moods,” and was in the possession of the Biafara nation, who were expelled by the Bijugas. There were no stagnant waters, nor marshes, discovered by Mr. Beaver; and, from being surrounded by the sea, it enjoys the regular sea breeze.

The thermometer throughout the year, attains in the shade, the same medium temperature as in the West India Islands; and, when exposed by Mr. Beaver to the direct and reflected rays of the sun, on the 16th of January 1793, it rose in twenty minutes from 91 to 135.

The following extracts are numbered, with a view to facility in reference, as they will be followed by such remarks as have sprung from an attentive consideration of this subject.

(No. 1*.) “ On the 11th of April, 1792, the following vessels got under

* African Memoranda.

“ weigh for the colonization of Bulam.

	Men	Women	Children	
“ Hankey	65	24	31	
“ Calypso	83	33	33	
“ Beggar's	5	0	1	}
Benison				
	<hr/>	<hr/>	<hr/>	
	153	57	65	Total 275.

“ The Calypso made Goree on the
“ 12th of May, 1792.

“ The Hankey made the islands of
“ Bissao, Arcas, and Bulam, the 5th of
“ June.”

(No. 2.) “ 2nd of July. Commenced
“ working on shore, and changing the
“ cargoes and persons of the ships,
“ which occupied until the evening of
“ the 18th.”

(No. 3.) “ 19th July. Colonists re-
“ maining after the sailing of the Ca-
“ lypso this day, 86; 48 men, 13 women,
“ 25 children, besides 4 seamen and a
“ boy in the cutter.”

(No. 4.) “10th August. Mr. Beaver
“ ill, with fever.

“ On the 17th. Supposed to be
“ dying.”

(No. 5.) “10th August. The Cap-
“ tain of the Hankey being unable to
“ procure some stone ballast, began
“ cutting wood for that purpose.”

(No. 6.) “18th September. The
“ Ship’s company still employed in
“ cutting wood for ballast.”

(No. 7.) 18th September. The Co-
“ lonists engaged in clearing ground,
“ building block-houses and places of
“ residence, digging up the roots, land-
“ ing stores, rolling them up hill, level-
“ ling the ground, making roads.”

(No. 8.) “24th September. The
“ Hankey’s Ship’s company left off
“ cutting wood, to rig the Ship.”

(No. 9.) “9th October. Hired three
“ sailors belonging to the Cutter to
“ work on shore.”

(No. 10.) “ 10th October. The Han-
 “ key’s Ship’s Company again cutting
 “ wood to ballast the Ship.”

(No. 11.) “ 11th October. The Han-
 “ key drove on shore.”

(No. 12.) “ 16th October. Hauled
 “ the Ship off to her old berth.”

(No. 13.) “ 24th October. Occupied
 “ the block-house.”

(No. 14.) “ 31st October. The Han-
 “ key’s Ship’s company stowing goods
 “ away in the storehouse.”

(No. 15.) “ 9th November. Mr.
 “ Beaver again ill, with fever, from this
 “ day to the 23rd. The charter of the
 “ Hankey expired on the 10th instant.

(No. 16.) “ 23rd November. The
 “ Hankey left the island. On leaving
 “ England, there was a total of 275 ;
 “ on the Calypso’s departure 91 ; and on
 “ the Hankey’s leaving, 28.”

(No. 17.) “ 11th December. Mr.
 “ Beaver again ill with fever ; and on
 “ the 13th delirious.”

(No. 18.) “ 17th December. The
 “ Hankey left the island (23rd Novem-
 “ ber) and ran aground near the isle of
 “ Formosa, and is now (17th December)
 “ sickly at Bissao.”

(No. 19.) “ 6th April 1793. Mr.
 “ Beaver again ill with fever, and did
 “ not get up until the 13th.”

(No. 20.) “ 28th November. Mr.
 “ Beaver again ill of fever.”

(No. 21.) “ 29th November. Quitted
 “ the island.”

(No. 22.) “ 5th December. Is better.”

(No. 23.) “ 24th December. Again
 “ attacked with fever followed by
 “ jaundice.”

The daily changes in the state of the
 sick of the Colony, after the sailing of
 the Hankey, 23rd November 1792*.

* N.B. I select this period as, previous to it, the
 names of the sick are not noticed; indeed they ap-
 pear to have been utterly neglected, from p. 146,
 where Mr. Beaver, speaking of the surgeon, says,
 “ I have, in truth, sometimes sent for him to visit par-

(No. 24.) “ 14th December 1792.
 “ Died, and were buried, both Mr.
 “ and Mrs. Freeman ; this couple were
 “ married on the 4th of last month.
 “ They were both taken ill about ten
 “ minutes after the ceremony was per-
 “ formed, and have been so ever since.
 “ They both died this morning within
 “ ten minutes of each other, and were
 “ buried in the same grave.

“ From 28th February }
 1793 } Bennet sick.
 “ To the 20th March. }

March
 “ 25th. Bennet still sick.
 “ 27th. Bennet continues ill.
 “ 31st. Bennet still sick.

“ ticular patients, and have sometimes made a point of
 “ seeing myself that he visited them daily, but it was
 “ after I had found that some had died without his
 “ ever having seen them ; that others, almost dead,
 “ had never been visited by him ; and that some,
 “ though exceedingly ill, from his known inhumanity
 “ would not suffer him to come near them.”

April

- “ 1st. Bennet as yesterday.
- “ 2nd. Bennet and Hood sick.
- “ 3rd. Bennet and Hood.
- “ 4th. Bennet sick.
- “ 6th. Bennet appears discharged from the sick list.
- “ 14th. Hodgkinson, a boy, taken ill.
- “ 16th. Hodgkinson still continuing ill.
- “ 17th. Bennet, Dowlah (a lascar), Williams and Hodgkinson sick.
- “ 18th. Bennet, Williams and Dowlah.
- “ 19th. Bennet, Williams and Dowlah.
- “ 20th and 21st. The sick continue the same.
- “ 22nd. Williams, Dowlah and Hodgkinson.
- “ 23rd. Williams and Dowlah.
- “ 24th. Williams and Dowlah.
- “ 25th, 26th, and 27th. Williams and Dowlah.

(No. 25.) “ 28th, 29th and 30th of

“ *April, 1793. Hayles, Bennet and*
 “ *Dowlah*.*”

(No. 26.) “ *6th August, 1793. Mr.*
 “ *Scott is added to the list, with fever,*
 “ *and died the 3rd September.*”

(No. 27.) “ *196 Grumetas, employed*
 “ *on the island at different periods.*”

(No. 28.) “ *On the 21st of March,*
 “ *Mr. Beaver and Hood embarked on*
 “ *board the Harpy, and arrived at Ply-*
 “ *mouth the 17th of May 1794.*”

(No. 29†.) “ *20th February 1793.*
 “ *In the evening went to look at a*
 “ *spring which Mr. Scott had discover-*
 “ *ed in the morning in a creek to the*
 “ *northward. It was copious, and ap-*
 “ *peared sufficient to supply four thou-*
 “ *sand persons daily.*”

* From this period to the day of Mr. Beaver's departure, the list continues to fluctuate as above, and some of the remaining colonists drop off: but it must appear obvious that the disease was of the Remittent and Intermittent character.

† African Memoranda, p. 195.

(No. 30*.) “ *Regulations.* ”

“ 1st. To knock down all the bulk
 “ heads between decks, and not to suf-
 “ fer the screens, which will be given
 “ in their stead, to be unfurled after
 “ the hour of ten in the morning, ex-
 “ cept in the case of sickness ; by which
 “ means we shall enjoy a free circula-
 “ tion of air.”

“ 2nd. To sweep the births between
 “ decks twice every day, the first time at
 “ 10 A. M. the second time at 2 P. M.”

(No. 31.) “ 3rd. To have the chests
 “ moved, and a thorough cleaning be-
 “ tween decks, every other day.”

“ 4th. To fumigate the Ship twice
 “ a week.”

“ 5th. To wash between decks with
 “ vinegar once every fortnight.

“ 6th. To prohibit washing cloaths
 “ between decks.”

“ 7th. To send all the animals out
 “ of the Ship.”

* African Memoranda, p. 92 and 93.

“ 8th. To build a house over the
“ Ship.

“ 9th. To supply the colonists, as
“ often as possible, with fresh pro-
“ visions.”

(No. 32.) “ *Secondly. Safety of those
Members.*”

“ As paying attention to the health
“ of the members of this community
“ will be of little use, unless they can
“ enjoy it in safety, I propose the fol-
“ lowing means for that end:

“ 1st. That all the men of the com-
“ munity be divided into four equal
“ parts.

“ 2nd. That one division be at all
“ times on deck, as a guard.

“ 3rd. That no individual of that
“ division be allowed to leave the deck,
“ until he be relieved by another, unless
“ it be with the consent of his officer.”

“ 4th. That each individual be fur-
“ nished with a musquet, bayonet, and
“ proper accoutrements, which it is ex-

“ pected, will be kept in proper order ;
 “ that is to say, always fit for service.”

(No. 33.) “ *Thirdly. Discipline.*

“ As we shall not be safe, though
 “ armed, without discipline, the Act of
 “ the British Parliament, entitled, ‘ An
 “ Act for punishing Mutiny and Deser-
 “ tion, and for the better payment of
 “ the army in their quarters,’ will be
 “ rigidly enforced while under arms.”

(No. 34.) “ *Fourthly. Religion.*

“ It is conceived that no man can ob-
 “ ject to public prayers being read to
 “ the whole community every Sunday
 “ morning.”

(No. 35.) “ *Fifthly. General Re-
 gulations.*

“ For the sake of order and regula-
 “ rity, it is necessary that no one quit
 “ the Ship without my leave ; that
 “ when on shore, no private parties go
 “ into the woods without my permis-
 “ sion ; that every one work when, and
 “ where, I order him, and only as I

“ order him ; that the water necessary
 “ for the day’s consumption, be hoisted
 “ up by the division that has the morn-
 “ ing watch, at day-light ; that no one
 “ wash but with rain water, upon deck,
 “ and before the windlass ; that all
 “ lights be extinguished between decks
 “ at nine o’clock, and that there be no
 “ singing after that hour.”

(No. 36 *.)

“ On Sunday the *3rd* of *June*, instead
 “ of assembling the colonists at prayers,
 “ and taking that opportunity of point-
 “ ing out to them their precise situa-
 “ tion, the difficulties they had to en-
 “ counter, the necessity of order, re-
 “ gularity, sobriety and industry ; in
 “ short, the virtues that would ensure
 “ the prosperity, or the vices that would
 “ tend to the destruction of the colony ;
 “ instead of doing this, which their situ-
 “ ation imperiously called for, every
 “ one was wandering about the island

* African Memoranda, p. 48, 49.

“ in pursuit of some favourite amuse-
“ ment. Some were on the shore fish-
“ ing among the rocks, or seeking crabs
“ and muscles; others taking oysters from
“ the mangrove branches, while many
“ were inland, botanizing, or hunting
“ after lizards; and others chasing, some
“ butterflies, and some elephants; a few
“ were sleeping by the hut where the arms
“ were kept, and some of the women
“ were sitting in its shade: thus were
“ the Colonists scattered at two o'clock
“ when the Bijugas made an attack.
“ They began by firing a volley into
“ the hut, which rousing those who
“ were asleep in it, as they rushed out
“ they were shot. Those who were
“ near the beach, and ran towards it
“ on hearing the fire of musquetry, in
“ order to get on board, were inter-
“ cepted by another party, and met the
“ same fate. In short, all the men who
“ were near the hut, at the time of
“ attack, were either killed or wound-

“ ed; and all the women and children
“ were taken prisoners. Some, at a
“ little distance, hid themselves behind
“ the rocks till the firing had ceased,
“ and by that means escaped to the ship;
“ and all those who were distant in the
“ woods, many of whom did not return
“ until very late, escaped also. On
“ board the Calypso, during this dread-
“ ful scene on shore, all was disorder,
“ all confusion. They indeed sent two
“ armed boats on shore as soon as they
“ could, to receive and protect those
“ who had fled to the beach for assist-
“ ance; but the work of death was
“ done; the object of the savages ac-
“ complished. They had surprised
“ and destroyed, and then, loaded
“ with booty, had retreated to the
“ bushes.

“ When the boats reached the shore
“ the firing had ceased, and a few co-
“ lonists, who had been alarmed at it,
“ having been near enough to hear,

“ without seeing its effects till they had
 “ passed the dead bodies, were standing
 “ up to their necks in water waiting to
 “ be taken on board.

“ Of those who were absent in the
 “ woods some heard, and some did not
 “ hear the firing, but they all returned,
 “ although late, in safety.

“ In this melancholy affair we had
 “ five men and one woman killed, four
 “ men wounded, and four women and
 “ three children taken prisoners.”

(No. 37*.) “ When I quitted the
 “ Hankey on the morning of the 5th, I
 “ had left a quiet, clean, healthy, and
 “ orderly ship; the colonists contented
 “ and in good spirits; but when I re-
 “ turned on the morning of the 7th, I
 “ found a noisy, dirty, disorderly ship;
 “ the colonists dissatisfied and dispirit-
 “ ed. That such a change could have
 “ been operated in so short a time was

* African Memoranda, p. 54.

“ scarcely credible, but such was the
“ effect of the Calypso’s rejunction.

“ The fever, from which the Hankey,
“ was still free, had already made its
“ appearance in the former ship; and,
“ instead of separating the infected
“ from the well, and taking any steps
“ to prevent the spreading of that dan-
“ gerous disease, by prohibiting any
“ unnecessary intercourse between the
“ two Ships; the whole time, since the
“ arrival of the Calypso, had been taken
“ up in the constant interchange of
“ visits. Nay the affected themselves,
“ the very persons who had the fever
“ on them at the time, had been actu-
“ ally on board the Hankey, and the
“ consequence was, that many days did
“ not elapse before the fever made its
“ appearance in that ship also. *22nd.*
“ The fever still continued in both
“ Ships, but only one person had fallen
“ a victim to it in the Calypso and none
“ in the Hankey.”

(No. 38*.) “ On our return how-
 “ ever, we found that measures the
 “ very reverse of those had been pur-
 “ sued. No boats had been sent to
 “ explore, but a fishing party under the
 “ protection of twenty armed men had
 “ been daily landed to haul the seine.”

(No. 39†.) Speaking of the misfor-
 tunes of the Hankey—“ This however
 “ was exaggerated. The Hankey did
 “ not arrive in England till the 2nd of
 “ *October*, 1793, when the enemies to
 “ the success of the Bulam undertaking
 “ raised a report, that the Ship had
 “ carried the plague from Bulama to
 “ Grenada in the West Indies, and had
 “ thence brought it to England; this
 “ report was for a considerable time
 “ believed. The Hankey was sent to
 “ Stangate creek to perform quaran-
 “ tine, and orders were afterwards
 “ given for sinking the Ship and her
 “ cargo; however, on examination, the

* African Memoranda, p. 75. † Ibid p. 172.

“ falsehood and malignity of this re-
 “ port being proved, the order was
 “ confined to the Bulama baggage.
 “ When the Hankey left Bulama not
 “ one of her crew had been buried, al-
 “ though so many of the Colonists had;
 “ however a few days afterwards she
 “ became very sickly; and this was
 “ most likely increased by the extra-
 “ ordinary labor consequent on the
 “ Ship’s running aground on the *4th*
 “ *December*, in the Bijuga channel, in
 “ which situation she remained on the
 “ *9th*, and the boat having been sent
 “ about ninety miles to Bissao for as-
 “ sistance; I find noted in the Han-
 “ key’s log on the day of her return,
 “ which was the *8th*, all the people
 “ which came from Bissao in the pin-
 “ nace taken ill. This was in all pro-
 “ bability owing to their great fatigue,
 “ and exposure to the sun in the day
 “ and the dews in the night. Certain
 “ it is, that there was a great mortality

“ in the Ship after leaving Bulama,
 “ during the time she remained in the
 “ Bijuga channel, but very little after-
 “ wards. Messrs. Cox, the owners of
 “ the Hankey, having been good enough
 “ to lend me that Ship’s log from the
 “ time of our chartering her to her re-
 “ turn to Irongate, I have in the Ap-
 “ pendix made such extracts from it,
 “ from the time of her quitting Bu-
 “ lama till her release from quarantine,
 “ as will enable the reader to form his
 “ own opinion of the ground there was
 “ for reporting that Ship infected with
 “ the plague, or Bulama fever, on her
 “ return to England. No one death is
 “ omitted that appears on the log.”

(No. 40*.) “ Among many occupa-
 “ tions which employed Mr. Beaver,
 “ that of apothecary was one, with this
 “ difference in practice, he observes,
 “ that I never made a bill. Indeed,

* African Memoranda, p. 298, 9.

“ he continues, that practice was con-
 “ fined to one disease only, fever. To
 “ each man that came to me with it, I
 “ gave four grains of Tartar emetic,
 “ or fifteen of Ipecacuanha, which
 “ having operated, he had as much
 “ Bark in Port wine as he could
 “ swallow while the fit was not on
 “ him; to women and children the
 “ dose was less in proportion to their
 “ strength and constitution. This must
 “ be understood as being done after
 “ the Surgeon had left us only, and
 “ this was the utmost extent of my
 “ sins in this profession.”

(No. 41 *.) “ Extract from the log
 “ of the Ship Hankey, from the time
 “ of her leaving the island of Bulam
 “ to her release from quarantine,
 “ noting all the deaths on board that
 “ Ship.

“ Nov. 23rd. Sailed from Bulama.

* African Memoranda, p. 470, 71.

1792

November

- “ 24th. Observed latitude 11. 26 N.
 “ The West end of Bulama
 “ bearing N. by W. one half
 “ W. 4 leagues, and the east
 “ end of Galenas N. N. W.
 “ three quarters W. three and
 “ a half leagues.
- “ 25th. Died, Mrs. Curwood, colonist,
 “ and George Wilkinson, sea-
 “ man.
- “ 26th. Anchored at Bissao; died, Mr.
 “ Munden and Mrs. Han-
 “ corne, colonists, and John
 “ Mitchell, the Ship's car-
 “ penter.
- “ 28th. Died, Edward Fuller.

December

- “ 1st. Died, Charles Robinson, co-
 “ lonist.
- “ 3rd. Sailed from Bissao; three of
 “ them taken ill of the fever.
- “ 4th. Ship run aground.

1792

December

- “ 5th. In the afternoon sent a boat
“ to Bissao to procure assist-
“ ance ; the Ship beat a great
“ deal all night, but did not
“ make any water.
- “ 6th. Ship continues aground, and
“ beats very hard.
- “ 7th. Ship labors a great deal, but
“ continues tight ; all hands
“ on board sick.
- “ 8th. At noon the pinnace returned
“ with a schooner and long
“ boat which carried out an
“ anchor and cable ; at five
“ got the Ship off and made
“ sail, but stuck fast again ;
“ died, Mr. Woody, the third
“ mate, and boy Dick, the
“ apprentice ; all the people
“ who came from Bissao in
“ the pinnace taken ill.

1792

December

- “ 9th. Got the Ship afloat again ;
 “ died, Patience Bates, and
 “ Joseph ———, boy.
- “ 10th. Charles Wood, seaman, died.
- “ 11th. Mr. Birkhead, colonist, died.
- “ 12th. John High, seaman, died.
- “ 13th. Anchored again at Bissao ;
 “ Mr. Rowe, colonist, died ;
 “ his death is noticed as if he
 “ had not been on board the
 “ Hankey, but had died in
 “ the town of Bissao.
- “ 19th. Richard Curwood, boy, colo-
 “ nist, died.
- “ 21st. Sailed from Bissao with the
 “ assistance of some men, who
 “ left them in the evening.
- “ 26th. At noon anchored in St.
 “ Francis’s Bay, St. Jago,
 “ having mistaken it for Port
 “ Praya.
- “ 30th. Mr. Gandell, colonist, died.

1793

January

- “ 4th. Anchored in Port Praya.
- “ 13th. The Charon, Commodore Dod,
“ arrived; died, Elizabeth
“ Curwood, girl, colonist.
- “ 23rd. The Charon sailed, having
“ sent two seamen to the
“ Hankey.
- “ 24th. The Scorpion arrived.
- “ 26th. The Scorpion sailed, having
“ sent two seamen to the
“ Hankey.
- “ 27th. The Hankey sailed from Port
“ Praya.

February

- “ 4th. Died, Samuel Hodge, seaman,
“ one of those who came from
“ the Charon.
- “ 14th. Arrived at Barbadoes.
- “ 15th. Sailed.
- “ 16th. Anchored at St. Vincent's.
- “ 17th. Sailed.
- “ 19th. Anchored at Grenada.

1793.

March

“ 27th. William Mosely, seaman, de-
 “ sserted.

May

“ 31st. The carpenter drowned.

July

“ 23rd. Received six men from the
 “ Commodore, and sailed
 “ with the convoy from Gre-
 “ nada.

“ 28th. Anchored at St. Kitt's.

August

“ 1st. Sailed.

October

“ 2nd. Anchored in the Downs, and
 “ ordered to perform quaran-
 “ tine.

“ 5th. Sailed for Stangate creek.

“ 8th. Anchored in Stangate creek.

“ 18th. Delivered up the Bulama
 “ baggage.

“ 24th. Released from quarantine.

“ 29th. Moored at Iron Gate.”

The preceding Extracts from the "African Memoranda," bear incontestible marks of truth, and are written under the influence of a mind incapable of misrepresentation, had it even tended to favor his views; but the author had no such inducements to lead him astray, and he had neither the pride of theory to support, nor the claims of discovery to maintain, claims which often, imperceptibly, lead into error the most intelligent and best informed men in many branches of science, as well as in that of medicine.

It appears that the Colonists arrived on the coast of Africa on the 12th of May, and beginning of June 1792, which certainly was the most unpropitious period at which they could have reached their destination; as the rainy season had commenced, or rather had preceded their commencing labors in clearing and opening the ground; so that great and persevering bodily exertions, aided by a climate (extremely

different from that under which they had been accustomed to live) where heat, moisture and miasmata, the never failing offspring of uncultivated lands in tropical countries, were all brought to act on their system as it were simultaneously. They had passed the winter in England, and had but just emerged from the influence of its temperature, 32° , when they were within a few weeks subjected to a climate where the thermometer ranges in the open air at 135 degrees, the temperature they were subjected to at Bulam. These operations, combined with such influence as must necessarily attend them, have at all periods in the history of tropical climates, given rise to fevers of the Remittent and Intermittent character; which, I believe, are not contagious: and these diseases, or a fever protracted in its character, made an early impression on the commencing Colony, and appears to have superseded the attack of every other epidemic.

The previous quotations, appear to me to establish this conclusion; but at all events, the doctrine of a contagious fever, a Bulam fever, having assailed the Colonists, from a cause peculiar to that island, would not be a legitimate inference from the above mass of evidence. That any febrile disease should prove fatal, to people so circumstanced, is not surprising; when we reflect on their utter want of medical attention*. The active benevolence of Mr. Beaver did all that appeared to him to be proper, yet there can be no doubt but that the indiscriminate use of Emetics, Bark, and Port wine, even when there was no "fever on them," must have proved highly detrimental†.

Bark and Wine would not have remained an instant on the stomach of a patient labouring under Yellow fever, particularly where the irritability of that organ had been aggravated by the

* Vide No. 23.

† Vide No. 40.

previous exhibition of four grains of Tartar emetic. To men, women and children, Emetics and Bark and Wine were given with a liberal hand; but we hear nothing of its being rejected; or of vomiting being a troublesome symptom of the disease; which, as well as its colour, would, I think, have been noticed by Captain Beaver had it existed. A patient labouring under Yellow fever, would not have survived such treatment twenty four hours; it must have killed him with the rapidity of arsenical action.

The feature which the disease exhibited in attacking men, women and children, and proving almost indiscriminately fatal to all those classes, is an additional proof that the disease was not Yellow fever.

I shall now point out those particular facts on which I found this opinion. Mr. Beaver appears to have laboured under fever, at Bulam, six different times, and it will be seen that those

attacks were repeatedly severe, and attended with imminent danger to his life*.

On the 20th of March Mr. Beaver and Mr. Hood, who had both repeatedly laboured under fever, embarked on board the Harpy at Sierra Leone, and arrived at Plymouth on the 17th of May 1794; but nothing of fever appeared in that Ship from the embarkation with their effects, to be sure they were not the effects of dead men, which to my mind makes no material difference in contemplating the agency of contagion †. Mr. Beaver, immediately after quitting Bulam, accompanied by all the Colonists with their moveables, visited Kacundy, and disposed of stores there as well as at Sierra Leone; and at the latter place, he and Mr. Hood resided a considerable time previous to their embarkation; but no infection was communicated at either place. Mr. and Mrs.

* Vide No. 4, 15, 17, 19, 20 and 23.

† Vide No. 28.

Freeman were both seized with fever, within ten minutes of each other, on the 4th November after being married; and on the 14th of December they both died, and were interred in the same grave*. Mr. Scott was seized with fever on the 6th of August 1793, and died on the 3rd of September †. The state of the list between the 28th of February and 30th of April is also useful. The patient was one or two days in the list, then out of it, which shews an intermittent character of disease. The Calypso made Bulam on the 24th of May, and between that period and the 19th of July, that of her sailing for England, three colonists died; and many of them were embarked with fever on board the Calypso, of which disease thirty of the colonists perished during the passage to England, and yet none of the Ship's company fell victims to that disease.

* Vide No. 24.

† Vide No. 26.

The Calypso touched at Sierra Leone thus charged with disease, but we hear nothing of her having communicated contagion there, or that injury was sustained by the baggage of those who had died of fever being landed; or that the Ship any where excited alarm. The Calypso would arrive in England about the middle of August, when the temperature was calculated to favour the action of contagion, had any such cause of disease existed. The malady appeared on board the Calypso, among many of the Colonists, early in June 1792, but only one had fallen a victim to it, on the 22nd of the same month*.

The fever called Bulam, by Dr. Chisholm and Mr. Pym, is rapid in its course, and often fatal in its tendency, under the best medical treatment; and therefore had they even possessed this advantage, such a degree of immunity from death could scarcely have existed,

* Vide No. 37.

had Yellow fever been the assailing disease; but such a result, under circumstances of an utter want of the resources of medicine, is beyond belief, and that the disease was Yellow fever, must therefore be rejected*.

The Hankey also laboured under the disease, which Mr. Beaver improperly ascribes to infection. The Ships were both under the influence of the same hurtful causes; the Calypso preceding, as having been longer exposed to such injurious sources of sickness, and the Hankey was subsequently attacked from the same influence, but not from contagion. Mr. Beaver here falls into the common error, of conceiving the diffusion of epidemical fever as the result of contagion. I shall endeavour to elucidate this point fully in a subsequent part, when I offer my opinions the result of personal observation and intercourse with those afflicted with this disease.

* Vide No. 23.

The interchange of visits, that of the sick going on board the Hankey*, proves also in an eminent degree, that the disease was not Bulam fever. When a patient is attacked with Yellow fever, it thoroughly abolishes all idea of visiting; the world appears as it were a blank; the sentiments of friendship, and even of affection, abandon him, and he is alone intent on being allowed to remain quiet. The fact of the Hankey not losing one of her Ship's company during her stay at Bulam, and remaining comparatively healthy until her departure, is a circumstance that could not have happened, had the Colonists died of a contagious disease. The Hankey, after sailing from Bulam, touched at Bissao, Port au Praya, and St. Jago, where she remained a month; and also at Barbadoes, St. Vincent, Grenada and St. Kitt's†; yet we hear nothing of contagion any where but at

* Vide No. 37.

† Vide Log.

Grenada. The situation of all others where it must inevitably have appeared if any thing of the kind had existed, would have been at St. Jago.

The Ship's company of the Hankey, however suffered after quitting Bulam ; and this in the face of previous facts, cannot well be ascribed to contagion. I have here to call the attention of the Board to their exposure in cutting wood for ballast, at different times, a process of great fatigue ; and, in an uncultivated country, certainly subjecting them to the causes of Intermittent and Remittent fever. Their assisting in landing stores, and stowing them away in the block-house for the use of the Colonists, before their departure, had the same tendency, and must have excited a strong pre-disposition to disease among that Ship's company. With processes such as these, followed by her running aground, and the consequent fatigue in boats and exposure therefrom, disease was lighted up among the seamen which

also proved fatal; and I dare say that the sick either received no medical treatment, or that Port Wine and Bark which may have been given, tended to aid the fatality of the disease. The Boat's crew left the Hankey in health, for Bissao, in order to obtain assistance; but on their return, they were all attacked with fever; which is not surprising, when the extent of their exertions is taken into consideration, that of rowing ninety miles in an open boat, under a tropical sun, with its vicissitudes*. Such an event, from such exertions, I state from experience, was to be expected; and to search for any other cause, where there was one so obvious and competent *to the effect*, would be to multiply research after causes; not only unphilosophically but uselessly. The disease among those men appears to have been rapid in its nature, and may be considered as bearing an ana-

* Vide No. 29.

logy to Yellow fever: and that attack of the crew of the Hankey, under the circumstances occurring after leaving Bulam; really constitutes a pointed illustration of the source, and consequently of the noncontagious nature of the disease in question.

The orders of Mr. Beaver, under the head of discipline*, exhibit the most satisfactory proof of his great attention to ventilation and cleanliness; and, as he had the means of upholding their execution, a contagious disease, the offspring of filth, cannot under such circumstances be deemed admissible; besides it requires excessive inattention to cleanliness, as will shortly appear under the hand of Dr. Chisholm himself, to generate a contagious disease in a tropical climate. Such a state of things was impossible, where Mr. Beaver superintended; and I am convinced that all who knew him will coincide with me in this opinion. The

* Vide No. 30—35.

plague has never made its appearance between the tropics, which is a decided proof how unfriendly such regions are to infectious diseases.

In concluding I will take the liberty to recapitulate—

1. The repeated attacks of Mr. Beaver.

2. The case of Mr. and Mrs. Freeman.

3. Mr. Scott.

4. The Calypso attacked with fever, from the beginning of June to the 22nd of the same month, with the loss of only one colonist.

5. The intermitting character of the disease remarked by Mr. Beaver.

6. Its not assailing the ship's company of the Calypso, although so many colonists died, and many embarked on board that ship in a state of sickness, thirty of whom perished on board.

7. The Hankey remaining for five months at Bulam, and during the whole of that time holding constant intercourse with the colonists, without the

loss of a man ; and her ship's company enjoying almost perfect health at the time of their departure.

It is reasonable to infer, that Nos. 1, 2, 3, 4, 5, 6, corresponded with the disease of which the other colonists died ; indeed any other inference would, to my judgment, be erroneous.

8. The orders of Mr. Beaver, on the head of cleanliness and discipline.

Such a chain of events was incompatible with a contagious disease ; and there is just cause for concluding that no such fever existed among the colonists, as that ascribed to them by Dr. Chisholm and Mr. Pym, under the head of Bulam fever. The latter gentleman says, "it runs its course from one to five days." From the cases which I have been able to trace, the fevers were of long duration.

Having finished my observations on the African Memoranda, I will now proceed to make a few extracts from the work of Dr. Chisholm, who has exerted himself greatly on this subject ; and

who has no doubt from laudable motives, constituted himself as it were, the parent and propagator of the Bulam fever; with a view to ascertain, whether those opinions, to the maintenance of which he has exerted so much ability and industry, coincide with truth; or are the result of error.

(No. 1*.) “ The state of the atmosphere between the tropics does not seem to admit of the generation of a high degree of contagion; and whenever such exists, it must arise from the most unpardonable neglect of cleanliness, and the retention of contagious effluvia from a total want of ventilation. The peculiar circumstances of the atmosphere in hot climates, where due attention is paid to cleanliness and ventilation, must prevent infection; and it is probable, that it is only where there is not a sufficient number of people to render, by their exertions, the places they inhabit

* Chisholm, P. 1.

“ clean and sweet, that infection takes
 “ place, and is retained. The observa-
 “ tion made by Dr. Blane on this sub-
 “ ject is in many respects just ; and
 “ may be confirmed by that of every
 “ intelligent practitioner in the West
 “ Indies : he says, ‘ there is reason to
 “ think that the open air very soon dis-
 “ sipates and renders inert all infections
 “ of the volatile kind ; and of course the
 “ warmer the air is, the more readily it
 “ will have this effect.’ It is accordingly
 “ observed, that infection is much less
 “ apt to be generated about the persons
 “ of men, and that it adheres to them
 “ for a much less space of time in a
 “ hot climate, than in a cold or tem-
 “ perate one.”

* “ If infection, or rather the conta-
 “ gion arising from accumulated human
 “ effluvia, is produced only in situations
 “ wherein many are crowded together
 “ in a comparatively small space ; it be-

“ comes a question of no small impor-
“ tance, why malignant and infectious
“ fevers are never, or very seldom, gene-
“ rated on board Slave Ships. In these
“ the number is much greater than
“ transports, or ships hired for the pur-
“ pose of emigration ever contain: the
“ slaves, in order to prevent insurrec-
“ tion, are generally kept below; some-
“ times in irons, particularly during the
“ night: the smell between decks is
“ intolerably offensive to those not ac-
“ customed to it. Infection, however,
“ is prevented, where so many causes
“ combine to produce it, by the follow-
“ ing means: The crew of a Slave Ship
“ is generally very numerous; whereby
“ the risk, should insurrection happen,
“ is much lessened; and the attention
“ to the slaves is proportionally in-
“ creased: the space between decks is
“ regularly washed every day, if the
“ weather permits: the slaves are in par-
“ ties of thirty or forty, taken on deck

“ in fine weather, their irons taken off,
 “ and they are encouraged, by every
 “ possible means, to exercise themselves
 “ by dancing; they have no clothing
 “ to which infectious particles can ad-
 “ here: their persons are frequently
 “ washed; their diet is always composed
 “ of vegetables, without any mixture of
 “ animal food, and seasoned highly
 “ with capsicum; their drink is water;
 “ and scuttles, are cut in the sides of
 “ the ship, by means of which, and wind-
 “ sails when they can be used, there
 “ is kept up a constant change of air,
 “ and as free a ventilation, as the situa-
 “ tion can admit of.”

* “ But in every situation, wherein
 “ the generation of infection is possible,
 “ the prevention of it is proportional
 “ to the degree of interest of those who
 “ have the direction and command. In
 “ ships of war, in merchant ships, in

“ transports, and in ships hired for
 “ the purpose of emigration, the interest
 “ of those who command extends not
 “ beyond the operation of a sense of
 “ duty; of course we generally find it
 “ weak; it is rare indeed to find an
 “ instance to the contrary, but where
 “ we do the effect is conspicuous. In
 “ Slave Ships, the profits of the Captain
 “ and Surgeon are more or less accord-
 “ ing to the number brought to market,
 “ and actually sold; hence their interest
 “ in their welfare is great, and their
 “ exertions to maintain it proportional.
 “ It is disgraceful that ‘ quærenda
 “ pecunia primum, virtus post num-
 “ mos’ should be in all ages the pre-
 “ vailing maxim.

“ In ships, therefore, in which the
 “ captains are not urged to prevent in-
 “ fection by motives of interest, fevers
 “ of a malignant and pestilential
 “ nature may be generated even in hot
 “ climates.”

Remarks on No. 1. It is in my opi-

nion correct, that the state of the atmosphere in the West Indies is unfriendly to the generation, as well as propagation, of infectious diseases; and it has probably fallen to the lot of few men, to have had better opportunities of satisfactorily ascertaining that fact than Dr. Blane, who served as Physician to the fleet under Admiral Rodney, and it is pleasing to find that I am supported by such authority. The French ships of war were proverbially dirty, and, had accumulated filth, anxiety, want of ventilation, and of personal cleanliness, been capable of giving origin to a malignant pestilential fever between the tropics, the 12th of April so glorious in our naval annals would never have been fought, as disease would have extirpated the crews of their ships. Those ships however, in place of being the subjects of acute fever, and encountering great mortality therefrom, were often more healthy than their more cleanly opponents the English. I am

no friend to the want of attention to cleanliness, but let us be correct in our view of the source of disease, and not ascribe more mischief to such causes than they actually produce. The state of Slave Ships is also another proof of the same doctrine, although not intended by Dr. Chisholm to lead to such an inference. Were the natives of tropical climates the subjects of acute fever; and were the confinement of a number of devoted human beings to a circumscribed space, capable of originating a pestilential fever in tropical climates, many of these unfortunate negroes would certainly have fallen victims to such disease. But their constitutions are not the subjects of acute fever; and the nature of the climate obviates the generation of contagion, under circumstances which must have given origin to it but for these two things; the non-existence of predisposition to acute fever in the Negro, and the hostile tendency of the torrid zone

to propagate such causes of destruction. It will be observed that no order of men have any grace in the doctor's eyes, for discipline and preserving health on board their ships, but these dealers in human victims. Surgeons and Captains of His Majesty's Navy, would have done well to have taken lessons by importing a cargo or two from the coast of Africa, into Grenada, or some of the other islands.

It is the wish of Dr. Chisholm, as it would seem, to analyse every appearance of fever by the test of contagion. Captains of men of war, agents of transports, masters of merchantmen, and vessels hired for emigration, are all blended together. All these vessels are represented as commanded by men, who are indifferent to the fate of those who are subject to their orders; and all these classes of ships may be considered, according to Dr. Chisholm, as officially generating contagion. There certainly never was a more incorrect picture

drawn of our men of war, the Captains of which are fully aware of the value of health, as without it every professional object, fortune, fame, self-approbation must be sacrificed. Can any human being remain indifferent to the safety of a body of men who are ready to lay down their lives, in promoting those views in which the glory and interests of their country are involved? Cleanliness, in fact, is a virtue worth cultivation, without reference to its numerous good effects.

Men of war are clean to excess. Transports are also very generally in good order. Contagion may be conveyed on board of vessels of this description, but it will seldom be generated there. The masters of West India-men, independent of the sense of duty, have powerful motives of interest to keep their ships clean and healthy; and these are, their own preservation, and the good opinion of their owners; for were their ships' companies cut

off by a contagious disease, the consequence of indolence and the want of attention to cleanliness, and from which the voyage of the ship was retarded, their removal and disgrace would assuredly follow their return to England. Would passengers, who are sources of great emolument to masters of West India-men, embark on board a filthy ship? As to vessels hired for the purpose of emigration, the Hankey and Calypso conveyed the Colonists in health to Bulam, and the Hankey remained there nearly six months without losing a man belonging to her; and, at the period of her departure from that Island, only two of the ship's company were slightly sick. Let me also observe, that if the state of merchant ships and men of war were such as to have originated contagion, why be so anxious to import it from Bulam, with so many sources of fever in every quarter of the West Indies? It may be proper also here to remark, that thousands of Europeans

who were engaged in the African trade, perished of Yellow fever, or Bulam fever, which are synonymous, before the island of Bulam was attempted to be colonised, or even well known. Were filth in the extreme capable of generating contagion, there is scarcely a Negro hut in town or country, in the West Indies, that would not have become a focus of contagion; the white population must then long ago have ceased in that climate.

(No. 2*.) “ It is however destitute
 “ of fresh water, and that procured by
 “ digging temporary wells on the beach
 “ is brackish, and consequently un-
 “ wholesome. The negroes of this part
 “ of Africa are ferocious in an extraor-
 “ dinary degree, and are even said to
 “ be cannibals.”

Remarks on No. 2. This is erroneous, as there is an abundance of fresh water on the island, although it was not made

* Chisholm, p. 85.

use of by the colonists. There appears to have been no necessity for the making use of brackish water, and to conceive, that they had recourse to it from choice, would be irrational in the highest degree*.

(No. 3 †.) “ This circumstance prevented the erection of any sort of accommodation on shore, during the nine months the Hankey lay there, the settlers were obliged to live on board; and the rainy season coming on almost immediately after their arrival, and the heat being at the same time excessively great, they endeavoured to shelter themselves from both, by raising the sides of the ship several feet, and covering her with a wooden roof.”

Remarks on No. 3. The Hankey was not six months at Bulam, and the colonists occupied the blockhouse on the 24th of October ‡. They arrived at

* Vide African Memoranda, Nos. 29 and 35.

† Chisholm, p. 85.

‡ Vide African Memoranda, No. 13.

Bulam the beginning of June. It is to be supposed that this erection was similar to a boat-house, and therefore not obstructing the circulation of air; so that we may conceive it to have formed a kind of wooden awning; and Mr. Beaver's anxiety, for the removal of bulk-heads, justifies this conclusion*.

(No. 4†.) “ Among upwards of
 “ two hundred people, of whom wo-
 “ men and children constituted a part,
 “ thus confined in a sultry, moist
 “ atmosphere, cleanliness could not
 “ be well attended to, however well
 “ inclined the people themselves
 “ might be. These circumstances,
 “ joined to the depression of mind con-
 “ sequent upon their disappointment,
 “ must certainly be considered as the
 “ causes of the malignant fever which
 “ broke out among those unfortunate
 “ people, some time after their arrival

* Vide African Memoranda, No. 30.

† Chisholm, p. 86.

“ at Bulam. And no doubt can be en-
“ tertained, that neglecting to sweeten
“ the ship, to ventilate her afterwards,
“ and to destroy the clothes, bedding,
“ &c. of those who died on board, was
“ the sole cause of her retaining the
“ seeds of infection when she arrived
“ at this port. The following facts will
“ serve to illustrate this: Captain Coxe,
“ finding the water at Bulam unwhole-
“ some, proceeded with his ship to
“ Bissao, where there is a Portuguese
“ settlement, for a supply. The ship
“ was navigated by about twelve sea-
“ men, most of whom had not experi-
“ enced sickness, and had been proba-
“ bly procured from Sierra Leone: at
“ any rate they were then taken on
“ board for the first time. Of these,
“ before the return of the Hankey to
“ Bulam, nine died; and the remain-
“ der, with the captain, were reduced
“ to a deplorable state. The time for
“ which the Hankey was chartered
“ being expired, Mr. Paiba, with his

“ family, intended to return to England
 “ in her; but as no seamen could be
 “ procured, they were obliged to pro-
 “ ceed to sea, having on board the
 “ captain sick, and only the mate, Mr.
 “ Paiba, and two seamen to navigate
 “ the ship.”

Remarks on No. 4. From what sources did Dr. Chisholm learn that the bedding and clothes of those who died were not destroyed? Looking at human nature, with all its failings and errors, it is much more reasonable to draw a very different inference. When a person perishes of a contagious disease, it assuredly is not incumbent, or necessary, to destroy all his personal property; it is certainly sufficient to devote to destruction those articles of dress, and bedding, that were in contact with his body, and this precaution appears to have been taken*.

* Vide African Memoranda, No. 30—35.

The Hankey, after sailing from Bulam never returned to that island. No men were taken on board at Sierra Leone. The Hankey did not lose one of her ship's company, while at Bulam; and at the period of her sailing from that island to return to England, there were only two of her ship's company slightly unwell; an event, quite irreconcilable with the idea of a contagious disease having existed among the colonists.

(No. 5*.) “ Captain Dodd, on his
 “ arrival at Barbadoes from the coast
 “ of Africa, was ordered by Admiral
 “ Gardner to convoy the homeward
 “ bound fleet of merchantmen. In
 “ the execution of his orders he came
 “ to Grenada on the 27th of May, and
 “ hearing of the mischief which the
 “ Hankey had been the cause of, men-
 “ tioned that several of the Charon's

* Clisholm, p. 88.

“ and Scorpion’s people were sent on
 “ board the Hankey at St. Jago, to re-
 “ pair her rigging, &c. that from this
 “ circumstance, and the communica-
 “ tion which his barge’s crew had with
 “ that ship, the pestilence was brought
 “ on board both ships; and that of the
 “ Charon’s crew, thirty died; and of
 “ the Scorpion’s, about fifteen. The
 “ Hankey arrived at the port of St.
 “ George on the 19th of February, in
 “ the most distressed situation; and
 “ for a few days lay in the bay, but
 “ was afterwards brought into the
 “ Carenage.

“ From this period are we to date
 “ the commencement of a disease be-
 “ fore, I believe, unknown in this
 “ country, and certainly unequalled
 “ in its destructive nature.

“ — Nova pestis adest: cui nec virtute resisti,
 “ Nec telis, armisve potest.” OVID.

Remarks on No. 5. Here is another
 alarming instance of mortality, boldly,

and without hesitation, stated to have occurred on board the Scorpion and Charon, the consequence of intercourse with the Hankey, which is decidedly erroneous; no such event having taken place, and that this statement of fatality, thirty on board the Charon, and fifteen of the crew of the Scorpion is incorrect; and the creature of the imagination, shall soon be put beyond all doubt. The disease described by Dr. Chisholm is not a new disease. It was known and described so far back as 1726; and I believe it may be considered as coeval with the attempt, on the side of Europeans, to settle in tropical countries. Although this fever is not to be cured *virtute*, (decision however is a great virtue) nor by arms nor missiles, yet Dr. Chisholm has very properly put great confidence in Mercury: but Dr. Wright recommended this remedy in 1790, in a small treatise on Typhus-Icteroïdes as it then occurred at Barbadoes.

(No. 6*.) “ Although so great a
“ mortality naturally leads us to form a
“ dreadful idea of the virulence of the
“ contagion which gave rise to it, it must
“ not remain unconsidered, that the pre-
“ disposition of the class of men among
“ whom it happened was very great.
“ The sailors were men from the age of
“ fifteen to fifty, and the circumstances
“ which appeared to predispose them
“ more strongly than other men to the
“ action of the contagion, were violent
“ exercise in the sun; the immoderate
“ use of undiluted new rum; bathing
“ in a state of intoxication, and often
“ when violently heated; sleeping on
“ deck during the night. Other cir-
“ cumstances which did not depend so
“ much on their own prudence, no
“ doubt, contributed very much to
“ give the disease so very fatal a ten-
“ dency: the damp heat between
“ decks; the excessive filth of most of
“ the ships; and the uncleanly state of

* Chisholm, p. 92.

“ the persons and clothes of the men
 “ themselves.

“ About the middle of April the
 “ disease began to appear on shore.
 “ The first house it shewed itself in,
 “ was that of Messrs. Stowewood and
 “ Co. situated close to the wharf; and
 “ the infection was evidently intro-
 “ duced by a negro wench who took in
 “ sailors’ cloathes to wash.”

* “ But the description of men by
 “ far the most obnoxious to this conta-
 “ gion, and who suffered most from it,
 “ were those lately arrived from Eu-
 “ rope; and of them, those who had
 “ never before been in a hot climate.
 “ In general, those possessed of tense
 “ fibres and sanguineous temperament,
 “ were the most readily infected; and
 “ among whom the disease was most
 “ fatal.”

* Chisholm p. 94.

Remarks on No. 6. The preceding extract is peculiarly entitled to attention, as it exhibits the causes of the fever to have been local, and utterly independent of imported contagion. The persons attacked, are admitted to have been from fifteen to fifty years of age. The most robust and vigorous were most obnoxious to the disease. They were recently from Europe, and had never been in a hot climate before; and of sanguine temperaments, and among whom it proved most fatal. They were dirty in their persons and ships.

Bathing in a state of intoxication, exposure to the sun, sleeping on deck and immoderate indulgence in the use of new and undiluted rum, are stated to have been the practices of those who were attacked with this fever. These causes were certainly sufficient to produce dangerous fever in any climate; and it appears to me singular in the extreme, that Dr. Chisholm, with those

facts before his eyes, should have ascribed the fever among the seamen to imported contagion. Here were the very identical causes; acting on the spot and under the immediate observation of Dr. Chisholm, to which he ascribes the origin of a contagious disease at Bulam. Why therefore, if the difficulty must be solved by contagion, import it? as assuredly the same causes acting on the human constitution at Grenada, that are stated by him to have been applied to the colonists, without any proof at Bulam, ought to produce similar effects. I am convinced that the disease ascribed to the Hankey originated on the spot. That ship arrived at St. George's Bay on the 19th of February, and it was not until the middle of April that the fever made its appearance on shore. Can it be supposed that, had the influence of the Hankey been so virulently contagious, or in any degree so, that it would have been so slow

in making its way to the land ; particularly, when we reflect on the numberless sources of intercourse which, no doubt, were held between the shipping and the shore. This slowness in gaining the shore at Grenada, is quite inconsistent with what is stated of its progress and rapid diffusion in other quarters ; indeed, before it was well known at Grenada, it would appear to have penetrated to St. Domingo and all the other islands.

(No. 7*.) “ A Captain Remington,
 “ an intimate acquaintance of Captain
 “ Coxe’s, was the first person who
 “ visited the Hankey, after her arrival
 “ in St. George’s bay. This person
 “ went on board of her in the evening
 “ after she anchored, and remained
 “ three days ; at the end of which time
 “ he left St. George’s, and proceeded
 “ in a drogher to Grenville Bay, where
 “ his ship, the Adventurer lay. He

* Chisholm, p. 89.

“ was seized with the malignant pesti-
 “ lential fever on the passage; and the
 “ violence of the symptoms increased
 “ so rapidly, as on the third day, to put
 “ an end to his existence.”

Remarks on No. 7. This case proves nothing; admitting the statement in the fullest extent, as to the nature of the fever of which Mr. Remington, master of the *Adventurer* died. What proof has Dr. Chisholm adduced to establish the identity of the disease, with which the colonists at Bulam perished, with that of Grenada? Nothing but conjecture. The disease at Grenada was observed to attack those of robust constitutions, and those from fifteen to fifty years of age. The fever at Bulam attacked men, women, and children, and without predilection, either as to age, sex, or temperament.

I entertain no doubt but similar instances, of persons being attacked after visiting in other ships, occurred; but the

Hankey alone attracted notice. There is not a hospitable house in the West Indies, and there they are indeed hospitable to an extreme, from which their European guests have not retired to suffer from Yellow fever. And to military and naval messes, the same observation is applicable. Surely such attacks resulting from climate, combined with excess, are known to every one, and cannot be ascribed to contagion.

(No. 8*.) Speaking of English harbour. “ The exhalations from these are
 “ supposed to render the dock-yard
 “ occasionally very unhealthy, and al-
 “ though the situation of these muddy
 “ tracts is to leeward of the harbour, the
 “ frequency of remittents and dysente-
 “ ries among the crews of the ships of
 “ war refitting during the hurricane
 “ months, removes all doubt that the
 “ maladies proceed from marsh mias-
 “ mata.”

* Chisholm, p. 272.

Remarks on No. 8. I was five years Surgeon to the Naval Hospital at Antigua, and my duties involved attendance on the dock-yard.

Neither Dysentery, nor Remittent fever, prevailed epidemically amongst the shipping, or among any class belonging to the dock-yard; indeed a case of either disease was very rare. Dr. Chisholm has derived his information no doubt from inquiry, which has here on examination, *as in every other instance*, proved unsatisfactory.

As the opinions of Dr. Trotter and Mr. Smithers (the former of whom at an early period of his life visited the coast of Africa) are calculated to throw light on this most important question. I have extracted from the *Medicina Nautica*.

(No. 9*.) “ The fever, according to
 “ Dr. Chisholm’s account, had among
 “ its peculiarities some of the most
 “ prominent characteristics of the en-

* *Medicina Nautica*, p. 326.

“ demial causus of Dr. Mosely, viz. its
“ affecting new comers, and being
“ almost confined to whites ; from these
“ circumstances we are led to believe
“ that it was nearly allied to the
“ Yellow fever. While the Vengeance
“ lay at St. Kitt’s, on the 31st July
“ 1793, with Admiral Gardner and the
“ homeward bound convoy, I was re-
“ quested to visit a gentleman on
“ board a merchant ship from Gre-
“ nada, who was reported to have the
“ plague; fever then raging in that
“ island. I found him in an helpless
“ condition, with many symptoms of
“ the last stage, such as universal
“ yellowness of the skin, black vomit,
“ and convulsions. I prescribed for
“ him, without expectations of success,
“ and supposed that he would die the
“ same evening. The fleet sailed next
“ morning and I heard no more of
“ him. In the passage home, Lat.
“ 33.44. Long. 57.02. Thermometer 81.

“ a ship lost her foremast in a squall of
“ wind, and received other damage,
“ when the Admiral made the signal
“ for the Vengeance to take her in
“ tow. The ship proved to be the
“ Hankey from Grenada and Bulam.
“ Captain Thompson sent carpenters
“ on board with the necessary stores
“ to assist in repairing her losses; they
“ remained for three or four days but
“ no sickness followed, nor had there
“ been any person indisposed since
“ they left St. Jago. On our arrival
“ in England I was not a little sur-
“ prised to find, that very particular
“ orders had been sent from the Privy
“ Council or Secretary of State’s office,
“ to Liverpool, ordering the ship Han-
“ key under a strict quarantine, lest
“ the Bulam fever should be communi-
“ cated by the intercourse. This was
“ done in consequence of the informa-
“ tion from the Governor of Grenada.
“ These circumstances made me curious

“ to read the account given by Dr.
“ Chisholm. Having perused it with
“ admiration of the author’s abilities,
“ and the successful though singular
“ mode of treatment, I frequently made
“ it the subject of conversation with
“ medical gentlemen lately returned
“ from the West Indies. Dr. Chisholm
“ tells us that the ships of war on the
“ African station having sent men to
“ assist the Hankey, numbers had pe-
“ rished from the fever by means of
“ this communication, and that in the
“ Charon thirty died, and fifteen in
“ the Scorpion. Captain Dodd, who
“ at that time had his broad pendant
“ in the Charon, now commands the
“ Atlas of 98 guns in the fleet. Mr.
“ Smithers the surgeon, is at present
“ in the Formidable, a second rate,
“ also in the fleet: and from them I
“ have copied the following narra-
“ tive of their transactions with the
“ Hankey.

“ When the squadron under Commo-
“ dore Dodd, came to St. Jago in
“ 1793, the Hankey lay there in great
“ distress for want of hands, and having
“ buried 100 persons, men, women and
“ children, from the time she had been
“ at Bulam.

“ The fever was now overcome :
“ Mr. Smithers saw two men that had
“ lately recovered. He prescribed to
“ the Master who was ill of a venereal
“ complaint, and for which he left him
“ some mercurials with directions how
“ to use them, at the same time he left
“ a quantity of bark. The Charon
“ and Scorpion sent two men each to
“ assist in navigating them to the West
“ Indies. The Hankey at this port
“ was cleaned, washed with vinegar
“ and fumigated. No fever appeared
“ in either of the men of war in conse-
“ quence of this communication, and
“ they arrived at Grenada in perfect
“ health, but they did not go to the

“ same port of the island to which the
“ Hankey went.

“ The Charon, at this harbour, re-
“ ceived some seamen from the mer-
“ chant ships then taking in cargoes
“ for England, she had afterwards
“ fourteen cases of Yellow fever, of
“ which one died; but it is remarkable
“ that the Scorpion did not bury a
“ single man during the whole voyage.
“ It is probable, from these facts, that
“ the Hankey did not import the in-
“ fection that produced the Grenada
“ fever; for after the disease was worn
“ out she had a passage to make to
“ the West Indies of many hundred
“ leagues. It is also doubtful how the
“ effects left in the Hankey could pro-
“ duce the fever, for the bedding had
“ been destroyed, and what cloathing
“ remained had been aired, and proba-
“ bly had scarcely been in contact with
“ the body after being sick. Mr.
“ Smithers was examined before the
“ Governor of Grenada on the subject,

“ and gave his opinion decidedly that
 “ the Hankey did not communicate
 “ this fever to the Colony: from our
 “ people remaining some days on
 “ board at sea and escaping with
 “ impunity, it is a strong support to
 “ the evidence of Mr. Smithers.”

Chisholm says *, “ Great weight has
 “ been very properly attached by Dr.
 “ Trotter, to the evidence of Com-
 “ modore Dodd and Mr. Smithers,
 “ Surgeon of the Charon; and on fur-
 “ ther enquiry I find I have been
 “ incorrect in my statement, of the
 “ circumstances of the interview which
 “ the Charon had with the Hankey at
 “ St. Jago †.”

Remarks on No. 9. Mr. Smithers was
 examined before the Governor of Gre-
 nada, and stated that he was of opi-
 nion the disease did not originate
 with the Hankey, yet this examination

* Vide Preface.

† The statement of deaths p. 71—75, is here
 acknowledged to be erroneous.

is not noticed by Dr. Chisholm, which is singular. The destruction of the baggage of the Hankey was as unnecessary as that of the Calypso, or as the burning of the ship Hankey was found to be. The whole narrative, on imported contagion, appears at this moment to my mind like a fable; and is unsupported by any evidence, either presumptive or direct, which will bear a moment's investigation. The diseases most likely, one or other, to make a general impression on a body of men, women and children, who attempted to cultivate and clear land, previously unsubjected to the hand of man, and beset with underwood and trees, in a tropical country during the rainy season, would be Dysentery, Remittent or Intermittent fevers: accordingly Intermittent or Remittent fevers appear to have been the predominant disease among the colonists, and which are not contagious.

However, between contagion and cannibals, of extraordinary ferocity, Dr. Chisholm has given a pretty tolerable specimen of what may be done on such subjects, when aided by an ardent imagination. An alarming disease, and destructive to mankind, was incautiously affirmed to have been generated and imported as it were from the ocean.

Terruit urbem :

Terruit gentes, grave ne rediret

Seculum Pyrrhæ nova monstra questæ: HOR.

I have no intention to ascribe to Dr. Chisholm any thing like unworthy motives, as I consider him a man of superior talent, and anxious to add to the resources of his profession; but he has been led astray by erroneous information; and, in consequence, has unfortunately adopted false premises as axioms, and reasoned from them as such; and hence, to my mind, have originated his numerous mistakes in treating a subject of so much importance.

The Yellow fever is a disease which has made a deep and lasting impression on my mind ; and on this occasion, has led me to search for every means likely to open just views of its causes. I have therefore, not only submitted to the consideration of the Board extracts from the African Memoranda, tending to illustrate this point, but I have compared the statements of Mr. Beaver with the work of Dr. Chisholm ; and of which I have also availed myself ; in order that the Board themselves may judge, of the sources and accuracy of the conclusions already drawn, by comparing the facts with the judgments flowing therefrom.

Before I retrospected on those circumstances, that involved so many of our unfortunate fellow creatures in great distress, and which to numbers proved fatal, I did not in the most distant degree imagine that facts would arise, to discredit the existence of Bulam fever, as described by Dr. Chisholm,

among those who attempted to settle on that island. Those cases of fever were protracted in their nature; and Mr. Beaver, who laboured under the disease six times, speaks of it as exhibiting intermissions. Previous to giving my own opinions, on this most important and interesting subject, and which are the result of much intercourse with that fever, attended with severe head-ache confined as it were to the bottom of the orbits, pain of the loins, sometimes most excruciating, and black vomiting, and which train of symptoms particularly attack young male Europeans, of robust constitutions, on their arrival in the West Indies, I will lay before the Board an extract from Lind, Jackson, Mosely and M'Lean, all of whom had ample opportunities of witnessing the rapid and fatal tendency of this disease. The last author from a disposition to generalise, considers Yellow fever as only a higher gradation of the Remittent of the coun-

try; an idea entertained by many, and particularly by those medical men who have much intercourse with the natives, and little with the Europeans: but he notwithstanding this opinion, as Physician to the forces at Port au Prince, St. Domingo, had ample opportunities, from practice among new comers, and was therefore perfectly conversant with the peculiarities of Yellow fever.

* “ This fever has been supposed by
 “ some to have been first imported to
 “ the West Indies by a ship from Siam:
 “ an opinion truly chimerical; as simi-
 “ lar diseases have made their appear-
 “ ance not only in the East and West
 “ Indies, but in some of the southern
 “ parts of Europe, during a season
 “ when the air was intensely hot and
 “ unwholesome. This happened at
 “ Cadiz in Spain, in the months of
 “ September and October, 1764, when
 “ excessive heat and want of rain for

* Lind on Diseases in Hot Climates, p. 136.

“ some months, gave rise to violent
 “ epidemic, bilious disorders, resem-
 “ bling those of the West Indies, of
 “ which an hundred persons often died
 “ in a day. At this time, the winds
 “ blew mostly from the south, and after
 “ sun set there fell an unusual and very
 “ heavy dew.”

* “ It has never been observed that
 “ a Negro, immediately from the coast
 “ of Africa, has been attacked with
 “ this disease; neither have Creoles,
 “ who have lived constantly in their
 “ native country, ever been known to
 “ suffer from it; yet Creoles or Africans
 “ who have travelled to Europe, or the
 “ higher latitudes of America, are not
 “ by any means exempted from it,
 “ when they return to the islands of the
 “ West Indies. Europeans, males par-
 “ ticularly, suffer from it soon after
 “ their arrival in the tropical countries;
 “ yet after the natives of Europe have
 “ remained for a year or two in those hot

* Jackson, p. 249.

“ climates, especially after they have
“ experienced the ordinary endemic of
“ the country, the appearance of the
“ Yellow fever is observed to be only
“ a rare occurrence. But besides that
“ this disease seldom discovers itself
“ among those people who have lived
“ any length of time in a tropical
“ country ; it has likewise scarcely ever
“ been known to attack the same
“ person twice, unless accidentally
“ after his return from a colder
“ region.

“ The Remitting fever on the con-
“ trary ; does not cease to attack
“ such as have resided the greatest
“ part of their life in those climates,
“ or who have lived after the most re-
“ gular and abstemious manner ; a fact
“ which seems to prove, that there
“ actually exists some essential differ-
“ ence between the two diseases ; or
“ which shews at least that the revolu-
“ tion of a season or two, destroys in

“ the European constitution a certain
 “ aptitude for the one disease, which it
 “ still retains for the other.”

* “ How a climate should foster a
 “ disease, and a contagious one, and
 “ the natives of that climate be ex-
 “ empt from it I cannot comprehend;
 “ but the whole story is fabulous,
 “ therefore it is unnecessary to reason
 “ on it.”

† “ On the second, often on the
 “ third day, the dangerous determina-
 “ tions to the vital organs begin, the
 “ stomach is assailed and its coats af-
 “ fected with inflammation, the vessels
 “ of them become distended with an
 “ unusual quantity of blood, which
 “ throws them into an inordinate ac-
 “ tion, and gives them all the irrita-
 “ bility of inflammation; the whole inner
 “ surface of the stomach may, in this
 “ state, be considered as one inflamed
 “ surface, to which nothing is applied

* Mosely, p. 404.

† Dr. M'Lean, p. 88.

“ with impunity ; the vessels thus dis-
 “ tended and active secrete more co-
 “ piously, and their secretion is poured
 “ out into the stomach, which acts
 “ with violence to return it, and thus
 “ supports a constant determination
 “ to itself. At length the vessels over-
 “ come with perpetual action lose their
 “ tone, and pour out portions of blood,
 “ which mixing in the stomach with
 “ the former secretion and an addition
 “ of bile, create what is termed the
 “ black vomiting, a most dangerous
 “ symptom, because the state neces-
 “ sary to produce it is a state of the
 “ greatest derangement.”

* “ There is no point on which I
 “ am more decided, than the absence
 “ of contagion in the Remittent of St.
 “ Domingo. The uncertainty of medi-
 “ cal reasoning, and the loose prin-
 “ ciples on which it is founded, has

* Dr. M'Lean, p. 78.

“ given rise to a variety of medical
“ opinions on almost every subject ;
“ but on this question we are all
“ agreed, no difference of sentiment,
“ no variety of opinion appeared
“ amongst us. Dr. Wright, who was
“ my colleague, and whose accuracy of
“ observation and strength of judgment
“ entitle him to attention, was of the
“ same way of thinking. He had made
“ his conclusions at Nicholas Mole be-
“ fore I had the satisfaction of meeting
“ him, so that we could not have
“ biassed each other. Dr. Gordon
“ likewise, who had extensive oppor-
“ tunities of observation, and was
“ anxious to ascertain this question,
“ entirely coincided in the same opi-
“ nion: and, if I recollect, it was also
“ the decisive opinion of Dr. Scot; in
“ short I never conversed with any
“ medical gentleman at St. Domingo,
“ who did not form the same judg-
“ ment.”

* “ Dr. Scot, Mr. Warren, Mr. Buckle, and many other gentlemen, who gave the sick their most assiduous attention, escaped this fever.”

The disease was long known in the West Indies, before it was attempted to colonize Bulam; indeed I cannot help again repeating that I think it coeval with the existence of Europeans in those regions; although not so frequent during the early periods of emigration, from causes which then operated in producing a tendency to scurvy; and it affords me peculiar pleasure and satisfaction to find my conclusions, on this head, supported by Dr. M'Arthur and Mr. Johnstone, men who have been long moving, to the benefit of the Service, in the school of experience and observation.

“ Necessitas est nulla hanc rationem persequendi, vel impuberibus vel

* Dr. M'Lean, p. 88.

“ ætate provectoribus vel delicatulis ;
 “ sat est dijectio alvi libera his casibus.
 “ Olim forsan periculosa foret hæc
 “ methodus, cùm nautæ proeliviores
 “ essent ferè ad scorbutum. Subactus
 “ verò nunc omninò est scorbutus, atque
 “ exindè verisimile est (augentur etiam
 “ luxuriæ atque numerus eorum qui
 “ has terras adeunt) febrem flavam tam
 “ frequentur grassari. Nam juvenilis
 “ ætas atque summus corporis vigor,
 “ huic morbo maximè obnoxia, atque
 “ insuper meâ quidem opinione pro-
 “ clivitas ad scorbutum vel solidarum
 “ vel fluidarum partium hujus febris
 “ viribus obviam ire potest, quæcunque
 “ sit corporis compages*.”

The Bulam fever of Mr. Pym might,
 with much more propriety, have been
 called the Grenada, Curaçoa, (Roupe,
 “ de Morb. Navigant.” describes it as

* Veitch de Methodo tractandi et præcavendi
 Febrem flavam, 1808.

occurring at that Island in 1750) the Barbadoes, the Antigua, the St. Domingo or Jamaica fever; for, in all these islands, it had shewn itself before 1793. The materials for Dr. Jackson's publication were collected between 1774 and 1782, and his work was laid before the public 1791. Dr. Mosely published in 1787, and the disease stands recorded as far back as 1727. Had this fever originated with the colonists at Bulam, the assigning to it the name of Bulam fever might have been conceded; but with our knowledge of its having previously occurred, such designation, to my humble judgment, only tends to introduce confusion; and I am sorry that Mr. Pym, of whose talents I think highly, should have adopted such a term, as it looks like mystery, and may be construed by those who are unacquainted with him, into a disposition to evade the question on its true base, and thus keep us at

as awful distance from its real nature, as we are from its place of origin. The history of mankind tells, that a name injudiciously applied, often closes the avenues to both the head and the heart*. There is no end to distinctions if we admit appellations to be so given; as by adopting this principle, a class might be formed from every island, with its orders, genera, species and varieties, according to the district in which it appeared. The great addition to our Naval and Military force, which the French Revolution rendered necessary in the West Indies, sufficiently accounts for the dissemination of Yellow fever, without importation from Bulam. It was the increased mass of susceptible materials, often hurried into tropical regions at the most unfavourable season, and not

* The history of the treatment of insanity, and of the effects of the word mad, are striking proofs of the justice of this observation.

the diffusion of contagion, which imposed the appearance and opinions of an infectious disease. The *Regulus*, (1794) the first ship in which I visited the West Indies, was, after leaving the Cove of Cork, attacked with fever of the Typhoid character, which became pretty general among the Ship's company, but the loss was on that occasion inconsiderable; and that fever did appear to have prepared the constitutions who were attacked with it, to sustain the influence of a tropical climate; as not one of those, who suffered from Typhus, were attacked with Ardent fever during our stay in the West Indies; which was something more than twelve months. The crew were all repeatedly opened on the passage out, and Captain Oakes joined as well as others in this precaution, by taking what he called his thunder-bolt. Some of the Ship's company and officers were also bled. The

master of the ship was seized with Yellow fever attended with black vomit, at Port Royal Jamaica, and he died on board; but no officer of the Gun room, nor attendant was assailed, although he received the most assiduous attention from all. Lieutenant Wilkinson was, at a period considerably subsequent, attacked with the same disease, and was sent in a convalescent state to the Hospital at the Mole, but no extension of the fever to others in the Gun room followed; a circumstance inconsistent with a contagious fever having occurred in so small a space. The ship was kept much at sea, which, no doubt, contributed greatly to health. The Regulus returned to England in 1796, and, after refitting at Plymouth, was again ordered to the West Indies; on which station that vessel remained until 1799, and during which period the Yellow fever repeatedly appeared on board, among the Ship's company

as well as officers, but it never exhibited the character of a contagious disease. The purser, Mr. Ross, was attacked in a form the most severe, yet it did not extend to others. In 1800, I was Surgeon of the Saturn, and had the honor of serving under the flag of Admiral Totty, who appointed me acting Physician to the fleet under his command; and in that ship as well as in others, many cases of fever occurred, but still bearing no analogy to a contagious disease. From 1808 to 1813, I was Surgeon to the Royal Naval Hospital at Antigua, which gave me ample opportunities of witnessing the character and cause of this fever; as few ships, when it became necessary for them to remain any length of time in harbour to refit, entirely escaped the influence of this disease; and the result of my experience and observation in that capacity, leads me decidedly to state, that the fever which destroys so rapidly

the young vigorous European, and on which the name of Bulam fever has been improperly imposed, is not contagious at Antigua, nor in any part of the West Indies. I now proceed to offer the foundations of this opinion.

I have seen this disease in many situations, and at different islands; and as far as my observation extends, there is no fever more uniform in its character and tendency, than the Yellow fever, when impressed on the constitution of the young vigorous European, of the sanguine temperament, on his first arrival in the West Indies. The Hospital at Antigua was, on many occasions, found too small for the number of patients it was necessary to admit, and therefore by no means well adapted to classification; so that all the wards of the Hospital were often exclusively occupied with cases of this disease; while the galleries were appropriated to those afflicted with ulcers, wounds,

and chronic complaints ; in fact, there was often a necessity for their sleeping in contiguous cradles ; yet no instance occurred of fever being communicated, from such intercourse, to those labouring under ulcers, wounds, chronic dysentery, or those who had been subjected to operations. The nature of the apartments for the reception of officers, laboured under all those objections, in a still more striking degree. There was a string of cabins, all connected together ; with only a thin partition between them, open at the top, and the atmosphere of one room communicated freely with the contiguous, throughout the whole range of these apartments. The gallery was in front of these cabins ; and was necessarily common to those patients convalescent from the diseases with which they were received, or under which they actually laboured : and consequently brought all of them into contact. Yet here, the same immunity prevailed.

When these cabins were not all occupied by officers, my assistants took possession of them without dread, or suffering any inconvenience*: and during the whole time I did duty at that Hospital, only two of those gentlemen were assailed with Ardent fever; Mr. Pool, and Mr. Pike; the latter died, the former recovered; but some months afterwards he *fell a victim to that disease* †. The hours of visiting the patients, without precaution of any kind on my part, or that of my assistants, proves the non-contagious nature of the disease. The first visit was at six in the morning; and during which visit, patients from the men of war in harbour were received and prescribed for; the assistants and myself, oftentimes sitting in the midst of ten or a dozen of them, in performing the duties connected with their reception. The second visit was

* Vide Appendix, No. 1.

† Mr. Conway I find also laboured under Ardent fever.

made at twelve; when the prescription tickets were examined, and compared with the medicines dispensed. And the third took place about eight o'clock, P.M.

I decidedly agree with Mr. Pym, as to the rapidity of convalescence and restoration to health, after the cure of this fever; and instances, of men relapsing, were not known at the Hospital at Antigua; particularly, where we had the good fortune to receive the patient early, and we consequently had an opportunity of thoroughly subduing the fatal movements of this disease; by decisive evacuations. When patients however, were admitted to the Hospital, who were improperly denominated convalescent, and whose treatment had not been managed with a decisive hand; and where determinations to internal organs, of a chronic nature, had taken place, these often suffered relapse: but such relapses could not be called Yellow fever; they were symptomatic and yielded to mer-

curials. Patients who have laboured under Synocha, Pleurisy, Gastritis, which has a strong analogy to Bulam or Yellow fever, Hepatitis, Enteritis, or any other inflammatory disease; particularly where the cure has been decided by well timed evacuations, are by no means disposed to an immediate recurrence of these maladies in their active form; but they are not secured from subsequent attacks, (which will be found milder,) of those diseases on their recovering their full vigor, and being again exposed to their causes; and such precisely, is my opinion of Yellow fever. The restoration of vigor, and of susceptibility by returning to Europe, or even going to sea in the West Indies will, on exposure to the causes, reproduce the disease; and many instances of this nature came under my observation; and several, even before the ships went out of the harbour. In the Cherub and Thetis, some cases of this description proved fatal; and in the

former ship, the recurrence of this disease was at one period pretty general. It has long been ascertained among people of colour, as well as the long resident inhabitants, that those who have had this disease are by no means so liable to it, as the recently arrived European; and that if they continue in the climate, they may be considered, comparatively speaking, as enjoying an exemption; yet this cannot be compared to the security arising against small pox, the result of an attack of that disease. The impression of small pox is lasting, and moves with the individual through all climates, and the same follows from measles; but in Yellow fever, the effect may be considered ephemeral; as the return to a cold climate, in the young and vigorous constitution, will generally reproduce the susceptibility of this disease; and a residence in such climates will render the White Creole, and Black, liable to Yellow fever;

and hence the promiscuous attacks of Whites and Blacks by the fever of Philadelphia. The fact, of its requiring a greater length of time to season the constitution at sea in the West Indies, than on shore, has not I think been sufficiently attended to. The cool sea breeze keeps up the European stamina, and may account for fever occurring after a ship has been a great length of time in the West Indies; this residence at sea therefore ought not to be trusted to by captains as a source of security to their ship's companies. I have met with the disease in Blacks who had been employed in cold climates.

The Creole, who visits Europe at an early period of life, and returns in full manhood, and with the sanguine temperament, often falls a victim to this disease: and a painful case of this nature occurred, and in which I was consulted, a little time before I left the island of Antigua. The young gentleman,

Mr. Athill, a nephew of Admiral Sir Richard Bickerton; was no obscure person, whether we regard his rising talents or his family. He had finished his studies; he possessed eloquence, and was of great promise; and he fell a victim to this disease, justly lamented from his acquirements and amiable manners, by all who knew him.

Multis ille bonis flebilis occidit.

It is not the character of contagious diseases to respect persons in their first impressions; and they, generally speaking, move through all climates habitable by man. It therefore exhibits a deviation, not a little singular, to find a fever described as contagious, and generated in the West Indies, from which the natives are exempted, but which proves very generally fatal to recently arrived Europeans.

This anomaly, simply considered, does astonish; but when we proceed

a little further in tracing the extent of its singularities as assuming a commanding influence over the natives of the West Indies who have visited Europe, and its losing its power, in a great measure, over those Europeans who have become resident in the West Indies, we are compelled to look for some other cause of this fever than contagion. The plague, spares neither natives nor strangers; and small pox, measles, syphilis, assail human nature in all climates. The extraordinary singularity of the climate, which gives origin to this contagion, rendering it inoffensive to the natives, has been just noticed; but the peculiarities do not cease here.

The contagion is, according to Mr. Pym, generated by heat; but cold, even a moderately cool breeze, destroys it as easily and effectually, as the electrical force from the clouds overwhelms all opposition. The phenomena here speak aloud, and in the present state

of knowledge will not admit of delusion. In obviating the evils flowing from this awful fountain, science and genius have done much; and it is from just views of the cause of Yellow fever that we must draw our means of prevention, and not to my humble judgment from quarantine laws. Yet without the action of cold on the human frame, this contagion would never have been known: so that we have here the extraordinary phænomenon of temperature, at once destroying, and giving efficiency to contagion by its subsequent action on the animal structure, which appears to me paradoxical and really incorrect, and would in itself therefore justify a conclusion in favour of climate, as the cause of this disease. It is certainly not consistent with medical observation, that the same causes which render contagion harmless should prepare the constitution for the future action of what it has annihilated. Boys under pu-

berty are exempted from this fever; and youngsters of this description, whether the boys of the ship or midshipmen, were never, to my recollection, subjects of my care. Men advanced in life, seldom suffer from it, and women are comparatively exempted; which striking circumstances arise from the state of the constitution, as well as habits of life.

An attack of Dysentery, Remittent or Intermittent fever, will as effectually secure the patient from Yellow fever, as if he had suffered from that disease; and by the same means, that of lowering the system. Animals subjected to the influence of a low temperature, or a frost bitten limb, constitute striking examples of the powers of climate; and where the sudden transition from cold to heat is locally as well as generally destructive to life. A person long exposed to the action of cold, would be effectually destroyed by the general application of heat to the surface of the

body, or of internal stimulation to that extent which was not only borne with ease, but was necessary for health before the action of cold was applied.

Could we explain the actual changes which accompany this well known appearance, or if our attention had been directed to the fact in the way of illustration; I am humbly disposed to think that the progress of contagion, as a cause of Yellow fever, would long ago have ceased. The direct and reflected rays of heat and light in the West Indies, would effectually destroy a frost-bitten limb, or a human body that had been acted on by intense cold; and if there were five thousand subjects so treated, they would perish much quicker, even than men do under Yellow fever. Epidemical diseases are unfortunately too often confounded with contagious ones. The invasion of catarrhal affection is a proof of the rapidity of climate, in the diffusion of disease, as it sometimes influences

whole kingdoms, continents, armies and navies, with the most striking celerity. I am strongly inclined to believe that, had it been a malady destructive to health, that quarantine laws would have been devised against its introduction; and many well meaning men would have favoured the plan. A malignant contagious disease carries the importance and air of destiny with it, and may be consoling to both the doctor, the patient, and relatives, if thoroughly entertained.

Let us suppose the inhabitants of a tropical country, to the number of 275, men, women and children, landed in Scotland for the purposes of colonization, at the most unfavourable season of the year; and that they proceed immediately to the objects of their destination; can there be a doubt as to the consequences; and that climate would very shortly prove fatal to the greater number of them? Catarrh, Diarrhoea, Dysentery, Pleurisy, Frost-bitten Limbs,

would soon diminish their numbers. And, if this view of the influence of our own climate is just, assuredly the converse mode of reasoning cannot be rejected. Their countrymen, on hearing the fate of their friends, would entertain a frightful idea of our climate, and contagion would probably heighten the picture; quarantine laws would be thought of; and if they possessed the power of acting on such suggestions, we, as the inhabitants of Great Britain, would certainly not admit their precautions to be founded in truth or necessity. And such is the feeling generally entertained by the Europeans long resident in the West Indies, as well as the intelligent people of colour, on the subject of the importation of Yellow fever. The law of climate, is the most powerful of all causes acting on animal and vegetable life. If it is exerted in a rapid and unaccustomed excess, it becomes fatal

to both animal and vegetable life from that excess; and if an undue and rapid reduction takes place, the same consequences follow. Let me therefore suppose that the temperature under which I now write, (32°), was transferred to the West Indies, and that tropical influence (135°) was removed here. Can any one doubt that the havoc would be dreadful; that many parts of vegetable and animal life would be almost extinguished; all would suffer, and man himself, who subsists under the same laws as the humblest animated existence, would encounter, in spite of his ingenuity, his proportion of misery and of disease?

It therefore appears to me singular, that we should reject evident and competent causes, in accounting for diseases; and feel better pleased with speculation and conjecture, leading to conclusions highly injurious, and also retarding just views of the means of prevention.

In contemplating organic functions individually, the light may be said, in a secondary point of view, to be the climate of the eye; sound the climate of the ear; and in which they live, and as it were create, by the aid of imagination, new worlds of enjoyment and delight for some of their possessors; but these causes, in excess, will destroy both. The eye may be destroyed by intense light, the ear by sound; but there are gradations exciting disease that may be remedied by art. This change is surely not caused by contagion, nor yet is Yellow fever. It is agreeable to the laws of nature, that the same causes which give health, vigor, and activity of both mind and body, should also be sources of disease; either from their excess or defect, or from the changed structure of the body, deranging that union of action so necessary to subsist between animal life, and the sources by which it is enabled to prolong existence,

While this reciprocal action, and re-action, are able to account for disease, it does not appear to me to be judicious to multiply causes. If causes of another nature must be sought for, we should examine local influence minutely, before proceeding to the importation of contagion; for, distracted by this view, the means of prevention will be as erroneously treated, as by a false interpretation of the local cause. In our own climate we allow transitions to produce dangerous disease, why overlook this fact, in reasoning upon maladies of other regions?

Phrenitis, Enteritis, Gastritis, Pleuritis, Catarrh, Phthisis, and even Carditis, may indirectly have their origin in the state of the surface of the body, connected with the vicissitudes of temperature. These are dangerous diseases; and would, without the early intervention of medicine prove fatal.

Entertainments in the West Indies, followed by dancing, often give rise to the Yellow or Bulam fever; and the hospitalities of military and naval messes are also productive of the same consequences. Are the hospitable houses of the natives, who are so to an injurious degree, under the influence of the best motives, and the intercourse of military and naval men, often leading to excess, to be considered as direct sources of contagion? The numberless instances of insulated and fatal cases of Yellow fever, which occurred in ships of war on the Jamaica and on the Leeward Island stations, among men and officers, effectually refute the contagious nature of the disease: and it was this circumstance, so often repeated in many men of war, which at an early period attracted my notice, and contributed greatly to form my opinion of its cause. The state of predisposition roused by climate to the condition of actual dis-

ease, although it has not its origin in that cause, is well illustrated by scurvy. A ship of war shall arrive in the chops of the Channel, with a predisposition in the Ship's company to this disease, but is there detained by severe weather; the men in consequence are much exposed to cold, rain, and fatigue, the scurvy soon makes its appearance, and they fall down in numbers. There was a time when this was conceived to be contagious.

The mode of life in a garrison is, I imagine, pretty generally felt by all. Their exercise, their amusements, their diet, and their duties, are pretty uniformly the same. Such an observation extends to ships of war; and from this uniformity in diet, duties, and amusements, a constitutional similarity of mind and body is generated. It is not therefore surprising, that when climate comes to exercise an injurious influence on such men, that it should diffuse

itself with uncommon rapidity; and that the general predisposition, should soon be followed by general disease.

This may be still further illustrated by a disease, familiar to our own climate, that of Apoplexy; and which, I believe no one thinks of ascribing to contagion. A person predisposed to that disease shall, in apparent full health, by the undue action of passion, or even stooping to buckle his shoe, be plunged into the greatest danger. If there were five hundred, or as many thousands, similarly predisposed, and all similarly acted on, in close succession, it would give the appearance of contagion even to this generally fatal determination to the brain.

I will now endeavour to expose the fallacy which has led, in the service of the navy, to contagion being considered the cause of Yellow fever, by tracing the progress of the disease in two ships that, I shall suppose, arrive

the one somewhat anterior to the other, in English harbour, Antigua, to refit. The health of the dock yard, as well as that of the inhabitants, black and white, is generally good.

The ship has passed the winter in the Channel, and the captain and officers are strangers to the climate.

The vessel is stripped, the stores are landed, she is hove down and hauled off from the wharf, under the inspiring zeal and activity of the captain and officers, with a degree of rapidity not practicable generally in England, from the vicissitudes of our climate. Probably, to encrease the evil, the men are allowed to go on shore on Sunday. They are now employed setting up their rigging, embarking sails, stores, and provisions.

The predisposition to disease has become general, the train is laid, and the mine is ready to be sprung. The continuance of these exertions, under a tropi-

cal climate, with a temperature, direct and reflected, equal to 135 degrees, induces fever; which multiplies and soon extends itself more generally to the officers and Ship's company. The officers, generally speaking, suffer in a greater proportion than the men; a circumstance unfriendly to contagion. To augment the difficulties, the surgeon is a stranger to the climate, and is under great apprehension as to its debilitating influence: the patients are conceived to labour under a disease analogous to Typhus and saline juleps, are administered; he either does not bleed at all, or he conceives fourteen ounces of blood an adequate evacuation. The sick are kept on board for twenty, thirty, or forty hours; so that the favourable time escapes, and the system is verging to the fatal remission, when remedies are comparatively useless.

In fact, a scene of the most distracting, heart-rending, and distressing nature

follows; by a third, probably, of the Ship's company being exterminated.

The second vessel arrived some days after the first; the same order and activity prevailed; and, as might be expected, predisposition and disease followed; but considerably subsequent to the attack of the former vessel, to which it is now fallaciously, although satisfactorily traced, by some intercourse. Very likely a few cakes of Windsor soap sent on board will bear the blame; but should any interchange of the Ship's company take place, the delusion is thereby completed; and the mode of conveyance is as clearly settled in the minds of the contagionists, as the latitude is by observation at noon. Even the vessel first attacked shall import contagion, from some ideal source: so that the climate, and the irregular and severe exertions under that climate, are never thought of as causes of the fatal disease.

These examples also illustrate those

limited attacks of disease that may occur under the necessary duties of the service, in spite of the most scrupulous attention. It is obvious, that with the idea of contagion being the cause of this disease, just means of prevention cannot be attained ; and it is to this point, that I wish to direct the attention of officers ; because I am impressed with the value of both officers and men to my country.

In combating this disease by medicine, a great proportion will often be lost from the rapid nature of the fever. Whatever humanity, skill, and attention may be displayed in the application of the medical art ; yet I believe few medical men, considering the tendency of the disease on a broad base, retire from their intercourse with Yellow fever satisfied with their professional results. None, I am persuaded, on contemplating their avidity for professional success, come from the conflict, without having experienced the most pain-

ful disappointments. Although their own feelings may bear the strongest testimony, in favor of having done their utmost. In refitting ships, in all situations in the West Indies, the mornings should be devoted to exertion. The labors of that period, will of course be followed by breakfast; between which meal and dinner, it would be prudent to avoid all duties that tend to expose the ship's company to the continued influence of the sun, during the forenoon. An hour and a half after dinner they may be turned up, until sun-set. The effect of the intermission of exposure during labour, from breakfast to dinner, relieves the system from the excitement of the morning, that in young, and vigorous habits of body, may be justly considered in some degree febrile. And the night's rest accomplishes, in the most pleasing and effectual way, the same object in what respects the exertions of the afternoon: so that, by

such alternate exertion and remission, predisposition to disease is prevented; and the ship consequently remains healthy. On the same principle, in the West Indies, the duties of wooding, watering and refitting, should not take place in close succession. Some interval at sea, if possible, should be allowed. Cold bathing after finishing the labours of the day, should be invariably interdicted.

In sending patients with this fever to an hospital, those taken ill during the night, should be sent in the morning; and those seized during the day, in the evening; an arrangement which nothing should be allowed to obstruct.

There is not only a painful diversity of opinion, as to the cause, but as to the treatment of this disease. One, adopts the varied forms of mercury as a remedy; another, trusts to purging combined with cold effusion; and a third to bleeding, but rejects the use of mercury.

The practice of those leaders, is to my humble judgment just, as far it goes ; but the misfortune arises from their insulating themselves, under mercury, or purging and cold effusion, or under bleeding.

The rapidity with which this disease yields to remedies, when taken in *limine*, is often remarkable. The subjugation of Pleurisy in our own country, by blood-letting, is not more striking, than the cessation of febrile symptoms in this most dangerous fever, by remedies of early application, and of which, the loss of blood at that period, holds the highest place. All medical men who were my patients, without a single exception, conceded the propriety of this treatment, from having personally experienced its great advantages. The rapidity of convalescence from this fever, is also a proof of its non-contagious nature ; for it is the character of all contagious fevers, whether exanthematous or other-

wise, however early they are attacked by the powers of medicine, to leave an impression on the system which often requires a great length of time, and judicious treatment to conquer. Men recovering from Yellow fever require no remedies; as they emerge from disease almost at once into health; but, if any thing is thought necessary, the simple infusion of Quassia is far superior to Bark.

To be successful, in treating this most rapid and dangerous disease, the whole of these remedies must be, according to circumstances, as it were successively and speedily, called into action.

I have known patients recover, from the dangerous and generally fatal symptom of black vomiting; but I cannot ascribe such recovery to the powers of medicine; from considering how inefficient similar remedies were, in other cases of the same nature.

In all cases of dissection, and this

investigation I considered an essential duty, and it was therefore performed by myself, the brain exhibited marks of increased action. The stomach, the small intestines, the liver, gall-bladder, the heart and great vessels, the lungs all partook of the same appearances.

The Government of our country have displayed liberal views and laudable anxiety in extending commerce, and consequently civilization, which are inseparable; and under these enlarged and benevolent schemes, coasts have been surveyed, and continents explored. With the above facts before me, I conceive that a similar readiness will be found, to extend our knowledge of the nature and treatment, of the diseases fatally afflicting mankind, in those climates in which we are most deeply interested; as colonies are valuable in proportion to the number, the health, and the industry of their inhabitants.

In 1808 I wrote a small practical treatise on Yellow fever, which I dedicated to the late Lord Melville, the qualities of whose head and heart mutually reflected the highest honors on their illustrious and benign possessor. His loss to the Navy is irreparable; he was our sheet-anchor; and the friend and benefactor of medical men; among whom, his memory will be ever cherished with delight and with gratitude. I will conclude these observations by three extracts from that dissertation.

* “ Hujus morbi exitalis vires corrigere, nonne opmutim foret remedium,
 “ medicos aliquos Britanniaë peritissimos stipendiis aptis ex thesauris publicis datis, ad Indiam Occidentalem transmittere, hoc solo atque unico proposito scilicet, ut morbi hujus naturam atque methodum medendi accuratiùs atque, penitùs investiga-

* De Methodo tractandi et præcavendi febrem flavam, p. 4.

“ rent? Verùm enimverò vix expec-
 “ tandum est medicos privatos, quamvis
 “ re medicâ peritissimos, ad investi-
 “ gationem et remedia hujus morbi
 “ sese publice accincturos. Horum
 “ quippè facultates atque solertia longè
 “ meliùs applicantur pro re sua, quàm
 “ si scientiam suam ad rem publicam
 “ devoverent. Contrà, medici navales
 “ atque militares parum habent tem-
 “ poris, literis mandare suas opiniones
 “ de hoc morbo, propter sua nego-
 “ cia necessaria in ægrotis tractandis,
 “ quibus continuè et præsertim oc-
 “ cupantur. His perpensis, mirum
 “ non erit quare in hac re indaganda
 “ tam lentus fit progressus; et quare
 “ si tandem morbi natura aliquantulum
 “ meliùs intelligatur, finito bello, talis
 “ scientia vix adeò utiliter applicari
 “ potest. Selecti igitur ex peritissimis
 “ medicorum navalium vel militarium
 “ ut suprâ dictum est, propter investi-
 “ gationem naturæ, et remediorum

“ alicujus morbi periculosi, ubicunque
“ per terrarum orbem sese ostenderit,
“ per utiles essent. Ex his medicis
“ scientia recepta summi pretii foret
“ quoque, quoniam leges de navibus
“ exonerandis (Anglicè dictæ quaran-
“ tine) in melius dirigeret. Haud levis
“ momenti hoc; coloniis præsertim
“ Britannicis, atque etiam aliis gentibus
“ quibuscunque nobis commercium
“ maritimum est; sic enim nec mora,
“ nec impedimentum negotiis mari-
“ timis imponerentur, nisi omninò ne-
“ cessaria viderentur. Res omnis ten-
“ tanda, atque omni modo nitendum
“ est ea mala depellere, quæ experta
“ est Britannia, atque etiam nunc
“ patitur ex febre hacce sævissima quæ
“ tam multos ex maximè strenuis
“ civibus suis, quotidie tollit, benè me-
“ rentibus de patria sua, et bello et
“ commercio navali feliciter occupatis.
“ Quoniam exercitus miserrimè deletos
“ atque socios navales pereuntes vidi

“ ex hoc morbo, quoniam spectatissi-
 “ mos atque ornatissimos ex amicis
 “ meis ex eodem malo amisi ; res est
 “ ex corde ; ideòque facilè mihi, ut spero,
 “ condonabitur, si fusius aliquatenus
 “ disserere hac de re visus sim.”

* “ Ex ipso initio hujus morbi multum
 “ sensibilitatis quæ superficiei inflam-
 “ matæ própria est, exhibet ventriculus ;
 “ atque nobis equidem persuasum est,
 “ mutationem morbosam virium hujus
 “ visceris, inflammationi propagandæ
 “ aptam, ab initio ejus pari passu,
 “ usque ad mutatam formam febris,
 “ semper comitari etiamque plenè
 “ atque necessario constituere magna
 “ saltem ex parte, hoc lethale malum.

“ Ubicunque febris grassatur, tropi-
 “ cis præsertim regionibus, sine hac
 “ nota (nempe dispositione subire mu-
 “ tationem tendentem ad inflamma-
 “ tionem) quæcunque methodus me-

* Vide p. 13.

“ dendi adhibetur, phenomena longè
“ diversa indicabit ex iis quæ de febre
“ flava historia narrat; et nisi in-
“ flammatio justa proveciore morbo
“ adsit, vix possibile est causam pro-
“ ponere, vel doloris a quo tantantur
“ præcordia, vel anxietatis vix verbis
“ describenda, vel denique caloris
“ atque vomitus qui hujus morbi
“ stadium acutum comitari solent.
“ Porrò, ut nobis quidem videtur,
“ planè impossibile est explicare func-
“ tiones læsas hujus partis corporis,
“ vel proclivitatem magnam ad gan-
“ grænam, nisi vis inflammatoria priùs
“ in hoc viscere sedem suam posuisset,
“ quoniam gangræna veluti affectus
“ ex causa sua propria ritè derivata
“ est.

“ Signa quæ nobis offeruntur, dum
“ irritationem aliquam localem tracta-
“ mus quæ etiam magna inflamma-
“ tione comitantur, elucidare possunt

“ aliquatenus saltem mutationes quas
“ subit ventriculus hoc morbo. Pona-
“ mus, verbi gratiâ, inflammationem
“ aliquam partem accendisse, ad vitam
“ verò minùs necessariam; atque etiam
“ hanc inflammationem remediis non
“ extingui, sed ad provectum gradum
“ jam provenisse; hujus inflammationis
“ irritatio per totum compaginem ser-
“ pit; compago nunc, e contrario,
“ repellit hanc actionem auctam in
“ primum morbum ex origine localem,
“ sic duorum junctis viribus, sensatio
“ atque vitalitas partis omnino exhauri-
“ untur; laxantur vasa; sequitur re-
“ mora, ut dicitur; atque post hanc
“ mutationem in promptu est gan-
“ græna, cui sequelæ sunt, color niger,
“ fætor, atque denique mors absoluta
“ partium. Febre flavâ, nisi mors has
“ mutationes prævenisset, nil dubito
“ quin omnes mutationes prædictæ
“ sese ostenderent. Quamvis verò ven-

“ triculi mutata conditio vix ad hunc
 “ magnitudinis morbi gradum fertur
 “ quem vidimus actione locali partis
 “ alicujus ad vitam minùs pertinentis ;
 “ tamen persuasum est, sectionem
 “ cadaverum opiniones quas nunc pro-
 “ posuimus satis benè demonstrare,
 “ atque firmare. Secretiones atque
 “ exhalationes morbosæ ventriculi ;
 “ sanguis dissolutus, bilis putrescens
 “ omnia hæc sævo atque nigro vomitui
 “ ortum præbent.

* “ Labor sub sole fervido, vel per se,
 “ vel cum ratione intemperata vivendi
 “ junctus, originem dare possunt huic
 “ feбри. Sæpenumerò vidi morbum
 “ inter eos grassari, quibus fuit neces-
 “ sitas ad terram applicandi propter
 “ negotia navalia ; nunquam verò vidi
 “ febrem ex his ægrotis ad sanos
 “ sese extendere ; et modo ferè sequenti
 “ per omnes navis nautas febris serpit.

* Vide p. 27.

“ Officia eorum qui ægrescunt, dum
“ aquam et ligna ex littore afferunt,
“ dum vela et funes aptant, atque aliis
“ muneribus navalibus funguntur, (ad
“ quæ facienda navicularum necessitas
“ est), hæc omnia ab aliis qui adhuc
“ benè valent nunc facta sunt: iisdem
“ periculis hi nunc sunt obnoxii, ac
“ priores: nunc hi posteriores ex simi-
“ libus causis ægrescunt, et sic de-
“ inceps per omnes nautas dissemina-
“ tur febris; quæ ortum trahit ex di-
“ versis muneribus laboriosis quibus
“ occupati sunt, ex modo vivendi
“ quàm maximè intemperato, dum
“ interea regionis vires ignorant; non
“ omnino verò ex contagione.

“ Consilia inita haud ita pridem ab
“ iis qui rempublicam gubernant, hac
“ febre tunc temporis veluti contagiosa
“ posita, aptissima fuere ad extinguen-
“ dam eam animi anxietatem quâ
“ omnes ferè homines tentabantur.
“ Tametsi verò summam benevolen-

“ tiam hæc consilia pro publica sani-
“ tate monstrant; tamen confitendum
“ est vix necessaria fuisse, nam donec
“ fit res possibilis temperiem cœli navi-
“ cula portare, vel navi longâ, vel
“ donec aliqua mutatio horribilis mundi
“ systematis fit; prorsûs ridiculum est
“ timere mortem Anglia ex his causis
“ quæ Indiâ Occidentali milites et
“ nautas nostros tam crebrò perimunt.
“ Sine investigatione accurata causa-
“ rum remotarum, prorsûs vana atque
“ inutilis fit omnis quæcunque demùm
“ morbi hujus prophylaxis. Satis mihi
“ jam longo usu persuasum est, multos
“ non omninò tentari, si doceremur
“ hunc morbum ortum suum ex cœli
“ temperie, non autem ex contagione,
“ originem suam ducere. Communis
“ sensus usus, methodum proprium
“ indicaret, scilicet quomodo vitare
“ possumus, supra dictas morbi causas;
“ verum simul ac tentamus nosmet-
“ ipsos ex malo imaginario protegere,

“ persæpè in errores gravissimos duci-
“ mur, atque animi attentio ex malo
“ vero ad phantasma merum errat.”

I am, Gentlemen,

Your most obedient humble servant,

JAMES VEITCH, M. D.

APPENDIX.

(No. 1.) The situation of the hospital at Antigua, is certainly the best that could have been selected, in, or about English harbor: it is elevated, and surrounded by about ten acres of land, capable of cultivation, and of being planted with fruit trees and vegetables; which would prove in a little time, not only a source of health, but of economy; by supplying the hospital and ships with them.

It enjoys the sea breeze in a full degree; and the salutary nature of its position is pointed out, not only by the men who were admitted seldom suffering from any disease different from that with which they were received into that

hospital ; but from the quick and uninterrupted convalescence of those who had been afflicted with fever ; and also, from the rapidity with which the patients, on whom I had performed surgical operations, recovered ; indeed the cure often advanced with more than European celerity. The last man on whom I performed the operation of amputation, above the knee, was out of his bed and walking on his crutches, on the 15th day from the period of the operation.

The want of adequate space for the accommodation of officers and men ; the uncultivated state of the ground around the hospital, and the insufficiency of the means for removing to a proper distance the excrementitious matter generated within the establishment, are its defects, not its position ; and these I submitted to the consideration of Sir Alexander Cochrane, whose attention to my representations, and

to the interests of the sick, I must always think of with respect and gratitude. The offensive matter arising from the hospital had been deposited, at the period of my leaving Antigua, under the western wall, from the foundation of that institution. Improvements to a certain extent were ordered; but as the dock-yard and hospital have been since abandoned, it is fortunate they were not carried into effect, as they must have proved sources of considerable expence*.

This condition of the western side of the hospital, which has existed, I believe, through nearly half a century, is a satisfactory proof, that the nature and tendency of the climate of the West Indies, are equally unfriendly to the generation, as to the spreading of contagion.

* Vide No. 4.

(No. 2.) “ Medical Inquiries and
 “ Observations by Dr. Rush, p. 115.

“ ——— Bilious Remitting Fever.

“ In treating of the remedies used
 “ in this disorder, I have taken no
 “ notice of blood-letting. Out of several
 “ hundred patients whom I visited in
 “ this fever, I did not meet with a
 “ single case, before the 27th of Sep-
 “ tember, in which the state indicated
 “ this evacuation. It is true, the pulse
 “ was full, but never hard. I acknow-
 “ ledge that I was called to several
 “ patients who had been bled without
 “ the advice of a physician, who re-
 “ covered afterwards on the usual days
 “ of the solution of the fever. This
 “ can only be ascribed to that disposi-
 “ tion which Dr. Cleghorn attributes
 “ to fevers, to preserve their types
 “ under every variety of treatment, as
 “ well as constitution. But I am
 “ bound to declare further, that I
 “ heard of several cases, in which

“ bleeding was followed by a fatal termination of the disease.”

Remark. Dr. Rush bled largely in the Yellow fever, and that practice was accompanied with the use of the most decisive character of purgatives.

(No. 3.) “ Inquiry into the Causes of Bilious and Intermitting Fevers, by Dr. Rush, p. 265.

“ It has been remarked, that Pennsylvania for some years past, has become more sickly than formerly. Fevers, which a few years ago appeared chiefly on the banks of creeks and rivers, and in the neighbourhood of mill-ponds, now appear in parts remote from them all, and in the highest situations. This change with respect to the healthiness of our country, may be traced to the three following causes.

“ 1. The establishment and increase of mill-ponds. There are whole counties in Pennsylvania, in which

“ intermittents were unknown, until the
“ waters in them were dammed, for
“ the purpose of erecting mill-ponds.

“ 2. The cutting down of wood,
“ under certain circumstances, tends to
“ render a country sickly. It has been
“ remarked, that intermittents on the
“ shores of the Susquehannah, have
“ kept an exact pace with the passages
“ which have been opened for the pro-
“ pagation of marsh effluvia, by cutting
“ down the wood which formerly grew
“ in its neighbourhood. I remember
“ the time, when intermittents were
“ known only within half a mile, in
“ some places, of that river. They are
“ now to be met with ten miles from
“ it, in the same parts of the state.

“ I beg a distinction to be made
“ here between clearing and cultivating
“ a country. While clearing a country
“ makes it sickly, in the manner that
“ has been mentioned, cultivating a
“ country, that is, draining swamps,

“ destroying weeds, burning brush, and
 “ exhaling the unwholesome and su-
 “ perfluous moisture of the earth, by
 “ means of frequent crops of grain,
 “ grasses, and vegetables of all kinds,
 “ render it healthy. I could mention
 “ in support of these facts, several
 “ countries in the United States, which
 “ have passed through each of the
 “ stages that have been described.
 “ The first settlers received these
 “ countries from the hands of nature,
 “ pure and healthy. Fevers soon fol-
 “ lowed their improvements, nor were
 “ they finally banished, until the higher
 “ degrees of cultivation that have been
 “ named took place. I confine myself
 “ to those countries only where the
 “ salutary effects of cultivation were
 “ not rendered abortive by the neigh-
 “ bourhood of mill-ponds.”

(No. 4.) Extract of a Letter to
 Rear Admiral The Honorable Sir
 Alexander Cochrane, K.B. Com-
 mander in Chief, &c. &c. &c.; dated

Naval Hospital, Antigua, 5th July, 1809.

“ I conceive it a duty which I owe
“ to His Majesty’s Service, and to the
“ immediate preservation of those va-
“ luable men who are the objects of
“ my care, to place under your consi-
“ deration a series of inconveniencies
“ and defects, which are felt at this
“ Institution, and which appear to be
“ coeval with its existence as an hospi-
“ tal. These defects, combined with
“ the other circumstances herein com-
“ plained of, have, in my opinion,
“ tended to render the exertions of the
“ medical man much less successful
“ than they would have been, had such
“ imperfections not existed. This hos-
“ pital is considerably elevated above
“ the surface of the sea, and is highly
“ favourable to cleanliness from the
“ descent on each side; but the fa-
“ vourable disposition given to the
“ ground by the hand of nature has not
“ been taken any advantage of, either for
“ the purpose of promoting the disap-

“ pearance and injurious effects of rain,
“ which falls here at times in great
“ quantity, or for the removal of the
“ excrement and filth generated in a
“ variety of ways within this hospital.

“ The necessary is situated to the
“ westward of the hospital, and not
“ above fourteen paces distant from it.
“ Here every thing excrementitious has
“ been, and is at present deposited,
“ and allowed to rest immediately
“ under the walls of the hospital.

“ I am certain it cannot fail to as-
“ tonish when I state, that the com-
“ mencement and duration of these
“ defects, appear to have originated
“ with the first inhabitants of this
“ hospital, and that they have been
“ gradually augmenting from that
“ period, and have now attained a
“ most horrid and disgusting increase.
“ When the wind blows from the west-
“ ward, or during the existence of
“ calms, the hospital is completely
“ charged with stench and pestilential

“ exhalation. Here is an evident and
 “ fertile source of injury to those sent
 “ to this hospital for the cure of
 “ disease, and which in my opinion re-
 “ quires immediate attention. It is
 “ truly fortunate that this noxious ac-
 “ cumulation of human and other ex-
 “ crementitious matter admits of an
 “ effectual remedy, by means of a
 “ sewer dug immediately behind, and
 “ one on each side of the hospital ne-
 “ cessary, for if it did not it would be
 “ adviseable instantly to remove the
 “ hospital to some other situation.”

Remark. It must appear obvious
 from the preceding extract, that on
 commencing my duties, at the Royal
 Naval Hospital, Antigua, I appre-
 hended much mischief from the state
 of things just delineated; but for-
 tunately no contagious disease could
 be traced, by the most attentive obser-
 vation to such a source; yet it became
 imperious on my side, to attempt the
 removal of so great a nuisance.

(No. 5.) Extract of a Letter to Sir John Duckworth, Knight; dated “ His Majesty’s Ship Saturn, Fort Royal Bay, Martinique, January 16, 1802.

“ Sir,

“ As you will soon command in chief in Jamaica, I do myself the honor of inclosing for your consideration, the copy of a Letter addressed to Sir Hyde Parker, while he commanded in chief on that station. An uncertainty, whether the hints given were carried into effect, induces me to place them under your eye; as I entertain the highest opinion of your readiness to promote any proposition, which can lead to the preservation of the health, as well as the restoration of the vigour of those who may have suffered from disease.

“ My thermometer, on the wharf from which the ships are watered, has often risen to 130 and 135 degrees, by the direct and reflected rays of

“ the sun. Compare the approaches
 “ of this temperature to that of boiling
 “ spirit of wine and water. Look at
 “ its influence on the surface of the
 “ body; and it will scarcely be possible
 “ to withhold assent to the propriety of
 “ gradually inuring the body to, and
 “ also to guard it, as much as possible,
 “ against the influence of such an ac-
 “ cumulated and unusual degree of
 “ heat *.”

(No. 6.) Extract of a Letter to Sir
 Hyde Parker, Commander in Chief,
 Jamaica, dated “ His Majesty’s Ship
 “ Regulus, Port Royal Harbour, Ja-
 “ maica, May 15th, 1799.

“ — My recent visit to Roche-
 “ fort, has recalled strongly to my

* The watering at Rochefort, the grave of our
 seamen, has been left off, and tanks are now establish-
 ed at Port Royal, which is attended with eminent ad-
 vantages to the health of his Majesty’s ships on that
 station; and it is no small consolation to me to feel,
 that I have in some degree contributed to this salutary
 arrangement.

“ mind, an opinion imbibed some time
“ ago ; and a more extended experience
“ of the causes productive of disease,
“ has brought to me conviction, that
“ it is the situation of the watering place,
“ by its adjoining heights reverberating
“ the rays of the sun with uncommon
“ force, and collecting them as it
“ were into a focus, which renders it
“ more powerfully destructive to our
“ seamen than other places. My
“ experience, moreover has taught me,
“ that this concentrated force of the
“ sun, acting on the young and vigo-
“ rous European constitution, recently
“ from England, is, in itself, capable of
“ producing fever of a dangerous and
“ destructive tendency, particularly
“ when aided by intemperance. I
“ therefore hope, as I act under the
“ conviction of these ideas, I shall not
“ offend by recommending a shade or
“ awning to be thrown over the wharf,
“ from which the ships are watered,

“ as one great mean of preserving
 “ the health of those men employed on
 “ that necessary duty. And, besides
 “ preventing diseases, it will enable
 “ them to complete their work with
 “ greater personal comfort, under
 “ labour, and in a much shorter time.”

(No. 7.) Extract of a Letter to Dr.
 Veitch ; dated “ London, 20th Novem-
 “ ber, 1817.

“ On our parting topic, I will
 “ endeavour to give you some idea.
 “ We sailed in the Juno frigate the
 “ beginning of 1776, as Commodore,
 “ convoying General Burgoyne and
 “ his army to the relief of Quebec ;
 “ and after that, until the latter end
 “ of 1778, we were employed along the
 “ whole coast, as far as New York,
 “ in alternate cruising and blocking
 “ up the American ships, until we
 “ destroyed our ship at the siege of
 “ Rhode Island.

“ During that time I messed with
 “ three warrant officers, and we had
 “ no other food but such as fell to the
 “ lot of the seamen. The provisions
 “ of the navy, prior and in this time,
 “ were of the worst kinds, and could
 “ give but bare existence to the frame,
 “ if we had not, now and then obtained
 “ some assistance from fish caught on
 “ the banks of the coast, and when in
 “ harbours, the produce of deserted or-
 “ chards, and wild antiscorbutics were
 “ also highly useful, as by the care of our
 “ surgeon, they were always collected
 “ and boiled with the pease. The stores
 “ were supplied with great quantities
 “ of provisions; perhaps we may say
 “ two years in advance, and (of course)
 “ the old was used first; when from the
 “ mode of curing, packing and keep-
 “ ing, it was in no instance fit for
 “ the food, or the vigorous sustenance
 “ of man.

“ The first article of support may be

“ considered beef, which, up to that
“ time was never named but as salt,
“ junk ; the most applicable of all de-
“ scriptions, for it had only the ap-
“ pearance and substance of junk,
“ with very little fat or nutritive prin-
“ ciple in it, even the skinny parts
“ were destroyed, and there was no
“ possible means of eating it but with
“ bread and water (scarcely ever pro-
“ curing potatoes to mix with it) and
“ dining on it as lobsouse. The pork
“ always had its lean parts entirely
“ wasted by over salting, and so rancid,
“ that it could only be used for frying
“ fish.

“ Butter and cheese were never seen.
“ Instead of those articles a little
“ molasses was supplied: the lux-
“ ury it occasioned I can never for-
“ get: a tea-cup full of it, and one
“ of sassafras chips, boiled together
“ in a cast iron yankey kettle, afforded
“ both morning and evening a joyous

“ treat to the eager circle. Our sup-
 “ ply of these two articles was so small
 “ we could not afford to hazard an
 “ upset ; so that one of us was obliged
 “ to attend the boy to clear the way in
 “ going and coming from the galley,
 “ and to see it firmly fixed and guyed
 “ on the fire.

“ The pease were always decayed,
 “ and the oatmeal sour ; consequently
 “ little nourishment could arise from
 “ them.

“ The staff of life was execrable ;
 “ nothing but the shadow of bread ;
 “ being filled as close as possible with
 “ a small maggot, of a yellow hue,
 “ coiled in a cell ; and when the parts
 “ of the biscuit were struck on a table
 “ it fell into dust, and the only sub-
 “ stance was the maggots. Little use
 “ could be made of it but mixing it in
 “ the gross as lobsouse, when the
 “ maggots floated as a thick yellow
 “ cream, which fell to the share of our

“ boatswain, who from his age and ex-
 “ perience in those matters, had got
 “ the better of squeamish inherentcies,
 “ and thus renovated his constitution
 “ with genuine spirit of animal life.

“ I hope you will now form some
 “ idea of the stamina infused in those
 “ days.

“ About the year 1783, a total change
 “ took place in the victualling of the
 “ navy. I think Mr. Cherry was the
 “ prime mover of it; since which time
 “ it has been constantly improving in
 “ that degree, that a person living on
 “ the regular luxuries of the shore,
 “ would consider a taste of the meat,
 “ and other things supplied, as a treat.

“ What I have related is not exagger-
 “ rated, but was indisputably felt.”

(No. 8.) Extract from Dr. Bancroft's
 Essay on Yellow Fever, p. 677—683.

“ But if we were to suppose (for
 “ the sake of argument) that the jail
 “ fever did at that time prevail in

“ Newgate, and to as great an extent
“ as it was ever known to have done,
“ there would still be good reason to
“ conclude that it did not occasion
“ the fever which was consequent upon
“ Captain Clark’s trial.

“ In a note to p. 670, I found
“ sufficient ground for concluding, that
“ whatever the cause of that fever
“ might be, it must have been con-
“ tained in and applied by the stream
“ of cold air, which entered by the
“ open window, and reached the per-
“ sons who, being placed in that par-
“ ticular direction, were afterwards
“ exclusively attacked with the disease.
“ This was also the avowed opinion of
“ Sir John Pringle and Dr. Hales.
“ But if we suppose the jail infection
“ to have been brought into Court
“ by Captain Clark, (a strange sup-
“ position considering his rank in
“ life, and the cleanly decency at
“ least, with which he must have

“ been clothed) that contagion would
“ have been much more likely to
“ operate previously to the opening
“ of the window, when, as there was
“ little or no circulation of air, it
“ would have been less diluted; but
“ if it had operated at that time, its
“ operation would not have been di-
“ rected and limited to those particu-
“ lar persons on whom the cold east-
“ erly wind afterwards blew, but to
“ those who were nearest to him on
“ all sides; and we may therefore pre-
“ sume, that the fever in question
“ was not occasioned by any appli-
“ cation of jail infection, previous to
“ the opening of the window; and cer-
“ tainly it could not have been pro-
“ duced by that cause, after the ad-
“ mission of such a strong current of
“ air, as must by its quantity and
“ coldness have [so much diluted, ele-
“ vated and dispersed the contagion;
“ as to render it harmless, even if, in

“ addition to Captain Clark, scores
“ of prisoners had been in court.
“ Another insuperable objection to the
“ supposed production of this fever by
“ contagion, arises from the space
“ between the bench on which the
“ judges were seated, (where the cause
“ of the disease proved mortal to four
“ out of six then present) and the box
“ wherein the prisoners are placed
“ when under trial, and which is the
“ nearest approach they are ever al-
“ lowed to make towards that bench.
“ This distance, as I have already
“ mentioned, and as will appear by
“ the engraved plan of the hall, is
“ about twenty-five feet; and we are
“ warranted by all the experience of
“ modern times in believing, that the
“ contagion of jail or typhus fever,
“ from a person actually under the
“ disease in its worst form, will not
“ produce fever in other persons at
“ the distance of three yards, in a

“ room of moderate dimensions, where
“ the air was not previously infected.
“ With this knowledge of the very li-
“ mited action of the contagion of
“ jail or typhus fever, when present,
“ and with so many valid reasons for
“ believing that none was present at
“ the sessions, the 26th April, 1750, we
“ are certainly bound to ascribe the
“ fever which was a consequence of
“ that session, to some other cause;
“ and none presents itself so obviously,
“ and with so many probabilities, as
“ that which Sir J. Pringle thought
“ proper to reject ; I mean the sudden
“ admission of a continued stream of
“ cold air, impelled forcibly by the
“ external wind upon persons who had
“ previously been greatly overheated,
“ and were consequently in that state
“ which renders a sudden and copious
“ application of cold, either external,
“ as on that occasion, or internally,
“ by large draughts of spring or iced

“ water, in very hot weather; or by
 “ the eating of iced creams; and in
 “ particular circumstances, so often
 “ productive of a mortal disease. Even
 “ Dr. Hales was aware of danger from
 “ a free admission of fresh air by venti-
 “ lation, as may be seen at p. 144, 153,
 “ and 155, of the work lately quoted,
 “ and at the last of these passages,
 “ after representing ‘ it as a matter
 “ ‘ of great importance to use means to
 “ ‘ change the air in crowded rooms, he
 “ ‘ adds, that this must be done by a
 “ ‘ constant gentle succession of fresh
 “ ‘ air;’ which ‘ must not be let in at
 “ ‘ open full windows, especially in
 “ ‘ cold weather;’ and this injunction
 “ he repeats in other places. Almost
 “ all the circumstances which are
 “ known to render the application of
 “ cold hurtful, seem to have co-ope-
 “ rated at the Old Bailey, during Cap-
 “ tain Clark’s trial, particularly the
 “ length of time in which its appli-

“ cation was continued ; its being ap-
“ plied by a wind, or current of air ;
“ it being a transition or sudden and
“ considerable change from heat to
“ cold ; and its being applied partially
“ to a particular part of the body,
“ while the rest was kept in greater
“ warmth than usual : we know but
“ little of the causes which might have
“ assisted to produce debility on that
“ occasion, and thus to render the
“ impressions from cold more injuri-
“ ous ; excepting that of fasting, which
“ from the duration of the trial, must
“ have been unusually prolonged ; nor
“ are we acquainted with what might
“ have happened after the court had
“ adjourned, to increase the morbid
“ influence of the cold, which had
“ been already applied. We know
“ enough however to make it probable,
“ in the highest degree, that this was
“ the cause of the fever which ensued,
“ and proved mortal to so many persons.

“ Sir J. Pringle has indeed, delivered
“ an opposite opinion, but on grounds
“ which, in my judgment, have little
“ solidity; he observes in the note
“ lately quoted, that the window which
“ admitted the cold air, ‘ was at the
“ ‘ farthest end of the room from the
“ ‘ bench, though the judges suffered
“ ‘ most:’ it should however be re-
“ membered, that this window was
“ much higher than the heads of any
“ of those who were on the left hand
“ side of the court, and consequently,
“ that the stream of cold air passed
“ harmlessly over those who were
“ nearest the window, and gradually
“ descending by its superior gravity,
“ went uninterruptedly, and with full
“ force, to the judges, (on that side)
“ who being most elevated, were most
“ opposed to its impressions, though
“ farthest from the window; a circum-
“ stance which Sir John Pringle did
“ not think of any importance, though

“ immediately after, he stated it as
 “ probable, that the air from the
 “ window averted the putrid streams
 “ to that part of the court where the
 “ judges were seated. Certainly, if
 “ the current from the window was suf-
 “ ficient to convey the supposed putrid
 “ or infectious matters to the judges,
 “ it must have been sufficient also
 “ to communicate the effects of its
 “ own diminished temperature or cold-
 “ ness.

“ In regard to his other ground, viz.,
 “ that ‘ neither the kind of fever, nor
 “ ‘ the mortality attending it,’ could ‘ be
 “ ‘ attributed to a cold:’ it may be
 “ answered, that they are much less
 “ attributable to jail infection.

“ Unfortunately, we know but little
 “ of the kind of fever ‘ then pro-
 “ ‘ duced ;’ a circumstance for which Sir
 “ John Pringle himself is blameable;
 “ for, though he appears never to have
 “ seen a case of it, he might easily have

“ procured from other physicians, a
“ sufficient account of its symptoms,
“ (which Mr. Foster states to have
“ been much alike in all the patients,)
“ and have enabled us to judge how
“ far they were similar to those which
“ he has described as belonging to jail
“ fever. But without doing this, he
“ admits that ‘it was said, that this fever
“ ‘in the beginning had an inflam-
“ ‘matory appearance,’ which is exactly
“ that of a fever from cold, and the
“ very reverse of a jail fever. In op-
“ position, however, to this admission,
“ he adds, ‘that after large evacua-
“ ‘tions the pulse sank, and was not
“ ‘to be raised again by blisters, nor
“ ‘cordials, and the patients, soon
“ ‘became delirious.’ It will not, I
“ presume, be expected, that I should
“ undertake to account for particular
“ effects, loosely stated on the ground
“ of hearsay, without any communica-
“ tion of other facts and circumstances,

“ which, if known, might probably re-
“ move all difficulty or obscurity res-
“ pecting them. I need therefore only
“ observe that I do not consider it as
“ necessary, that fevers produced by
“ the sudden application of cold,
“ should, in all circumstances, ages,
“ and constitutions bear large (proba-
“ bly excessive) evacuations, without a
“ sinking of the pulse, or without sub-
“ sequent delirium. And in regard to
“ petechiæ, which were reported to
“ have been observed in some few
“ cases, I need only refer to p. 97 of
“ the Appendix to Sir John Pringle’s
“ work, where he notices, ‘ the under-
“ ‘ mentioned meaning of the word
“ ‘ petechiæ;’ adding, ‘ its ambiguity
“ ‘ is such, that I must regret my
“ ‘ having at all used the term.’ The
“ author had before said, in the pre-
“ ceding page, that even these spots
“ which he called petechiæ, though
“ sometimes accompanying the jail

“ fever, had no title to characterise
“ that disorder. Sir John Pringle also
“ mentions that some escaped without
“ a fever, by a ‘ looseness coming on
“ ‘ which was easily cured.’ This fact
“ I consider as eminently indicative of
“ morbid affection from the applica-
“ tion of cold, which is often observed
“ to take that course, and by doing so,
“ to obviate the occurrence of fever,
“ and other worse consequences: but I
“ have never known such an escape
“ from typhus fever. On the contrary
“ I believe that where a sufficient dose
“ of that contagion has been imbibed,
“ the supervention of diarrhœa from
“ any cause, would render its operation
“ in producing fever more speedy and
“ certain by inducing debility.”

THE END.

" fever had no title for characters
 " that disorder. Sir John Fungie also
 " mentions that some escaped without
 " a fever, by a looseness coming on
 " which was easily cured. This fact
 " I consider as essentially indicative of
 " morbid affection from the applica-
 " tion of cold, which is often observed
 " to take that course, and by being so,
 " to obviate the occurrence of fever,
 " and other worse consequences; but I
 " have never known such an escape
 " from typhus fever. On the contrary
 " I believe that where a sufficient dose
 " of that contagion has been imbibed,
 " the super-curious of disorders from
 " any cause would render its effects
 " in producing fever more speedy and
 " certain by inducing debility.

THE END.

