

THE FEVER

AT

B O A V I S T A

IN 1845—6,

UNCONNECTED WITH THE VISIT OF THE

“ECLAIR”

TO THAT ISLAND.

BY

GILBERT KING, M.D., R.N.,

INSPECTOR OF HOSPITALS AND FLEETS.

LONDON:

JOHN CHURCHILL, PRINCES STREET, SOHO.

1852.

LONDON: PRINTED BY W. CLOWES AND SONS, STAMFORD STREET.

R34581

P R E F A C E.

It has no doubt occasioned considerable surprise in the medical world, and disappointment to some of my personal friends, that I, who had furnished one of the Official Reports concerning the sickness on board H.M.S. "Eclair," and subsequently on the island of Boa Vista, should not hitherto have thought it necessary to take part in the controversy which is still maintained on that subject. And I confess that I ought long since to have noticed the attacks of Sir William Pym and Dr. McWilliam.

To a younger and more ambitious man than myself, or to one who sought notoriety, such a task might have been acceptable: to me it was not. What encouragement had I, having been nearly forty years in the Royal Navy—what inducement could I have—for entering voluntarily into a personal controversy on a subject which has seldom or never been discussed, during the last half-century, without a pitiable display of personalities and recriminations?

But there was another consideration, even more discouraging, namely, a conviction that, from the manner in which the discussion as to the contagious or non-contagious nature of Yellow Fever has been carried on, the dispute was likely to be interminable: assertions were palmed off as facts, they were contradicted and disproved; but where has been the "amende"—the honourable acknowledgment of error or mistake? Besides this, a great deal of irrelevant and extraneous matter has been mixed up with the present subject;

the testimony of incompetent and interested witnesses has been accredited, and, to heighten the effect, their evidence has occasionally been tricked out in a disguise of maudlin sentimentalism: indeed, fact and fiction have been so artfully interwoven, that the writings accumulated on the question of the Boa Vista Fever have produced such a mass of contradiction, error, and confusion, as would baffle the skill of an experienced lawyer to analyse.

I have already admitted that I ought to have written on the subject before; and I further admit, that after I had perused the remarks and observations of Dr. McWilliam and Sir William Pym on my Report, I felt that I was under a moral obligation to do so, as I possessed means of elucidating the truth. That my task has been so long in hand has been owing partly to the objections I have stated, but chiefly to impaired health, which has not been improved by the very disagreeable duty which I have thus reluctantly undertaken.

It is my purpose, in the following pages, to give a brief, plain, and connected summary of the principal incidents which preceded or accompanied the outbreak of the Yellow Fever epidemic at Boa Vista in 1845-6, and of the various statements which have been assumed as facts in the discussion, in so far as they have any material bearing on the alleged contagious nature of the disease, and its presumed importation into that island by H.M.S. "Eclair."

This, I trust, will have the effect of removing a stumbling-block which has been most unnecessarily placed in the way of inquirers.

G. K.

London, September, 1852.

THE
FEVER AT BOA VISTA

IN 1845-6,

UNCONNECTED WITH THE VISIT OF THE "ECLAIR" TO
THAT ISLAND.

THE long-disputed question respecting the contagious or non-contagious properties of the Yellow Fever, having lain dormant for many years, was revived when the unfortunate ship "Eclair" arrived at the Mother-bank from Boa Vista and the coast of Africa, and the particulars of a sad story of disease and death became known to the public.

Before many months had elapsed, intelligence was received in England that the inhabitants of Boa Vista were suffering greatly from the same disease which had been so destructive on board the "Eclair;" and as it was well known that, during the three weeks the "Eclair" had remained at Boa Vista, the intercourse of her officers and seamen with the inhabitants of Port Sal Rey had been free and unrestricted, the subsequent outbreak of fever on the island,—yes, the *same* fever, after the ship had departed,—gave a new interest to the old controversy, and led many to believe that the fever in the ship had been a contagious disease, and, as such, was communicated to the people of the island.

Under these circumstances Dr. McWilliam was dispatched to Boa Vista to investigate the matter. After an absence of (I believe) seven or eight months, he returned to England, and presented his Report; but before it was published, another most melancholy account had been received from Boa Vista,*—the fever had again broken out on the island, and was committing great havoc among the inhabitants. On this occasion I

* See Appendix A.

was ordered to proceed immediately to Boa Vista, and, on the 3rd December, 1846, embarked in the "Sphinx" man-of-war, at Devonport, and on the 23rd of the same month reached the Cape de Verde Islands.

After remaining six weeks at Boa Vista, the rest of my time in the tropics was passed on different parts of the Coast of Africa and at the island of Ascension, when I returned to England, and landed at Sheerness in the month of July, 1847.

In my Report, soon afterwards presented to the Admiralty, I expressed my belief that the disease which had prevailed on the island of Boa Vista was not a contagious fever, but was strictly of local origin.

This opinion having given rise to much controversy on the part of Dr. McWilliam,* who, on the other hand, had maintained that the disease in question was contagious and had been imported into Boa Vista by the "Eclair,"—I now propose to review the question as to the importation of the fever; to do which it is first necessary to specify the points at issue, and the pathological law which ought to govern the decision.

That the ship arrived at Boa Vista with yellow fever on board, and that the same disease broke out subsequently on the island, is admitted. The question therefore is simply reduced to the two following propositions:—

1st. Did the epidemy on the island commence within such a time after the arrival or departure of the "Eclair" as to warrant the conclusion that those events stand in the relation of cause and effect?

2nd. Were there no natural causes in operation at the time which would account for the outbreak of epidemic disease among the inhabitants, altogether independently of contagion?

In examining the various statements which have been adduced to prove that the disease was imported, we must not overlook the period of incubation. It is to be regretted that the members of the profession are not

* "Remarks on Dr. King's Report," 1848. "Further Observations," &c.—*Medical Times and Gazette*, May, 1852.

yet agreed as to the precise time necessary for developing the symptoms of disease, after the poison has been imbibed, or after exposure to contagion; but there is, nevertheless, a limit to that process, and, by the testimony of the most enlightened medical men in every part of the world, that limit does not exceed a certain number of days. This law, which, as experience teaches us, governs fevers in temperate regions, applies with equal force to the same class of diseases within the tropics.

It may be well to bear in mind that the "Eclair" arrived at Boa Vista on the 21st of August, 1845; that her sick were landed at the Fort on a small island contiguous to the town of Port Sal Rey on the 31st; that on the 13th of September the ship with the remainder of her unfortunate crew finally quitted Boa Vista; and that Dr. McWilliam has not attempted to prove that a case of Yellow Fever occurred in the town of Port Sal Rey earlier than the 12th of October.

There is yet another preliminary point to be settled. Dr. McWilliam (Remarks, note, p. 8) says: "There are not a few in the profession who would at once declare that, for all the purposes of proving infectious communication, the fact of the soldiers being within the walls of the fort was sufficient proximity." Proximity to what? Contagion or infection?

These terms have been confounded by Dr. McWilliam; there is, however, a very material difference in their proper acceptation; for instance, it may be readily admitted that a man was attacked by fever within the walls of the fort, and in consequence of being there, without at all allowing that he caught the disease from the sick.* The place was infected, but the disease was not contagious; nor was it contagious on board the "Eclair." It is desirable, therefore, that we should clearly understand the real meaning intended to be conveyed when either of these terms is used.

The various accessories connected with place, season, circumstance, &c., are referred to, when the term "infect-

* José Sancha, of the 5th Guard, did not enter the Fort until ten days at least after Alves, the last person sick there, had been removed from it, yet Sancha was taken ill on the third day after he went on this duty.

tion" is used:—"contagion," on the contrary, is derived from proximity or contact, either with the person or clothes of a patient; it is, in short, a poisonous emanation from the body of a sick person which produces the same disease in a healthy person.

Infection refers to *places* :

Contagion to *persons*.

In the 76th page of the Admiralty Correspondence on the "Eclair," Sir William Pym says,

"It is highly infectious." "It is a fever *sui generis*, and known by the names of the African, Bulam, Yellow, and Black Vomit Fever." "This fever has also a singular and peculiar character, namely, that, like Small-pox, Measles, &c., it attacks the human frame but once;" and moreover, "it is in no ways connected with malaria or unhealthy situations."

From this we may justly infer that Sir William Pym wishes to inculcate the doctrine that the disease is only propagated according to the known laws of contagion; or, in other words, that it results solely from a specific virus engendered in the bodies of the sick, producing the same disease in those susceptible persons who come within the sphere of its influence.

If this be a fair exposition of Sir William Pym's sentiments as to the "Bulam," and is also in accordance with Dr. McWilliam's opinions regarding concentrated remittents, it matters but little whether the terms, "contagion" and "infection" have been used appropriately or not. On this ground we stand directly opposed; as I am fully satisfied that it is by malaria only—a vitiated state of the atmosphere, from agents hostile to animal life—that we are to account for the origin and propagation of this disease; and, on the other hand, I am persuaded that the Yellow Fever has never been communicated to any one by a specific contagion from the bodies of those labouring under the disease.

Sir William Pym asserts that the disease which prevailed on board the "Eclair" from the time of leaving Sierra Leone until the vessel arrived in England was the Yellow, or the Bulam Fever—a disease altogether different from the bilious remittent. Dr. McWilliam, on the contrary, in his Report, p. 111, says,—

“That the fever on board the ‘Eclair’ was primarily the remittent of the African coast, which is not a contagious disorder, but that the disease acquired contagious qualities in virtue of a series of causes.”

The Doctor remarks in the preceding page :—

“To me there is no proof that the fever in question was in any degree contagious before the vessel reached Boa Vista ; and we have a right to look for proof both at Sierra Leone and the Gambia, where the evidence is against contagion” [and he might have added the West Indies also]. “At Boa Vista the reverse is the case ; for the whole history of the progress of the fever, subsequent to the landing of the crew on the small island, proves it to have then possessed highly infectious qualities. I would say, then, that the contagious properties which marked the ‘Eclair’ fever at Boa Vista were acquired or contingent, and not primarily or essentially belonging to it.” “Why did this malignant disorder rage on board the ‘Eclair,’ and not in *other vessels that were with her*? Simply because her circumstances were peculiar, and it is entirely to this peculiarity and unwonted combination of circumstances that the contagionality of the fever with which her crew was affected is due.”

It is true the “Eclair” had remained long at anchor in one of the most pestilential localities on the whole coast ; that her crew had been much employed in boat service, and in clearing out her hold and that of the “Albert ;” that she had taken in green wood for fuel at Sierra Leone ; that a large collection of mud, fully three inches in depth, was found upon that portion of her bottom occupied by the boilers and machinery ; that this mud was not entirely removed from under her flooring even at the time she was recommissioned ; that fever again began to appear in her when she returned to the African coast ; and that it has broken out on board for the third time (on the West Indian station) within the last few months. There can be little doubt, then, that there was an unwonted combination of circumstances in this ship, even in her construction,* unfavourable to the health of her crew. But what proof do these circumstances afford of the existence of contagion? None. As regards sickness “in other vessels that were with her,” Dr. Bryson informs us,

* See Correspondence, &c., p. 83.

in his valuable Report on the Climate and Diseases of the African Station (p. 171, 2), that twenty cases of fever occurred in the "Growler," off the rivers Sherboro and Gallinas, in the beginning of 1845, which "presented the closest resemblance to Yellow Fever;" and (p. 224)—

"When the holds of the 'Growler' were opened at Woolwich, after her return from the coast of Africa, two men who slept directly over the hatchway were seized with fever, and in the course of a few days they both had black vomit, and died in the Marine Infirmary."

In March the "Growler" proceeded to the Cape Verds, and the fever ceased; but, on her return to the Gallinas and Sherboro, cases of fever again occurred, and she sailed for England in August. It does not appear that the holds of the "Growler" were disturbed while she was on the station. The difference in circumstances, then, between the "Growler" and the "Eclair," was as evident as the difference in the sufferings of their respective crews. There is no reason therefore to infer that the same fever acquired contagious properties in the one ship any more than in the other, because the effects were only in proportion to the exposure to the cause, viz., the foulness of the hold.

Dr. McWilliam then has expressed his opinion decidedly, that until the "Eclair" arrived at Boa Vista, there was no proof that the fever was in any degree contagious.

The question is,—Did the disease acquire contagious properties after the ship arrived at Boa Vista on the 21st of August, and before the people were landed at the fort on the 31st?

If Dr. McWilliam assumes the affirmative—and his attempt to prove that the fever was introduced into Port Sal Rey by people from the ship, and into Rabil by Luis Pathi, implies as much—surely he must have discovered, and ought to have disclosed, some of the causes in virtue of which the disease had then acquired contagious qualities which did not belong to it previously.

“Two days after their arrival at Boa Vista the crew again commenced clearing the holds,”* while the men were on board; but I do not see how anything else which happened on board the “Eclair” during these ten days could have had any other than a salutary influence; a considerable quantity of foul linen was removed from the vessel when she arrived, and four days afterwards 17 officers and men took up their quarters on shore, thereby affording better accommodation on board, and allowing a freer circulation of air between the decks.

At p. 104 of his Report the Doctor says,—

“Several of the cases that occurred after the ship left Sierra Leone were marked by unequivocal black vomit, a symptom . . . extremely rare in the endemic fever, and regarded by all who have served in hot climates as a test of unusual malignancy.”

The essential character of the disease could not have been altered for the worse under such circumstances, unless from some local influence connected with the spot at which she was at anchor, which, I presume, Dr. McWilliam would not admit.

Sir William Pym, indeed, remarks (Observations on Dr. King’s Report, p. 3)—

“And here it is necessary to explain that the labourers had no communication with the ‘Eclair’ until some days after the sick had been removed to a fort on a small island near to Boa Vista, and after the vessel had been fumigated and whitewashed by the Kroomen; add to which, she was at anchor, and constantly exposed to the fresh trade-wind; there was, therefore, very little risk of infection from this empty and well-purified vessel.”

Nevertheless, six Africans and two men sent from the “Worcester” to clear the holds, for the third time, were taken ill at Standgate Creek.†

It seems, however, by a part of the passage I have already quoted, that Dr. McWilliam would ascribe the acquisition of contagious qualities to a later period, viz., after the sick were landed at the fort.

“The whole history of the progress of the fever, subsequent to the landing of the crew on the small island, proves it to have then possessed highly infectious qualities.”

* Correspondence, p. 88.

† Correspondence, p. 90.

We must infer therefore from Dr. McWilliam's statements, that the same disease which was in no degree contagious when the ship arrived at Boa Vista acquired contagious properties ten days afterwards at the fort.

Although the Doctor has avoided stating the precise time and place when this mysterious change occurred, he evidently considers that the disease manifested contagious properties at the fort, and that it spread over the town from that quarter. It would have been less unsatisfactory if this preliminary matter had been settled by himself; but he has in fact evaded a question which must have involved him in considerable difficulty; for if the fever acquired its contagious qualities at the fort, it follows that a contagious disease was not imported into the fort; nor could it have been introduced into the town of Port Sal Rey by the sailors who visited the grog-shop, before the sick were landed at the fort; nor to the district of Rabil, by Luis Pathi, who had not been near the fort, but was simply employed on board an "empty, well-ventilated, and well-purified vessel."

Although Dr. McWilliam, in his Remarks, makes no allusion to the persons who in his Report he said were first infected with the fever in the grog-shop at Port Sal Rey, the impression which he evidently intended to produce,—viz., a conviction in the minds of his readers of the intimate connexion between the fever on shore and the disease in the ship—was attempted in his Report; and the evidence relating to the grog-shop was welcomed by Sir William Pym as proving that the disease was thus first introduced into the town.

With regard to this auxiliary channel for the introduction of the disease into Port Sal Rey, Dr. McWilliam in his "Further Observations," says:—"It never has been alleged that Georgio, or the two prostitutes, Anna Gaspar and Rosina St. Antao, were infected by the crew of the 'Eclair.'" It appears, however, from their own evidence, that of Jamieson, and others, that those women were attacked about the same time with the two soldiers in the fort, and Luis Pathi, at Moradinha; but as we know from authority that they were

not infected by the crew of the "Eclair," whence did they derive their fever?

I am quite willing to agree with Dr. McWilliam (see Remarks, p. 10) that

"if the disease was infectious on the small island, and at Port Sal Rey, *a fortiori*, it was infectious everywhere else on the island of Boa Vista."

But how does this *a fortiori* argument agree with the antecedents of the disease? for by the same process of inductive reasoning we must admit, that, if the soldiers caught the fever from the sick of the "Eclair," the disease must have been infectious when the ship arrived at Boa Vista; it must have been so when at the Gambia, at Sierra Leone, yes, and when off the Sherboro; all which is at direct variance with the recorded avowals of Dr. McWilliam himself and "the concurrent testimony of all the medical men to whom reference could be made, both ashore and afloat."* I have already shown that during the ten days which intervened between the arrival of the ship at Boa Vista and the landing of the crew at the fort, the occurrences on board, with one exception, could only have had a salutary influence; we must therefore conclude that Dr. McWilliam refers to the disease at the fort, and not before, when he says that it ("the Remittent of the African coast") "acquired contagious properties not primarily or essentially belonging to it."

If such were really Dr. McWilliam's convictions, it is much to be regretted that he has not declared them more explicitly; he has told us, indeed, that the disease acquired contagious properties in virtue of "a series of causes," but he has not even attempted to explain the time, place, and circumstances, under which the mysterious change was wrought.

I can easily imagine that it would have greatly embarrassed Dr. McWilliam in the line of argument he has adopted, to have stated in express terms that the disease only (and first) acquired contagious properties at the fort; such a declaration would have amounted

* Mr. Macaulay, Correspondence, p. 39.

to a virtual admission that a contagious disease had not been imported at all. But still it appears to be his aim to lead us inferentially to the same conclusion.

But did the fever increase because the crew of the "Eclair" were in the fort? Dr. Bryson, in the Report on the Climate and Diseases of the African Station, p. 190, says,—

"The fever, the violence of which had apparently somewhat abated from the 9th to the 13th, seemed to have acquired additional malignancy as soon as the "Eclair" reached the open sea, and the cases became more numerous than before."

In the Correspondence, p. 89, it is also stated that—

"During the 9th, 10th, 11th, and 12th of September, the four days preceding embarkation, there were only two new cases of fever; whilst on the three succeeding days, the 13th, 14th, and 15th, there were fourteen."

Had the contagion been asleep in the fort during these four days?—or, had the noxious influence of the open and disturbed holds of the ship, to which the men had been exposed for eight days before landing, almost ceased to affect their health? The great increase of sick after the crew re-embarked, and the attack of three officers sent on board from the "Growler," to hold a survey on her stores, with the very same fever, on the 7th, 11th, and 12th of September (Sir W. Pym, Correspondence, p. 77), when the crew of the "Eclair" in the fort had begun to suffer less from the disease, give direct and peremptory replies to these questions, as the ship had then been so cleansed and fumigated that contagion must have been annihilated. These statements so strongly corroborate the opinion I have already given (see Dr. King's Report, pp. 12 and 13),—that the foulness of the hold was the true cause of the disease, that to the impartial it must appear as the only fact yet established regarding the origin of fever in the "Eclair."

The disease, however, in Dr. McWilliam's opinion, was decidedly contagious at the fort. There can be no mistake about this; I shall therefore leave him and Sir William Pym (the latter asserting that the disease was contagious when the "Eclair" left Sierra Leone,

and the former that it was in no degree contagious when the vessel arrived at Boa Vista about a month afterwards) to reconcile their different opinions as best they may, and proceed to examine the arguments they have adduced, and the grounds they allege for believing that the fever at the fort was contagious.

It may be as well to ascertain at once whether we, who differ so widely in our opinions, admit the identity of the disease at the fort with that which prevailed on board the "Eclair" when she arrived at Boa Vista.

Sir William Pym says it was the Bulam; but what are the sentiments of Dr. McWilliam on the question?—for it is with his arguments that I have to deal.

In reference to the disease at the fort (Report, p. 104), Dr. McWilliam says—

"The house in which the sick were lodged there contains only one room at all well ventilated; and, judging from the evidence of Dr. Almeida, they must have been much crowded; at all events, the fact is beyond doubt that the accession to the sick list and the mortality became much greater at this than they had been at any previous period. In short, from the endemic remittent of the African coast, the disease had, from a series of causes, been exalted to a concentrated remittent, or yellow fever."

Are we to infer from this that the disease at the fort, and on board ship, was essentially the same, and differed only in degree or intensity?—that it was simply the African coast remittent, exalted to a concentrated remittent? If so, the accessions to the sick-list and the increased mortality, for the first eight days at the fort, may be satisfactorily accounted for without the slightest necessity for having recourse to contagion.

But Dr. McWilliam evidently means something more, for he adds the following note (p. 105):

"This assumption is, I am aware, opposed to some high authorities: but it is made on a calm review of the facts of the cases before me, which seem to favour the views of those who consider a common remittent convertible into yellow fever."

And in another part of the same page, he says—

"Now if the fever which raged among the 'Eclair's' crew was

primarily the remittent of the African coast, aggravated by circumstances to an unwonted degree of malignancy, it is quite reasonable to believe that a fever of equal intensity might be grafted on an endemic of the same nature originating on the island of Boa Vista, whose geographical position is within the legitimate domain of yellow fever."

The only meaning I can extract from the above passage is: that the remittent of the African Coast was grafted on the endemic remittent of Boa Vista, and that the result was a hybrid disease, which turned out to be Yellow Fever, with contagious properties, which neither of the originals possessed primarily or essentially.

Will Dr. McWilliam or any of his partisans describe any one symptom or feature of the disease at the fort, except the supposed attribute of contagion, which had not previously occurred on board the ship?

If the disease on board the "Eclair" possessed the attribute of reproduction or transmissibility, the result of the intercourse of numerous persons with the ship and the people belonging to it must have furnished, at an early period, demonstrative proof that the fever was contagious. Let us try the question by this test.

Through the medium of four different classes of persons, the disease, if contagious, might have been communicated to the people of Boa Vista.

1st. The washerwomen, by fomites.

2nd. The persons from the shore, who visited the ship soon after she was anchored, as also the fort after the crew had been landed;—and the officers and men from the ship, who visited, not once but frequently, the greater part if not all the houses in Port Sal Rey, during the time the ship remained at Boa Vista.

3rd. The soldiers coming from duty at the fort, two of whom were placed under surveillance in a house in that quarter of the town called Pao de Varella.

4th. The labourers who had been employed on board the "Eclair," or on the small island.

In reference to the history of the fever among the washerwomen and their families, it may be observed, that the soiled linen, &c., belonging to the officers, which had accumulated from the time of their departure from Sierra Leone to their arrival at Boa Vista, on the 21st August, was landed that night, and distributed to the washerwomen the following morning.

When, then, did the disease first appear among the washerwomen and their families? And was there anything peculiar in its origin and progress which should lead us to infer that it was transmitted to them through the medium of fomites?

Both questions may be settled satisfactorily by referring to their evidence in Dr. McWilliam's Report, beginning at p. 14; in summing up which, the Doctor says (p. 82)—

"I have examined the whole of the survivors, and have found that two were attacked late in October, five in November, two in December, three in January, and one not until some time in February. None of the deaths took place until fever was general in Porto Sal Rey. So that in none of the cases can the occurrence of fever be fairly attributed to infectious matter conveyed by the linen."

Yet, notwithstanding Dr. McWilliam's late attempt to throw overboard the foul linen, I affirm that these women not only washed the linen, &c., of persons who had been ill with fever on board the "Eclair," but also of those who were then actually labouring under the disease at Boa Vista.

Will the contagionists account for this anomaly in the laws of contagion? They cannot. The disease, then, was not communicated through fomites; and I point to the fact (which is manifest from the evidence), that among the washerwomen and their families, amounting to eighty-four persons, four deaths only occurred, and those not until November, December, and January.

Secondly.—The fever of the “Eclair,” if it were contagious, might have been communicated to the people of Boa Vista by Dr. Kenny and John Jamieson, who went on board soon after the vessel was anchored, and were frequently among the sick both in the ship and after they were removed to the fort; but still more probably by the officers and men from the ship who visited many of the houses in Port Sal Rey. At present I shall confine myself to the question,—Was the fever, which afterwards prevailed on shore, attributable to the intercourse of the people from the ship with the inhabitants of the town?

Soon after the ship arrived (21st August) some of the petty officers and sailors were allowed to go on shore. In a day or two afterwards the Captain, having most humanely given up his cabin for the accommodation of the sick, went on shore also, and resided with Mr. Macaulay; and on the following day, the 26th or 27th, about twelve officers, with four servants, took possession of a house which had been prepared for them in the town: thus making, with the Captain and two servants, the aggregate number of nineteen persons, who resided in the town, and who were in continual intercourse with the inhabitants of Port Sal Rey. During this period, some of the officers went on board daily, their intercourse with the people of the town being not only unrestricted but general and indiscriminate, for my informant, (who was a capital authority!) assured me that they had been, not only the first night but frequently, in almost every house in Port Sal Rey.

Moreover, Dr. McWilliam informs us (Report, p. 82),—

“Some of the other officers, the captain’s cook, and some other servants, were taken ill at the house in Santa Barbara; but they as well as the purser were (in accordance with the stringent rule laid down by Captain Estcourt) sent to the Fort as soon as they were attacked.”

I infer, therefore, that, had the disease on board been contagious, the fever must have appeared in the town at a much earlier period; for Anna Gallinha and others

were then just as closely approximated to the alleged contagion, as they were long afterwards when visiting the two negro soldiers from the fort. Yet she, the first person who died from fever in the town, was only attacked with the disease (supposing that the date of her illness is correctly given by Dr. McWilliam) forty-seven days after her first exposure to the assumed specific virus from the people of the "Eclair," and twenty-nine days after the ship had sailed.

If, however, I understand rightly the tenor of Dr. McWilliam's remarks, we agree also on this second point, that the fever was not communicated to the inhabitants by the people from the ship who resided in the town of Port Sal Rey. Captain Estcourt, by Dr. McWilliam's account, "went to live with Mr. Macaulay on the 26th of August (p. 78), on the 11th of September was himself taken ill, and at once conveyed to the fort" (p. 79). If the Doctor means to say that the Captain went to the fort as a patient, it is not correct; he did not sleep one night in the fort: but Mr. Macaulay and Captain Buckle prove that his visits to the sick at the Fort were frequent and prolonged, in fact that "barely allowing himself time in the interval to take his meals, he passed day after day with the numerous sick in the hospital," (Correspondence, pp. 40 and 94); and his officers were on terms of friendly intimacy with all the respectable people in Port Sal Rey.

Dr. Stewart, to whom all the papers of the Medical officers relating to the "Eclair" were submitted, gives the following concise statement of some circumstances which occurred at Boa Vista. See Admiralty Correspondence, p. 88.

"1st. On the arrival of the ship, partial leave was given to the petty officers, who went into the town, and one man slept on shore. 2nd. The sick were visited by two of the resident medical gentlemen, one going on board; the other going to the fort. 3rd. There was a Portuguese guard at the fort, whilst the crew of the 'Eclair' were there, and the guard was changed three times during that time. The men mixed freely with the crew of the 'Eclair,' and two of them were flogged for selling grog to the seamen. 4th. The clothes, and particularly the bedding of the crew and convalescents, were aired daily, at least after Dr.

McClure had joined the fort. 5th. There was a good deal of other intercourse between the people of the town and the crew of the 'Eclair,' on the island, particularly where the boats were repairing; and one, a Spaniard, was particularly well known to the crew, from his smuggling habits. 6th. The officers and their servants resided in the town, as already stated; the former partook freely of the hospitality of their countrymen, and both they and their servants were often in the market. 7th. Three of the officers, who had passed through fever before their arrival, had their bedding with them in the town, and one of the three had his linen washed at Boa Vista. 8th. Some of the officers and servants were attacked with fever whilst in the town. 9th. The Captain was taken ill whilst residing in the house of an English family. 10th. The purser lived in the house of another English gentleman, when taken ill, and remained there until the day before his death. 11th. The purser went to the Consul when in a state of delirium, and not only communicated with him, but probably must have come near others."

Here then, we have not only the "germs," but the disease itself, brought into close approximation—into absolute contact—with a numerous class of persons peculiarly obnoxious to its influence had it possessed contagious properties. But was all this intercourse and hospitality for nearly three weeks followed by any unhappy result? The late Mr. Macaulay, in a despatch to the Earl of Aberdeen, dated 24th December, 1845 (ten weeks after the departure of the "Eclair"), has replied in the negative.

"No injury whatever had resulted from the unrestricted intercourse which had subsisted during the whole of the 'Eclair's' stay in the harbour, between the officers and men (not in hospital at the fort) and their friends on shore."

In our instructions from Sir W. Burnett,* Dr. McWilliam and myself were enjoined to ascertain—

"Whether it appears that the fever was communicated to any individual in the house where the sick officers and their servants resided, or to any person in its immediate vicinity?"

This important point of inquiry has been altogether unnoticed by Dr. McWilliam in his official Report, and in his Remarks on my Report, and barely noticed in his recent contributions to the 'Medical Times' on the Boa Vista Fever.

* See Appendix C.

In my own Report, on the other hand, appears the following :—

“ It does not appear from the information I have received, that fever was communicated to any individual in the house where the sick officers and their servants resided, or to any persons in their immediate vicinity. The owner of the premises, the judge, and his two servants (Europeans) re-occupied the same house soon after the ship left; one of the servants, however, was attacked with fever and died at the end of December.—(Dr. King’s Report, p. 7.)

The above facts, which are correctly given, (each incident being stated as it occurred,) do not countenance in the most remote degree Dr. McWilliam’s history of the communication of the disease to Anna Gallinha in Port Sal Rey, and to the children of Luis Pathi in Cabeçada, which is all conjectural, confused, and contradictory.

It may assist in giving a more comprehensive view of the matter, if I submit a modified table or abstract from the lists at the beginning of Dr. McWilliam’s Report, pp. 9, 10, 11, 12.

| Number of Europeans resident in Boa Vista in September, 1845. | Number who died before November. | Number who left the island before November. | Remarks. |
|---|------------------------------------|---|--|
| Portuguese . . . 56 | { 2 in September. 2 in October. | None. | The two soldiers died in the fort in September, and it is said that Anna Gallinha and José Lisboa died in October. |
| English . . . 23 | None. | 10 persons. | |
| Americans . . . } Frenchmen . . . } Spaniards . . . } | None. | None. | |
| Total . . . 86 | 4 | 10 | |

The ten persons who left the island on the 22nd of October were Messrs. Macaulay and Pettingal, and their families.

We have no reason to infer from the published correspondence of the late Mr. Macaulay with the Earl of Aberdeen, that he left the island on account of sickness amongst the inhabitants, though Dr. McWilliam would

make it appear that that was the reason for the departure of Mr. Pettingal; but might not Mr. Pettingal have gone to St. Nicolao to make arrangements for the expected marriage of his daughter with Mr. Miller? Dr. McWilliam has alluded to that anticipated event, in his Remarks. But if Mr. Pettingal left on account of the increasing sickness of Boa Vista, it is very strange that he should have returned with his wife and daughter within twenty days; and when he had returned to Boa Vista on the 11th November, and found that a malignant disease was then raging in Port Sal Rey and Cabeçada (for he could not have been kept in ignorance of the fact, had it been true), it is still more strange that he did not re-embark immediately, and flee the infected island.

There were no quarantine laws in force at that time.

Thirdly.—The third class of persons through whose instrumentality the disease, if contagious, might have been communicated to the natives of Boa Vista, was the soldiers.

Only one of the six soldiers forming the two guards that were in the fort with the crew of the "Eclair," during the first ten or eleven days, was taken ill within a reasonable time after exposure to the risk of contagion from the sick, if any risk did exist. The incubative stage (24 hours), in this case, would be almost too short to render it probable that the fever (for such it was, see query 147, Dr. McWilliam's Report) had been derived from the sick of the "Eclair." At all events, if its origin were contagion, its end was non-contagion; for, although the patient had visitors, and was nursed by his wife, the epidemic did not begin until six weeks later, and has not been traced to this source.

The two Europeans and the negro, composing the third guard at the fort, could not have entered on duty there before the 9th or 10th of September, at the time when the supposed contagion was so inactive that only two of the Eclair's crew were attacked during four days. Their chances of escape, therefore,

were greater than those of their predecessors ; but to counterpoise as it were the "inertia" of the contagion at this time, Dr. McWilliam, in his Remarks, p. 6, says, they

"were the first, in fact, the only European guards, who were sent on duty at the fort, while the sick of the 'Eclair' were there ;"

forgetting that Luis Briza, of the second guard, came from Portugal with those men in August, 1844. Both the Europeans died in the fort, the one on the 20th, the other on the 21st of September,—viz. thirty and thirty-one days after the arrival, or seven and eight days after the departure of the "Eclair."

"But," observes Dr. McWilliam, Report, p. 105, "the soldiers had, only a week before they were seized with fever, come from Porto Sal Rey, where, at least in a theoretic view, the condition of the soil, during and after the rainy season, is such as may cause fever. Assuredly many bad fevers have been attributed to less obvious causes."

Now if he will only refer to the evidence of Captain Buckle and Dr. Carter, of the "Growler," he will find that the rains had commenced before these soldiers had quitted Port Sal Rey.

I shall hereafter advert to the two negro soldiers who, it is now asserted (*Medical Times*, 22nd May, 1852), exclusively introduced the Yellow Fever from the fort on the small island into the town of Port Sal Rey, after the "Eclair" had left Boa Vista.

Dr. McWilliam here* condescends to appeal to our sympathies on account of his personal hardships and privations.

"I can only say that, during the months of April, May, and June, 1846, I examined every part of the island—on one occasion with John Jamieson and my two negro attendants, sleeping in the open air during four successive nights—making the circuit of its entire coast, traversing it in every direction, and with my barometer ascending and measuring the height of its principal mountains."

I am at a loss to understand the necessity for his sleeping in the open air even one night, for I know

* See *Medical Times*, 22nd May, 1852.

that he was well mounted at Boa Vista, and I also know that from any central point the island does not extend more than nine miles in any direction.

In the discussion of this question, the arguments in support of contagion are founded solely on the assumption that Anna Gallinha died in Port Sal Rey on the 16th of October; but of that fact we have no adequate proof, and in default of any authentic particulars of the outbreak and progress of the epidemic, we are required to substitute the oral testimony of ignorant and illiterate persons in the very lowest grade of civilized society, upon whose carefulness in observing, accuracy in remembering, and truthfulness in narrating, the exact dates, and the precise order in which the events are said to have happened, the whole case rests.

I do not mention this as a reproach to the poor, uneducated, and neglected beings who were questioned about incidents which had occurred six or seven months previously, for the educated classes had no recorded dates to refer to respecting the beginning and progress of the fever on the island. The difficulty accruing from this has been acknowledged as well by Dr. McWilliam as by myself in our official Reports.

“There is the greatest difficulty in obtaining anything like accurate information as to periods or dates.”—Dr. McWilliam’s Report, (note) p. 83.

“Is this highly important question, then, to be decided, in the absence of all recorded or documentary evidence, by the oral testimony alone, of persons in the lowest condition of civilized life, who are ignorant and uneducated, and who are always sadly perplexed when referring to the dates and particulars of memorable occurrences even in their own families?”—Dr. King’s Report, p. 3.

It is absolutely necessary therefore to examine carefully the amount and value of this sort of evidence.

1st. Silvester Jose Romess, Pao de Varella (Dr. McWilliam’s Report, p. 27), the husband of the woman who washed the clothes of two soldiers:—

“Query 315. When were you attacked with fever?—I do not know the date; but I was taken ill about the same time as Anna Gallinha was. I had fever when she died. Query 317. Did your wife receive clothes of the two above-named soldiers to wash?

—Yes, she received them the day they came from the island. Query 318. How long after your wife received the clothes was it that you were taken ill?—Three days; it might be a day or two more. Query 319. How long were you ill?—Nearly two months.”

The next question might have been, How many persons lived in the same house?—but Dr. McWilliam simply asks,

“Query 320. Was any one else in your house, besides yourself, taken ill with fever?—Yes; my child and my niece, lastly my wife.

His wife, child, niece, and himself, however, all recovered. But this is not all his evidence. Dr. McWilliam again asks, Query 326,—

“Did any one else in your house take ill?—Yes, a man named Luis Barros was taken ill in my house early in November. This man was taken ill immediately after he had buried a fever-corpsé on the beach. Query 328. Was there any one else ill in your house?—Yes; a boy, who left the island with Mr. Pettingal and family, and returned to Boa Vista in the same schooner (in which by this time Mr. Pettingal had died of fever at San Nicolao), was brought to my house ill with fever, and died in eight days with vomiting and dark bloody stools.”

Mr. Pettingal died on the 5th of December, and the “Livramento” schooner immediately after his death returned to Boa Vista, “and again landed Mrs. Pettin-gal there.”

“On the passage,” says Dr. McWilliam, p. 87, “one sailor died of yellow fever; and another went on shore ill at Port Sal Rey, where he soon died of the same disease.”

As a voucher for the first assertion, the Doctor gives no reference whatever, but the information is contained in Query 330:—

“Do you know if any sailors died on board this schooner?—I have heard that one sailor died on board.”

As to the boy, his death must have taken place about the middle of December. It appears then, from the above, that there were six persons in the family or house of Silvester. One died from fever early in November, and the other in December.

But we have a somewhat different account, from

another member of the same family in Pao de Varella. (See Dr. McWilliam's Report, p. 18.)

2nd. Antonia Romess washed clothes for the officers of the "Eclair." (Query 126)—

"What family have you?—A mother, six brothers and sisters. Query 127. Have any of you been sick?—Yes; all of us have had the fever. Query 128. Who was first attacked?—My brother. He died. Query 129. When was he taken ill?—Some time in November. Query 131. Had he been among sick people?—Yes; but he was taken ill after he had been carrying some dead bodies to be buried."

I have submitted the accounts of the outbreak of fever in this family, as it is doubted by some of the witnesses whether the disease in Port Sal Rey did not commence first of all in the house of Silvester Romess.

3rd. Manoel Affonso. (Query 298)—

"When was Manoel Affonso laid up?—He was taken ill the day Anna Gallinha died. Query 301. How long was Manoel Affonso ill?—He died after four days' illness."

The answer to the last query would lead one to believe that he died on the 21st October, but Dr. McWilliam, in his Remarks, dispatches the poor man in forty-eight hours.

"It is further true—at all events it remains uncontradicted—that Manoel Affonso, living twenty yards from Anna Gallinha's house, was dead from fever on the 18th October" (p. 8).

[4th.] "Gertrude Bent, a native mulatto woman, who had visited both Anna Gallinha and Manoel Affonso, and lived next door to the latter, was attacked with fever the day after Affonso's death, and died with the same symptoms as Anna Gallinha. [5th.] Antonio Perica had occasionally seen Manoel Affonso during his illness, and afterwards carried his corpse, as well as that of Anna Gallinha, to Rabil, for the purpose of burial; was in two days afterwards attacked with fever, which proved fatal in a very few days. [6th.] Eusebio Da Luz, who attended him (Perica), was also seized with fever, and soon died. [7th.] Pulcherra Gertrude, the widow of Perica, was also attacked, but she recovered. [8th.] Theresa Maria Jesus, who lived the second door from Anna Gallinha, and [9th.] Anna Texeira, who had occupied the same room with her, were also at this time laid up with fever, of which they both recovered. [10th.] Maria Nazarinha, another visitor of Anna Gallinha, was taken ill and died during

the illness of Anna Texeira. [11th.] Jose Carlos de Lisboa, who occupied the other house in Beira, was taken ill some time in the latter part of October, and died in five or six days." [12th.] Senhor Carvahal's son, had not "seen any sick except Lisboa, with whom he remained two nights during his illness. He was attacked with fever the day after Lisboa's death, which proved fatal on the 4th of November."—Dr. McWilliam's Report, pp. 85, 86.

To the above list I shall add the substance of the evidence of three other families who lived in the same locality — Pao de Varella. 13th. Antonia Chileco washed soiled linen for the "Eclair." (Dr. McWilliam's Report, p. 17.) Query 119—

"How many are there in the house you live in?—My mother and seven children. Query 120. Have you all had fever?—Yes. One of my brothers *was first taken ill during the sickness of Manoel Affonso, where he had visited; the rest of the family were taken ill all about the same time.* The brother, who was first taken ill is called Leandro Evera: he was in the boat that took Manoel Antonio Alves, the soldier that buried the two Portuguese soldiers who died at the fort. Query 121. Did you all recover?—Yes."

The obvious question was not put to the witness—When was your brother, Leandro Evera, attacked with fever?

According to my own notes, Antonio Chileco, or Slake, and her mother, washed linen for the "Eclair." They had five children in the house; all were attacked in November; were seen once by a doctor, who ordered enemata only. All recovered.

"[14th.] Joana Maria da Graça, washed some foul linen belonging to the officers of the 'Eclair;' lives in Pao de Varella. Had fever." (See p. 17. Query 96.) "When had you the fever?—I do not know the time; but it was after Manoel Affonso, Anna Gallinha, and many others were dead. Query 98. How long were you ill?—Twice; the first time five days, and the other time a week. Query 100. Who was first taken ill?—Myself, then my mother, and next my sister. Query 101. Did you all recover?—No; my mother died. Query 103. Had your mother seen many sick?—Yes, she had seen several, and attended on Mrs. Learner when she died."

Mrs. Learner died on the 27th of November.

The evidence of this negress to me was, that she

washed for the officers of the "Eclair," was taken ill fifteen days before Christmas, has five persons in her family: they were all taken ill the same month. Her mother, who washed also, died on the 21st of December, 1845.

15th and last. Manoel dos Santos Conceição was employed on board the launches six days, was once at the fort, but not near any of the sick. (Dr. McWilliam's Report, p. 59.) Query 1145—

"Have you had fever?—Yes. Query 1146. When?—Some time in November last. Query 1148. Had you seen any sick people before you were taken ill?—Yes, I had been with Manoel Affonso when he was sick, and was taken *ill very soon after he died*. Query 1149. Is your house near to that in which Manoel Affonso died?—Yes."

In reference to the families just specified, and to supply some additional matter for serious consideration, I shall quote for the first time from the list which I obtained through the instrumentality of John Jamieson, of the commencement of fever, and its results in Port Sal Rey:—

| | | |
|--|-----|------|
| " 1st. Jose Carlos Lisboa was taken ill and died in Nov ^r . | | |
| 2nd. Gertrude Bent | do. | do. |
| 3rd. Antonio Perico | do. | do. |
| 4th. Mary Nazarinha | do. | do. |
| 5th. Eusebio da Luz | do. | do." |

Having thus cited evidence from fifteen different families, I may ask whether Anna Gallinha who is said to have contracted the fever from the two soldiers who had returned from the fort on the small island, and died on the 16th of October, could have been the cause that—

"Each succeeding day, to the end of the month, gave two, and sometimes three cases daily, all occurring within the immediate neighbourhood of the house, where [hers] the first death took place."—*Consul Rendall's Correspondence*, p. 36.*

* "The first serious case of fever which subsequently attracted observation occurred at the house in which one of these sick soldiers had lodged; but so long an interval had elapsed between the departure of the "Eclair" and the appearance of this case of fever in the town, that we were all disposed in the first instance to attribute it, as well as *the general sickliness of the place*, rather to

To keep as much as possible within the limits of contagion, Dr. McWilliam has selected the two Portuguese soldiers who were in the fort when their comrades died, on the 20th and 21st September, as the medium of the communication of the fever from the fort to Port Sal Rey. But can the Doctor persuade us that the laws of contagion were in abeyance until then? Anna Gallinha had frequent intercourse previously with the people of the ship, even from the second day after their arrival (21st August), and for nine days before the sick had been removed from the ship. That intercourse continued until the "Eclair" left the island on the 13th of September.

In reference to the two soldiers, Dr. McWilliam says (Report, p. 85):—

"It will be recollected that Miguel Barbosa and Pedro Manoel, the negro soldiers, were, as a matter of precaution, on their return from the fort, placed in a house in Pao de Varella, instead of being sent to their quarters [the barracks] in Porto Sal Rey. It is of the greatest importance that every circumstance connected with their stay here be carefully noted, as it afterwards turned out that the *very first case* of fever in the town* appeared in the room adjoining that in which the soldiers were lodged."

"The soldiers remained at the house in Beira about eight days. They were not laid up; but it is evident that they had the germs of fever in them, by the symptoms alone which were manifest while they were there, independent of the fact of their being both soon after attacked with fever."

But what were the manifest symptoms which alone indicated that they had the "germs of fever in them," during their residence in Pao de Varella? All the information respecting those formidable symptoms is

stagnant water which had settled in great quantity at the back of the town, joined with the great heat of the weather, and the dirty state of the streets."—(See Mr. Macaulay's Letter to the Earl of Aberdeen, *Eclair Correspondence*, p. 40).

* Dr. McWilliam can only mean *the very first case from contagion*, otherwise the mention of "the general sickliness of the place" when this "the first serious case of fever . . . attracted observation" [Mr. Macaulay]—"the first fatal case in the town" [Consul Rendall]—"little, if any, attention was paid to the illness of any one until Anna Gallinha showed strong and suspicious symptoms" [John Jamieson]—must be meaningless verbiage: instead of the concurrent testimony of three witnesses, all on the spot, tending to prove that Anna Gallinha was not the very first person attacked in Port Sal Rey, though the first "serious," "fatal," and "suspicious" case.

contained in the evidence of Silvester Romess (Query 333), and of Joanna Texeira (p. 28, Query 337):—

“Were they sick?—They were not in bed, but they both complained, and were restless, and had headache. They looked ill.”

But when were the soldiers taken ill? Barbosa, having said nothing about his own illness or that of his comrade in his first examination, was properly afforded an opportunity to amend his evidence thus—

Query 234 a. “When were you laid up?—I was still complaining when I went to the barracks, and was laid up in bed the next day.” Query 236 a. “How long were you in bed?—Three or four days.” Pedro Manoel—Query 242. “How long did you remain in this house in Pao de Varella?—Seven or eight days; we then went to the barracks. In three or four days more I was taken ill with general fever, and then lived in the house of Manoel Joana, a store-keeper, when I was laid up in bed fifteen days. *I had black vomit, and was visited by the Doctor of the Governor-General.*”

Both these men declared to me that they were seventeen days in the hut at Pao de Varella, and it appears that they were attacked with fever after their return to barracks.

The only authority for the dates of the attack and death of Anna Gallinha is the oral testimony of John Jamieson. It is but just therefore that his evidence should be impartially weighed, and that also of any other authority which Dr. McWilliam can even now produce in support of his case. (Dr. McWilliam’s Report, Query 290)—

“About what time was Anna Gallinha taken ill?—I am not quite sure, but I think about the 12th of October last year. Query 286. How long was Anna Gallinha sick?—Only four days.”

Apparently conscious of the vague and doubtful character of this kind of evidence, Dr. McWilliam (p. 85), when referring to the case of Anna Gallinha, says,—

“It is not easy to ascertain dates with precision; but it is probable that this woman was taken ill on the 12th and died on the 16th October.”

But notwithstanding this admission, that date is gratuitously assumed as a positive fact, and becomes the basis on which the Doctor has constructed the elaborate but artificial hypothesis which has been so

much admired, and which is to convince the world,—at least “all thinking men,”—that the fever of the “Eclair” was a contagious disease.

We have already ascertained that the soldiers were both attacked with fever after their return to barracks, and it appears from the evidence of Joanna Texeira, that Anna Gallinha was taken ill “just after the soldiers left the house: it might be several days;” but there is no direct evidence as to the precise date of attack in either of them.

In Dr. McWilliam’s Report (p. 23) we find the two following queries, with their answers:—Query 234a. Miguel Barbosa,—

“When were you laid up?—I was still complaining when I went to the barracks, and was laid up in bed the next day. Query 238. Was any one then sick in the barracks?—Yes; Luis Briza.”

Luis Briza was only sick then, he was not dead, when the soldiers returned to the barracks, and before they were attacked with fever. But it appears from the official documents of Joao Antonio Mascarenhas, Brevet Major and Military Commandant, furnished to Dr. McWilliam and myself, that Luis Briza died on the 12th of November; and I find in my records of the fever at Boa Vista (which I am willing to submit to inspection) that Luis Briza died with black vomit after an illness of four days only.

It is clear therefore that Miguel Barbosa was not taken ill until November, and it would be absurd to suppose that he could have been the cause of the illness of Anna Gallinha, (who it is said died in October,) or that the germs of this “highly infectious” fever should have remained dormant in his system from the 21st of September to the 8th of November—more than six weeks!!

After all this tiresome exposition, then, will Dr. McWilliam, or any other subtle casuist of the same school, tell us—for proof is entirely out of the question—whether Anna Gallinha caught the disease from the negro soldiers, or the soldiers from Anna Gallinha?

Fourthly. The fourth and last class of persons who

might have introduced a contagious fever into the island, were the labourers who had been employed on board the "Eclair," in the launches, and at the coal-heap on the small island.

Dr. McWilliam in his Remarks, p. 10, says,—

"And here I must, with every respect for Dr. King, correct a grave error into which he has fallen, the influence of which is apparent in his Report throughout, in supposing that the circumstance of exposure to whatever morbid influences may have been on board the 'Eclair,' or at the fort, were exactly the same in the persons of the soldiers and labourers. He says (p. 6)—'How did it happen that the disease (if contagious) was not introduced into the town at an earlier period by the labourers, who were quite as much exposed as the soldiers to its presumed fatal influence, and were daily employed from the 1st until the 13th September, associating freely with their acquaintances, and sleeping every night in their own houses in the town?'

"Now, instead of the 'labourers being quite as much exposed as the soldiers,' &c., it is hardly possible that two bodies of men could have held positions more diametrically opposite to each other than they did, with reference to the 'Eclair' and the sick crew at the fort. No labourer (with the exception of Portajo, the slave who died) ever was within the walls of the fort, although some were at the gate to get water, while the 'Eclair' was there; but most if not all of the labourers were at one time or another on board the 'Eclair.' On the other hand, no soldier was at any time on board the 'Eclair;' but all those who composed the several guards were, of course, in the fort with the sick."

In the fourth page of my Report I have said that it does not appear to me at all probable that fever was contracted by the labourers (except perhaps in one instance) even from the malaria which certainly existed at that time on board the ship. Does not this clearly imply that the labourers were exposed to the cause or causes of fever belonging to the ship?—although none of them, except Luis Pathi, were attacked until long after the "Eclair" had left the island.

Is it not equally plain in Page 6, that the soldiers were not exposed to the same causes on board ship? "The soldiers were never on board the 'Eclair.'"

Where, then, I ask Dr. McWilliam, is the grave error which he has been constrained to correct; and what does he mean by saying the influence of this error is apparent in my Report throughout?

It might be inferred from the above paragraph, and some other passages in Dr. McWilliam's Remarks, that he wishes to make a distinction between the cause or causes of fever in the labourers and washerwomen who had intercourse with the ship, and in the soldiers who had only intercourse with the "Eclair's" people in the fort. If I am right in this conjecture, it is a pity that he has not said so plainly in his official Report; and it is still more to be regretted that we are left even now in considerable doubt as to his opinion on this point.

In the general line of argument which I have pursued on this question, it has been my aim to prove that the fever of the "Eclair" was not a contagious disease, and therefore that it could *not* have been communicated to the inhabitants of Boa Vista by any of her crew; at the same time I have carried on the discussion in the firm belief that Dr. McWilliam himself, referred to the "Eclair"—"the fever-stricken ship"—as the radiating centre of infection, and the cause of all the disease on the island; I have assumed also, that it was in corroboration of these views that Dr. McWilliam has endeavoured to indicate the course of the fever from its origin to different parts of the island.

To the district of Rabil, by Luis Pathi, one of the labourers who had been employed on board the ship; to that part of the town called Biera, by the two soldiers who returned from the fort; or according to Sir W. Pym, to the spirit-shop in Port Sal Rey, by some of the people belonging to the "Eclair." These were the channels through which, according to Dr. McWilliam, the fever spread over the whole island.

I maintain, therefore, that I have fallen into no error; and Dr. McWilliam might with more propriety have spared the assertion that the influence of this error is apparent in my Report throughout.

The explanation contained in pp. 97, 98, will account for the difference in the number of the labourers in Dr. McWilliam's Report and my own; but it would be in vain to attempt to reconcile the numerous discrepancies as to the dates of the commencement of

the fever in these men or their families who resided in the different villages.

The villages scattered over the island are not very numerous, and we may as well take them in regular order, for the purpose of showing if possible when the first case of fever occurred, and of ascertaining the date of the first death from fever in each village.

1st. "Estacia, Povoação Velha, or Old Town.—The town is very well supplied with water; the houses are all small and rather irregularly built; still there is a degree of neatness and cleanliness about the village."—Dr. McWilliam's Report, p. 91.

Several of the women who washed for the officers, and a number of the labourers who were employed about the "Eclair," resided in this village; two of the labourers were amongst the first attacked—1st, Gregorio Tavares, negro slave, aged 25; he went on board the "Eclair" soon after she anchored at Boa Vista, put several bags of foul linen into the boat, and came on shore with John Jamieson; was patroa of Mr. George Rendall's launch, and his duties led him to the small island every day; had fever, could not say when, but believed he was the first person taken ill in Estacia, and names João Maria Berba (610) as the next case. Though his statement regarding himself is confirmed by Theophilo Gomez (835), Dr. McWilliam says there is "strong reason to believe" that the disease was introduced either from Rabil, by João Chico Fernandez, and his sister Libania; or from Port Sal Rey, by Justinian da Britho. The evidence (1084, 1101, 1369, &c.), however, is too weak and contradictory to enable the uninitiated to say from which source the disease was introduced, and the opposite testimony is rejected. In dealing with the evidence in this fashion, there can be no difficulty in making it appear that the disease was communicated by intercourse.

In the villages of the district of Rabil we will begin with, 1st, Estacia de Baixo: the first person attacked there was

"Felina Rosa, who was taken ill some time in the latter end of November, after returning from Port Sal Rey. She died after four days' illness. Her brother, José Lorenzo, who nursed her,

was seized some time in December, and was ill nearly a week, when he died with suppression of urine and black vomit. *A great proportion of the people in the village had attacks of various degrees of intensity; but among a population of 256, only three deaths took place*" (Dr. McWilliam's Report, p. 90);

and one of the three fatal cases came from Port Sal Rey. It is said elsewhere (*ibid.*, p. 106),

"that Moradinha, which is situated in the Rabil Ravine, and Estacia de Baixo, which overlooks it (both of which places have always come in for a great share of remittent fever at any time that disease was prevalent), were in a *most unaccountable degree exempt from fever during the late epidemic.*"

But it has just been seen that in Estacia de Baixo "a great proportion of the people in the village had attacks of various degrees of intensity:" which statement are we to believe?

At Moradinha, again, where Luis Pathi was taken ill in September, and is alleged to have infected Varella and his wife (*vide note to Dr. McWilliam's Report, p. 90*) within three weeks after Pathi left the village,—

"No other case of fever occurred until some time in December, when a woman called Magdalena Maria Spence came sick from Rabil, and died shortly afterwards. Her brother, Julio Gomes Centento, also died of fever; [when?] and a boy called Cæsario Antonio was taken ill and died in January. These were the whole of the deaths that occurred among a population of 101, about half of whom were said to have been attacked with fever." (Report, p. 91.)

Yet we are told Moradinha was "in a most unaccountable degree exempt from fever during the late epidemic."

Dr. McWilliam, in his Remarks (p. 12), "regards these localities [as] being physically favourable to the development of fever poison," and insists on their alleged "unaccountable exemption" as a reason for assuming that the disease was infectious. But if the mortality in Estacia de Baixo and Moradinha was trifling in comparison with other villages, though in the one "a great proportion," and in the other "about half" the population "had attacks of various degrees of intensity," this decided advantage could only be owing to sheer tenacity of life, if the disease had been

contagious. On the contrary, if the fever arose from malaria, the situation of these villages to windward of the "green foetid pools" of the Rabil ravine, which exerted such a baneful influence on its spread and mortality in Cabeçada, to leeward of them, affords a rational explanation of an exemption which is utterly unaccountable on Dr. McWilliam's hypothesis.

Boaventura adjoins Cabeçada, but stands to the north on a higher elevation; it is built on one of the highest ridges of the ravine; you have to descend to visit Cabeçada and the other localities. The houses are of a better description, and the inhabitants a superior class to the occupants of houses in any other part of the district. Their doors and windows are all on the lee side, for they all have an instinctive dread of the current of wind even during the day. Dr. McWilliam says (Report, p. 89)—

"The inhabitants there were extremely careful in having as little intercourse as possible with the people of Cabeçada; and their precautions seem to have been so far effectual, for it seems highly probable that there was no case of fever in Boaventura before the 15th of November."

In page 90, however, he tells us,

"The months of November and December were the most fatal in Cabeçada; and in Boaventura from the middle of November to January."

He had just before said the first death in Boaventura occurred on the 20th November. I think Dr. McWilliam would have done better to have ascribed the more tardy appearance and lower rate of mortality of the epidemic in Boaventura, compared with Cabeçada, to the more advantageous position of the former, rather than to a suspension of intercourse; for the disease was later in appearing, and still less fatal, both in Estacia de Baixo and Moradinha, to windward of the ravine, with which villages the intercourse was perfectly free.

In the history of the outbreak of fever at Boaventura, a most singular contrast between this village and Cabeçada is presented to us. Luis Pathi introduces the fever to Cabeçada, within less than a stone's throw

from Boaventura, about the 24th of September; and after a considerable or indefinite time the people about him sicken and die in succession, and the fever rapidly extends over Cabeçada, "especially in a south-western direction." (Dr. McWilliam's Report, pp. 89 and 107.)

Such was the effect of the removal of Luis Pathi from the low and sheltered hamlet of Moradinha to his home in the village of Rabil, usually sickly at this season. With the somewhat suspicious exceptions of Varella and his wife (Query 662, p. 43) there was no fever in Moradinha (where Pathi lay for the first week) until December, when fevers usually appear there (Query 551). At Cabeçada, however, Pathi was to leeward of the "large green fœtid pools, with all kinds of decomposing matter," (Report, p. 88,) in the Rabil ravine; and as the prevalent wind was from the north-east, the disease naturally extended in a south-westerly direction; for we cannot believe that all Pathi's visitors came from that portion of the village.

We have no date to show accurately either when the first child was attacked, or when the first death occurred in the village.

At Boaventura the reverse is the case; it is the principal village, and many of the inhabitants are intelligent men, who gave dates both to Dr. McWilliam and myself.

How then was the fever imported into Boaventura? On the 15th November Mr. Pinto was brought from Port Sal Rey, labouring under fever (he died on the 20th); soon afterwards Rosa Fortes came to her father's house in Boaventura, from Port Sal Rey, also sick, but it was after the death of Miss Pettingal (24th November). And finally, to introduce beyond all doubt the Yellow Fever "more solito," the Doctor adds:—

"About the same time, or very shortly afterwards, a slave belonging to Cecilia de Britho, who had gone stealthily during the night to Cabeçada, was attacked with fever."

Yet the common thoroughfare from Cabeçada and every village of the district to Port Sal Rey was through the centre of Boaventura.

His mode of dealing with the evidence respecting

these two adjoining localities presents a singular contrast, and it will perhaps surprise the reader to find in Dr. McWilliam's official Report, that the evidence of two different witnesses, each preferring nearly an equal claim with Luis Pathi, to have been instrumental in conveying the fever to Rabil, has been set aside. 1st. Luis Santos Nazario (Report, p. 52. Query 956),—

“When were you attacked?—Four or five days after Luis Pathi was.”

2nd. Antonio da Cruz, was employed on board the “Eclair” five days (Query 966).

“How many were sick before you were?—I am sure I was among the first taken sick at Boaventura.”

Those cases would not have suited Dr. McWilliam's purpose; the interval was too great between the outbreak of the disease within the village and any fatal result, seeing that the first death occurred on the 20th of November, about ten weeks after the “Eclair” had sailed from the island.

In the eastern villages I find that two soldiers, who had just arrived from Port Sal Rey, were laid up with fever in João Gallego on the 2nd of November (Queries 476 and 1579); but Lieutenant Santos found no sick there on the 29th of that month (Query 496-7). Nevertheless, Dr. McWilliam (p. 92) traces the disease through three families, as if it had spread immediately after the arrival of these soldiers.

In Fundas das Figuieras “one man is said to have been ill with fever at this village in October” (p. 92). Fever was a second time introduced from Rabil about the 19th of November; still Lieut. Santos found “only one sick” (Query 497) on the 29th, and “there was no farther extension of the disease until the middle of December (Report, p. 93), when it was a third time introduced from João Gallego, in spite of Dr. Almeida's cordon, and it now spread among the population.

By Dr. McWilliam's account (Report, p. 92), the fever was introduced in the following manner to Cabeça dos Tharafes, at the end of October :—

“ A young mulatto girl, daughter of a Captain Aniceto, arrived at the village from Port Sal Rey, where she had been living in the house of Antonio Joaquim Lima, where there was fever, and was herself the next day taken ill.”

There was no fever in the house of Antonio Joaquim Lima in Port Sal Rey until November. The three villages are only separated about a mile and a half from each other, and the aggregate population was not more than 1508 persons, young and old.

It will be advantageous to compare the evidence respecting the first cases of fever which occurred amongst the labourers, as it was given to Dr. McWilliam and myself, in our respective examinations. And as Dr. McWilliam asserts more confidently in his Remarks than in his official Report, that the fever was introduced into the district of Rabil by an individual who had been on board the “ Eclair,” it is important to bear in mind the admission made in his Report, p. 108, viz., that—

“ He (Luis Pathi) was indeed on board when the sick were brought on board from the island, but so were also nearly the whole of the other labourers,”—(amounting to eighty-seven persons.)

If such was the case, all must have been equally exposed to the morbid influences belonging to an infected ship, and to the risk also of fever from the crew, assuming that the sick laboured under a contagious disease.

According to Dr. McWilliam (Report, p. 88), Rabil is divided into two districts, Cabeçada and Boaventura. My information from the Vice-Consul was, that the whole district—and it was by no means extensive,—was called Rabil, and contained Boaventura and Cabeçada, close to each other; and at a little distance, Chain de Losna, Senhore das Dores, and Estacia de Baixa, with a population altogether of about 1400 persons. Povoação Velha (Old Town) is several miles distant, and was not included in the district of Rabil. I have thought it necessary to state these particulars; because in my Report not only the small hamlet of Moradinha,

but all these villages were referred to when I used the general term, "the district of Rabil."

I now proceed with the case of Luis Pathi, who was the first person said to have been attacked with the "Eclair" fever in Boa Vista. Dr. McWilliam has invested this man's case with great importance, and has attempted to shew the rapidity with which the disease spread from his house (after a considerable time, however) to the other inhabitants of Cabeçada. According to the Doctor (Report, pp. 42-89), Luis Pathi was employed on board the "Eclair" eight days, and in that time he was occupied nearly one day in pumping water on the lower deck. He returned to his own house at Rabil every night, and also when the ship sailed on the 13th of September. On the next day he paid a visit to a friend at Moradinha (about half a mile east of Rabil), where a festa was being held, and was there taken ill with fever about three days after he left the ship; and, eight days after his attack, was carried to his own house. One of his daughters, aged 12 years, was taken ill some time about the beginning of October, and died in three days, with delirium and black vomit. After this event, his two remaining children and his wife were taken ill in succession, and also died with the same symptoms, but the last (his wife) after an illness of fifteen days.

Dr. McWilliam, in his Remarks, p. 11, says,—

"There was strong suspicion of his having taken a coverlet belonging to one of the officers of the ship; above all, he was on board the day the sick were re-embarked from the fort, and assisted in hoisting them in."

Having thus stated the case of Luis Pathi, as it appears in the Report and Remarks of Dr. McWilliam, I must contrast it with the same man's evidence given to myself.

He was employed two days on board the "Eclair," was taken ill at a dance, and when engaged in the dance, at Moradinha, on the evening after the "Eclair" sailed from Boa Vista. The disease was very mild and lasted only a few days, and he then returned to his own house. His three children were taken ill in succession, about a

month afterwards, and died one after the other; and last of all his wife was attacked with the fever and died about the middle of November.

Whether the man was on board the ship two or eight days is a matter of no moment, as in my Report, p. 5, I did not fail to note the possibility of his having contracted the fever from the same miasmatic cause on board, which I then suspected induced the disease in the ship's company; and Dr. McWilliam, in his Remarks, p. 11, evidently implies that Luis Pathi inhaled the contagion on the last day of his services, when he assisted in hoisting the sick on board.

The disease, therefore, may be referred to exposure to the influence of either of those supposed causes: he was liable to fever from the malaria in the ship; and when hoisting in the sick he might have caught the disease (if contagious) directly from the sick crew. But on what authority does Dr. McWilliam assert in his Remarks, that Luis Pathi assisted in hoisting in the sick? In his evidence, in Dr. McWilliam's Report, the man states that he was employed on board taking in water and coals, but not one word about hoisting in the sick.

This man's disease (ephemeral fever, no doubt) may be ascribed to a third cause, on grounds equally tenable: he was taken ill suddenly when engaged in the dance at Moradinha.

I have stated the 14th as the date of Pathi's attack, but Dr. McWilliam gives the 17th of September; and to prove, I suppose, that the latter is the correct date, he informs us in his Remarks that the 14th of September was the Festa of the Holy Cross. But was the festa celebrated in any other manner than drinking and dancing? I am quite assured it was not, and I am equally certain that the dance began on the 14th, and that Luis Pathi bore a part in it. The same man during the whole time that he was employed about or on board the "Eclair" walked nearly four miles every morning to his labour; and, after a hard day's work, walked home every evening to Rabil. If, then, Dr. McWilliam's date (17th) is correct, Pathi's remain-

ing three days and nights at Moradinha, not half a mile distant from his own house, is unaccountable, considering his domestic habits; if, on the other hand, he was attacked with fever on the 14th, his absence from home was unavoidable.

Supposing, however, that Luis Pathi was attacked with fever on the 17th, and that he had been exposed to infection on the 13th, when he is said to have assisted in hoisting the sick on board, we cannot but infer that the same specific poison (emanating from the bodies of the sick) then possessed a virulence equally dangerous to all within the range of its influence, and which must have been recognised not only in the features of the disease in the individual, but in its immediate transmission to all who approached him during his illness. Was this the case in any one of the three particulars I have stated? I shall be able to prove the contrary even from Dr. McWilliam's Report, and that the results afford no evidence whatever that the disease was contagious.

In the first place, of the 87 labourers who were employed about the "Eclair," 48 resided in Cabeçada, which, Dr. McWilliam says, "contains 120 "small hovels, rudely constructed of sandstone, and "much crowded;" five labourers escaped the fever altogether; four others, including Luis Pathi, are said to have had fever in September and October; and the remainder when fever was general in November, December, January, and February—two, three, four, and five months after the ship had left the island.

In the second place, there is not one symptom recorded in the account of the illness of Luis Pathi which warrants the conclusion that he laboured under Yellow Fever, or any malignant disease. And lastly, there is no proof that any other individual in the district of Rabil had fever until the middle of October (if even then), nearly one month after Luis Pathi was attacked.

It is not Dr. McWilliam's fault if any doubt is entertained as to the fact of the infection of Luis Pathi by contagion; for, in addition to the supposed risk to which he and many others were equally ex-

posed from having been on deck when the sick returned on board from the fort, it is insinuated, and from repetition more than insinuated, that Luis Pathi was pre-eminently exposed to the operation of the pestilential virus through the medium of fomites. Either of the supposed causes, if supported by sufficient evidence, might have led to conviction; but the necessary facts being defective, if not altogether wanting, we are left to take one or the other, or both together, as it may suit our different tastes or purposes.

But on what ground is Pathi charged with theft? Merely on vague, and I believe unfounded, suspicion. The wish, perhaps, was father to the thought.

In the examination of Luis Pathi (Report, Query 649) he is asked by Dr. McWilliam, in the most bland and insinuating manner, and with a heart no doubt overflowing with benevolence, "Did you not take some small article of clothing, which you got on board the 'Eclair,' with you to Rabil?"

The man might have honestly bartered melons, or pumpkins, or even "agua diente," with the sailors in exchange for "some small article of clothing;" but this was not sufficient, for all the labourers might have done the same, and Dr. McWilliam was too much on his guard to put the plain question,—Did you not steal a coverlet from one of the officers of the ship?

In reply to Dr. McWilliam's question, he said, "No, I took nothing but what I had on my back." The denial is direct and peremptory; and as Dr. McWilliam made no successful effort to substantiate the charge, it might have been expected that this part of the examination would have been expunged from his notes. The point however was too important to be conceded; the bare fact that the man was on deck, when the crew of the "Eclair" returned on board from the fort, could not be considered conclusive that he caught the fever from the sick, and therefore we are to take it for granted that Luis Pathi was doubly exposed. The first being insufficient, the second is added and still insisted on as a sort of make-weight to the argument.

There is another statement in the evidence of Luis

Pathi in Dr. McWilliam's report which I think it necessary to notice, although it may appear unimportant. Having been ill about eight days at Moradinha, he was carried to his own house, "where, after a long but *not violent* attack, he recovered;" which seems to imply that he laboured even then under the fever; if so, why was he not carried to his own house the first day after he was attacked? Now all this is quite at variance with the account I received from Luis Pathi subsequently: indeed, from what he stated on that occasion, it did not appear to me at all probable that he had suffered from any peculiar or specific disease, but merely from what is sometimes called ephemeral fever. John Jamieson, the consul's storekeeper, however, one of my interpreters, who was quite as decided a contagionist as Dr. McWilliam, and just as anxious to make converts to his opinion, endeavoured (when I was at Rabil and examined Luis Pathi) to place the case before me in a different light: recollecting no doubt the particulars of the former examination by Dr. McWilliam, he contradicted the man in English, which the other did not understand, and assured me that Luis Pathi had been very ill indeed, had been carried home from Moradinha, and moreover had been suspected of stealing a blanket.

This information was new to me, and, being different to what Luis Pathi had stated, I requested Signor Baptista, at whose house in Boaventura the examinations were carried on, to put a few questions which I suggested, for the purpose of ascertaining the real facts of the case, or at least of learning the man's own version of the story.

His replies were, that he had only slight or mild fever at Moradinha, that he was never seriously ill, and that instead of having been carried home, he walked without assistance; and in the presence of a considerable number of his neighbours in Cabeçada, and fellow-labourers on board the "Eclair," he boldly and emphatically challenged any one to prove, or even to assert, that he had taken or stolen anything from the ship. I could not have anticipated that Dr. McWilliam

would have ventured to dress up so meagre an incident in a garb so attractive and imposing.

First, the man is accused of theft; and here are the grounds of the charge. In Dr. McWilliam's report, (Query 649)—

“ Did you not take some small article of clothing, which you got on board the ‘ Eclair,’ with you to Rabil?—No; I took nothing but what I had on my back.”

Again, in a note, p. 89, Dr. McWilliam says, “ This man was generally believed to have, with Manoel Affonso, taken some clothes from the ‘ Eclair.’ He, however, stoutly denied the accusation, and I could not bring it home to him.” Notwithstanding this, however, Dr. McWilliam again, in reference to Luis Pathi, tells us (p. 108) “ that the medium of infection ” was “ *possibly* the clothes which he is *supposed* to have obtained surreptitiously from the fort.”

Unable to prove the stealing of a coverlet from the ship, Dr. McWilliam gratuitously substitutes a “ supposed ” theft of some clothes from the fort. Yet in Remarks, p. 11, the charge resumes its original shape:—

“ There was strong suspicion of his having taken a coverlet belonging to one of the officers of the ship.”

Now will Dr. McWilliam rest the issue of his cause on the assumption that Luis Pathi stole a blanket, or coverlet, or any other “ small article of clothing,” either from the ship or the fort? There is not a tittle of evidence to support the charge, which the Doctor admits his inability to substantiate, at the same time that he disingenuously assumes it to be true.

It is certain that all the soiled linen belonging to the officers was taken on shore when the ship arrived on the 21st of August. Now, assuming Dr. McWilliam's version to be true that Luis Pathi was employed on board eight days, and that the last and 8th day was the 13th of September, his first visit to the ship must have been on the 6th of September; but the crew and the sick were not then on board; they had been removed to the fort seven days previously; and even before that removal the officers with their servants took up their residence in Port Sal Rey.

If anything, then, was stolen (of which there is no proof), the article had no doubt passed through the process of washing and bleaching on shore, for it seldom if ever happens that naval officers in the tropics take soiled linen to sea. But it is unnecessary to prolong this part of the discussion, as, in the face of his own admission, when speaking of the washerwomen who had in their possession the whole of the foul linen belonging to the "Eclair"—that "in none of these cases " can the occurrence of fever be fairly attributed to infectious matter conveyed by the linen"—Dr. McWilliam nevertheless takes much pains, with little success, to furnish Pathi with the additional means of contagion by the gratuitous assumption that he committed the larceny of a coverlet or blanket from the ship, or clothes from the fort.

The only question, then, remaining, as regards Pathi, is, whether he was infected with fever by the operation of contagion while on board the "Eclair" with "nearly the whole of the other labourers" on the 13th of September, when the crew and the sick returned on board? The question is answered in the affirmative by Dr. McWilliam in his Remarks on my Report, p. 11: "Above all, he was on board the day the sick were re-embarked from the fort, and assisted in hoisting them in." I repeat that Luis Pathi, when examined by Dr. McWilliam, said not one word about hoisting in the sick. The Doctor then proceeds: "It may be said there were others on board at this time who were not attacked when Luis Pathi was." Did Dr. McWilliam at that time solve the doubtful question in favour of contagion? No. But in his Remarks (p. 12) everything is made smooth and "comfortable," and we have the solution:—

"It is answered that Luis Pathi's case bears every evidence of being a positive instance of infection, which is not to be controverted by any number of mere negative results."

I assert that Luis Pathi's case bears no evidence whatever of being a positive instance of infection, and I appeal to every man of common sense for a decision, when I submit for consideration the fol-

lowing extracts from Dr. McWilliam's Official Report (p. 108):—

“ Yet in one case only was a labourer connected with the ‘Eclair,’ the first person attacked in any of the villages (Luis Fortes Pathi, at Cabeçada), and none of the washerwomen were among the first laid up in Port Sal Rey. Facts such as these would indicate that the fever only propagated itself to those who approached others under its influence. The case of Pathi, just mentioned, forms, however, a marked exception to this, as in his case the medium of infection seems to have been either something in the ship while the sick were on shore, or some of the healthy crew, or possibly the clothes which he is supposed to have obtained surreptitiously from the fort.* He was indeed on board when the sick were brought on board from the island, but so were also nearly the whole of the other labourers.”

And again, in p. 110, after speculating as to the cause of fever in Maria dos Prazeres, Dr. McWilliam says,—

“ If this explanation be correct, it is the only case, with the exception of that of Luis Pathi, which was brought under my notice as having been communicated without direct intercourse with the sick.”

Lastly, the Doctor states (p. 111),—

“ That the fever was propagated throughout the island almost exclusively by direct intercourse with the sick, there being only two cases in which there appears any probability of persons having been infected in any other way.”

Here it is clear that Luis Pathi was one of the two exceptional cases.

Notwithstanding all this, however, it is now boldly asserted by the same writer that the case of Luis Pathi is a positive instance of infection from the poison of contagion!

As there were four persons employed as labourers, including Luis Pathi, who it appears from Dr. McWilliam's Report (the dates being taken from the tables) were attacked with fever in September and October, we shall now proceed to analyse the evidence in the three remaining cases.

The second person then attacked with fever, who had been employed as a labourer, was Luis Santos

* Not from proximity to the sick, be it observed.

Nazario, living at Boaventura. This man (950, p. 52, Dr. McWilliam's Report) had been employed in coal-ing, and whitewashing the hold; and on being asked, "When were you attacked? he replies (956), "Four or " five days after Luis Pathi was."

Now are we to consider this as a case of the "Eclair" fever? The man had not been near the fort; it does not appear that he was on board the ship when the sick were re-embarked; and he is not charged with stealing any "small article of clothing;" how then, or from whom, was the disease caught? It is an interesting question, as Dr. McWilliam has not told us explicitly that the fever possessed contagious properties until after the crew of the ship were in occupation of the fort.

If the disease was the "Bulam" fever, and "highly contagious," it must be admitted that the man would have carried with him the seeds of the disease from the ship to Boaventura, where he was taken ill; but the fact ought to have been demonstrated by subsequent occurrences in the village.

That kind of proof to which Dr. McWilliam is so favourably inclined, and which he has spared no trouble to elicit in all his examinations, is totally wanting here,—for even supposing that Luis Santos was attacked at the end of September, and was ill three days, it is necessary to know when the next case of the "Bulam" fever occurred at Boaventura. The following sentence from Dr. McWilliam's Report (p. 89) solves the question, and something more:—

"It seems highly probable that there was no case of fever in Boaventura before the 15th of November,"

More than two months after the 'Eclair' had left the island. In a note, however, Dr. McWilliam surmounts this difficulty by saying,

"His case was very slight by his own account, and nobody else seems to have heard of it."

After the above case, I cannot resist the temptation of bringing under the notice of the reader its counterpart from my own official Report.

Pedro Ascensoa in my list (see Dr. King's Report,

p. 15) stands next to Luis Pathi, as having been the second person attacked with fever of all the labourers; and the following extract from my notes contains the substance of what he communicated to me at Rabil:—

“ He was employed five days on board and at the fort, and mixed freely with the people of the ship. He lived in a house with 14 persons, and was attacked with fever in October; the others were taken ill in November; one of them died in that month. They had no doctor or medicine.”

But I find that Dr. McWilliam examined the same man eight months previously, and after the first epidemy had terminated; what then was the result of that examination? (See Dr. McWilliam's Report, p. 60, Query 1167).

“ And you yourself were never attacked?—No, never.”

And again, p. 62:—

“ Pedro Ascensoa had not fever.”

The man probably had not been attacked with fever at all in either 1845 or 1846, but when I was there I could not help observing that everybody seemed to consider that his own personal interest depended on establishing the fact that he had suffered from the “Eclair” fever; and this fellow, having missed the first, availed himself of the second opportunity, which my mission afforded him, of putting in his claim for compensation by making himself a sufferer.*

* In my Report (p. 3) I adverted to the coincidence of the arrival of the ship and the subsequent outbreak of fever on the island, as likely to lead superficial observers to the conclusion that the one was a natural consequence of the other, and at the same time stated my reasons for doubting the competency and credibility of the witnesses on whose vague oral testimony it was inferred that the disease manifested contagious properties. Notwithstanding the assertions freely hazarded, I entirely disbelieved, from my previous experience, either that all the inhabitants had been attacked with fever or that one-twentieth part of them had suffered from black vomit; for I have had, in the course of my practice, many negroes and coloured persons labouring under fever committed to my care during the prevalence of epidemic yellow fever, and I never in any such case witnessed the symptoms of black vomit or yellowness of skin.

During one of my excursions to Rabil for the purpose of examining persons who had been in any way connected with the “Eclair” (my visit had been announced some days previously), about thirty or forty persons, who represented in their features and complexion the different degrees of blood, from the pure African to the free denizens of Europe, assembled in the presence of Senhor Baptista and John Jamieson at the house of the former. They had

We come now to the third of the four earliest cases of fever amongst the labourers, viz., that of Manoel da Silva Marques, who informed me that he and two other persons in his family had slight fever about the end of October or beginning of November, and recovered without the aid of doctor or medicine. His account of those occurrences in his family to Dr. McWilliam was not quite so precise and definite, but still sufficiently so, in my opinion, to prove that he had not been attacked with fever in September, as it appears he was by the list in the Doctor's Report, p. 62, nor even early in October, as stated in his Remarks, p. 11. When asked by Dr. McWilliam (Report, p. 65)—

“When were you attacked?” he replied, “I think there were only three or four persons ill in Cabeçada before I was.” (Query 1301) “Who was ill before you were?—Luis Pathi, a child of Luis Pathi, and a child of Manoel Fachina's.”

The date of his attack therefore was subsequent to

been attracted probably by the gratuity which I promised for their attendance and as an equivalent for their loss of time; but I believe they had a stronger inducement,—they were anxious to narrate their sufferings individually, and thereby establish their claims for compensation from the English Government. They were each examined as they presented themselves, and everything went on smoothly enough until the appearance of a young man of about twenty years of age, with an intellectual countenance, and better dressed than the others. The usual questions were put to him, and his replies were given readily, through Senhor Baptista, my interpreter on that occasion. He was at length asked, “Have you also had black vomit?” and his reply produced an instantaneous shout of laughter. I could not of course understand the cause of this ironical manifestation, and therefore asked Senhor Baptista to explain to me what the man had stated, which was “O yes, I had plenty of black vomit!” This man, though young, revealed the qualities of a promising impostor, but it was then too late for the admission of interlopers. He was immediately contradicted by John Jamieson; he never had anything to do with the ship at any time or in any capacity; he never had fever, and therefore could not have had “plenty of black vomit.” The imposition was too palpable, and he left the room, himself laughing, amidst the laughter of his compatriots.

In the face of such efforts at imposture, leaving my own experience of the disease out of the question, I could not believe that so many persons had recovered after black vomit, and without medicine or medical advice. I believed John Jamieson, it is true, on being told by him that he had black vomit when he was attacked with fever at the commencement of the second epidemy in 1846 (more than twelve months after the “Eclair” had left the island), but I did not believe him when, in accounting for his recovery he asserted at the same time, that he had immediately and repeatedly swallowed the black vomit after it had been ejected from his stomach:—such a feat (considering the state he was in) was too improbable.

that of the children, and could not have been in September nor early in October. But the next question (1306) is rather important and the reply quite explicit:—

“ How long were you ill?—Three days; I had high fever.”

And no doubt, in the estimation of Sir William Pym and Dr. McWilliam, three days' illness from endemic or epidemic fever proved to their entire satisfaction that it was a case of “Eclair” fever, and a positive instance of infection, no matter how long it occurred after exposure to the morbid influence of the ship.

The fourth case is that of Silvester da Silva Marques, labourer, Cabeçada. He was attacked with fever, it appears, some time in October, but whether at the beginning, middle, or end of the month, is not specified by Dr. McWilliam or myself, in the tables in our respective reports; but the point can be determined notwithstanding, and the day of the month now ascertained with tolerable accuracy.

When asked by Dr. McWilliam (Report, p. 72), “When were you attacked?” he answered, “At the same time with Joaquim Marques and his family.” Now when were Joaquim Marques and his family attacked with fever? It is stated in my Report that he was attacked with fever on the 25th and died on the 30th October, and that this was the case is verified by Vincente Antonio Oliveira in Dr. McWilliam's Report (p. 33):—

“Can you tell me when the fever did appear at Cabeçada?—I cannot, but Joaquim Marques died on the 29th of October.”*

There is only a difference then of one day in the three accounts of the illness and death of Joaquim Marques; and as Silvester da Silva Marques was attacked at the same time, he could not have had the fever before the end of October, which shows an interval between the departure of the ship from Boa Vista and the attack of fever in this case of nearly fifty days.

* This is corroborated in p. 89. Joaquim Marques had also been a labourer on board the “Eclair,” and died of fever on the 29th of October, after only a few days' illness.

According to the plan of inquiry which I proposed to follow out in this branch of the subject, I ought now to proceed to the investigation of the cases of a few of the labourers, besides the four I have just noticed, whose names stand next in the list of priority; but as the whole of those belonging to the district of Rabil (confessing their inability to recollect dates) refer in a general way to the sickness in Luis Pathi's family as antecedent to the outbreak of fever among themselves, it is better perhaps to endeavour to ascertain clearly when his children were attacked with the fever.

When examined by Dr. McWilliam, Luis Pathi stated that one of his children (the first in the family taken ill after himself) was attacked with the disease about the beginning of October, but from his evidence to me I inferred that the child had been taken ill at the middle of October, about one month after the father.

Now, if Anna Gallinha (who it is said died in Port Sal Rey on the 16th of October) was the first person who died from fever on the island after the departure of the "Eclair," and the first case which manifested the suspicious symptoms of "black vomit," &c.—and I believe there is no doubt of it—the child of Luis Pathi, who died also with black vomit, and after an illness of only three days, could not have been attacked with the fever before the middle of October. It is not likely, indeed, that the death of Gallinha should have produced such a sensation in the island if the child at Rabil had died previously, with the same symptoms, and after a shorter illness.

The distance between the two places is not so very great,—not quite four miles; and as there is frequent daily intercourse between the inhabitants, the fatal occurrence at Rabil, if it happened before the death of Anna Gallinha, must have been well known in Port Sal Rey: and the distance between Boaventura and Cabeçada, in the same district of Rabil, is still less—Dr. McWilliam says a few hundred yards; but it did not appear to me that the distance between the two villages was more than one hundred yards, if so much; and yet

Senhor Baptista, the acting Vice-Consul, who had a large house at Rabil (Boaventura), in which part of his family always resided, and who had a great number of relations and acquaintances living in the district, makes no allusion whatever to the illness of Luis Pathi or his children in his account of the commencement of fever on the island. (See Dr. McWilliam's Report, p. 32) :—

“ When did you hear that sickness had appeared on the island? —When Anna Gallinha, Silvester Jose Romess, and Manoel Affonso were ill.”

But throughout his examination he said not one word about his neighbour Luis Pathi.

And moreover, if any of the children of Luis Pathi had been attacked with fever before the sickness and death of Anna Gallinha, the evidence of Vincente Antonio Oliveira, which I have already quoted from Dr. McWilliam's Report, is still more incomprehensible. He lived at Boaventura when the fever appeared in Cabeçada, and the question was put to him—

“ Can you tell me when the fever did appear in Cabeçada?— I cannot, but Joaquim Marques died on the 29th of October.” (467.)

Could he have been ignorant of the fact, if it really was a fact, that in the next, the adjoining house to Joaquim Marques, Luis Pathi had previously lost three children from fever with black vomit? In the absence then of the slightest proof to the contrary, I feel justified in maintaining that none of the children of Luis Pathi were attacked with fever until after the death of Anna Gallinha, which occurred (we are told) on the 16th October.

We learn from Dr. McWilliam's Report, p. 89, that—

“ The house of Luis Pathi is situated in the most crowded part of Cabeçada, and adjoining it are the houses of Manoel Fachina, Joaquim Marques, Joaquim Pathi, and Manoel Rosa, who, after Luis Pathi's illness, were the first cases that occurred at Rabil.”

The case of Joaquim Marques having been already disposed of (he was attacked with fever at the end of

October), we come now to the case of Manoel Fachina, who lived in the other adjoining house to Luis Pathi. When examined by Dr. McWilliam (Report, p. 63), he stated that his wife and both children were sick before he was, and when asked (p. 64), "How long was it after Luis Pathi's illness that she was taken ill?" replied, "I cannot say how long!" What! the head of a family occupying the adjoining house to Luis Pathi, and unable to answer so plain a question? Such was the case however, and it is to be regretted that another and more direct question was not then submitted to the man, viz., How long was it after the illness and death of Luis Pathi's children that the fever broke out in your own family? The latter query he could surely have replied to, but the former it appears he could not, and I am not surprised at it, for until Dr. McWilliam arrived on the island I doubt much if Luis Pathi's neighbours, or indeed any one else, knew whether he had had fever or not. Be this however as it may, it is perfectly clear, from different passages in Dr. McWilliam's Report, that the fever broke out in Manoel Fachina's family, and one of his children died, before any of Luis Pathi's children; I shall now therefore place before the reader the man's evidence to myself. He was employed six days in coaling and watering the "Eclair," and mixed with the people at the fort. Five persons lived in the house with him: his daughter was taken ill with fever in October, and died. No person was sick in the house before that event, and none died afterwards. They had no doctor and no medicine.

The next case is that of Joaquim Pathi, a cousin of Luis Pathi, and who resided in the same locality. It appears by the table in Dr. McWilliam's Report (p. 41), that the date of his attack is "doubtful, but fever was common at Cabeçada." On referring to his examination (p. 45) we find that he was employed on board four days, and assisted to weigh anchor when the ship was about to leave the island; and, moreover, when the question was put to him by Dr. McWilliam, with his usual tact,—

“ Did you assist in getting the sick on board ? ”—

he replied, of course—

“ Yes, I assisted in getting them out of the boats.”

And his reply to Dr. McWilliam's query (Query 751) is also worthy of notice :—

“ Do you know who were among the first taken ill with fever at Cabeçada?—Yes; my cousin Luis Pathi and his children first, then Manoel Fachina, then Manoel Rosa, then Luis D. Nasario, and next Joaquim Marques.”

All of them living near each other, and it appears all had fever before the disease commenced in the family of Joaquim Pathi.

The particulars of the cases in three of these five families, who are said to have been first attacked with fever in Cabeçada, have been clearly stated; and in trying to ascertain when Joaquim Pathi was attacked, I need only refer to one of them, about which there can be no doubt. Joaquim Marques died on the 29th or 30th of October after a few days illness. The fever, therefore, broke out in the family of Joaquim Pathi afterwards.

In some respects the cases of the two cousins are similar: they were both employed several days; both were on board on the 13th of September when the crew and sick of the “Eclair” returned from the fort; and they both returned to their respective houses (close to each other) in Cabeçada immediately after the departure of the ship.

But in the following respects they differ: Joaquim Pathi was not charged with stealing anything—Luis Pathi was suspected (nothing more) of stealing something. Joaquim Pathi said he assisted in getting the sick out of the boats—Luis Pathi said nothing of the kind.

Joaquim Pathi and his family were not attacked with fever until the end of October, or as I believe some time in November. The fever having appeared at a late period in the family of Joaquim Pathi, although he was equally if not more exposed than his cousin to the influence of the contagious virus at its presumed source

on board the ship, the cause of the disease is conveniently ascribed to intercourse with the family of the latter.

Another question is now forced on us, Where and when are we to find the second link of connexion? which reminds me that two of the five families who occupied hovels adjoining to Luis Pathi, in the most crowded part of Cabeçada, have not yet been noticed. To supply the necessary information, therefore, I proceed to the case of Manoel Rosa (in my Report Manoel Boavista). According to Dr. McWilliam's account (Report, p. 63), "This man was taken ill about the time Luis Fortes Pathi was laid up with fever, or soon after." Now I ask any one whether he would feel justified in drawing such an inference from what the man actually said to Dr. McWilliam in reply to query 1231:—

"When were you attacked?—I do not know when, but it was after Luis Pathi was sick; also after Joaquim Pathi and a child of Manoel Fachina's were taken ill."

It is unnecessary to dwell on this case, and I shall only add to it the substance of his evidence to myself.

He was employed in the launches 15 days; there are three persons in his family; all had fever about the end of October, but recovered. They saw no doctor and had no medicine.

The last case is that of Luis Delgado Nasario. He had not been employed in any way about the "Eclair," but he was examined by Dr. McWilliam (Report, p. 46) on part of Joaquim Pathi's evidence, although it is anything but clear from his testimony what part of Joaquim Pathi's evidence he has substantiated; but the reader shall judge for himself. (765).

"Had you fever during the time that vessel was here, or at any time afterwards?—Yes, I had fever after she sailed from this island."

The next question which might naturally be suggested to the mind of any candid inquirer would be, most probably, "When were you attacked with the disease?"

His answer to such a question, however, might not have suited Dr. McWilliam's purpose, and he is simply asked—

“Where were you when you were laid up?—At Rabil.”

(He lived in Cabeçada.)

But Dr. McWilliam is more at home when he puts the following question:—

“Had you visited any sick people at Rabil or anywhere else?—Yes. I visited Joaquim Pathi, who is my next-door neighbour, when he was sick; also Joaquim Marques, who lives close to me: he and his sons had fever when I saw them. I likewise saw Manoel Rosa when he had fever.”

The witness said that he saw “Joaquim Marques, who lives [lived?] close to me.” But to proceed: his wife and two children were taken ill after he was. They were not more than four or five days sick, and all recovered.

Such is the true account of the origin and progress of the fever amongst the labourers who had been employed some way or another about the ship; for all the other attacks occurred subsequently, at the end of November, in December, January, and February.

In questioning the authenticity of the date of the commencement of the epidemic of Boa Vista, according to the statements of John Jamieson and Dr. McWilliam, I have tried to discover, but in vain, whether there was any collateral or indirect proof to verify the assumed fact that it began on the 12th of October in the person of Anna Gallinha.

A despatch from Mr. Macaulay, dated 21st of October, never alludes to the fever, and the first which does allude to it, dated 10th of December, says—

“A dangerous epidemic fever has prevailed at Boa Vista since the latter end of the month of October. It is supposed to have been brought there by Her Majesty's war steamer ‘Eclair,’” &c.

From the account given by Dr. McWilliam, in his official Report, of the commencement and progress of the fever in Port Sal Rey and in Cabeçada, it would be

inferred that from that time, viz., the middle of October, and from these places, the disease radiated in every direction, and that the victims of its virulence were neither few nor far between. But were those incidents indeed realities? If so, they made no impression whatever on the rest of the inhabitants, who remained in Port Sal Rey passive spectators of the progress of the pestilence for a month afterwards, and quietly awaiting its attack upon themselves and their families, although they had the means and opportunity of leaving the town and the island itself, had a malignant and contagious disease broken out.

There is a fact, not less significant of the real state of the case, which strongly militates against the assumption, viz., that four medical men who were then residing in Port Sal Rey, and who had previously seen the disease in its worst features, gave no intimation of danger. They gave no warning to the Governor or to any part of the population that the island was invaded by a contagious and pestilential disease *until the 20th of November*, just three months after the ship had arrived, and more than two months after her departure from Boa Vista.—1st. Mr. Kenny, an English practitioner in Port Sal Rey, went on board and saw the sick of the “Eclair” soon after the vessel anchored in the bay. He often saw them afterwards, both on board the ship and at the fort; and Captain Estcourt pays the following tribute to his professional zeal and humanity.

“ Mr. Kenny, civil surgeon, residing here, has given his attendance by night as well as by day, whenever called.”

2nd. Dr. Almeida returned to Port Sal Rey from the island of Sal four days after the “Eclair” had arrived, and from his position in society on the island he must have met frequently with the officers of the ship before he was consulted by the Governor-General as to the propriety and safety of allowing the sick of the “Eclair” to be landed at the fort on the small island; and besides, he was at the fort when the “Eclair’s” people were there, and saw the whole of the sick, by

orders from the Governor-General. As a medical man he must, therefore, have been cognizant, from the evidence of his own senses, of the character of the symptoms which were manifested in some of the patients; and again, he visited the fort on the 20th of September, by orders from the Governor-General, when the two Portuguese soldiers were dying—the one with black vomit, and the other with hæmorrhage from the nostrils, which he stated to me in conversation.

Yet, according to Mr. Macaulay's Letter to the Earl of Aberdeen, dated St. Nicholas, 24th December, 1845,

“The opinion which Dr. Almeida immediately expressed in the most unhesitating and decided manner, and in which I understand he still perseveres, was, that the disease was not Yellow Fever, nor of a dangerous nor malignant nature.”

3rd. We learn from the evidence of Pedro Manoel, one of the two soldiers who were supposed to have introduced the fever into Port Sal Rey (and who says he was attacked about the same time as Anna Gallinha, and had black vomit also), that he was seen by the surgeon of the Governor-General. And

4thly. We learn also from the official correspondence with the Earl of Aberdeen that the Portuguese surgeon (who had been brought from Porto Praya, in the neighbouring island of St. Jago), “Dr. Nunes, Surgeon of Artillery, &c., was then in Port Sal Rey.” Whether this gentleman was the surgeon of the Governor-General whom I have just noticed I know not, but this I know, that if he was brought for any purpose, and Dr. McWilliam's account of the “explosion of the fever” in Port Sal Rey and Cabeçada is to be credited, he must have seen in many cases the sad and distressing symptoms which characterize the Yellow Fever in its worst form. Now, what was the verdict of the medical men as to the nature and attributes of the disease?

“A Portuguese surgeon who had been brought from Porto Praya, with the Portuguese practitioner in the town, maintained that the fever arose from the presence of stagnant water, and they so held the same opinion until the 20th of November, when [and not till then] they openly declared it to be a fever

of the worst description, and of a most contagious nature."—Correspondence, p. 36.

We are left in the dark as to the real grounds which influenced the doctors in their decision, which was given suddenly. Why should this have been the case?

In this small town of Port Sal Rey, containing little more than five hundred inhabitants, of whom at least one hundred were Europeans, or their immediate descendants, and where there is the greatest familiarity between the highest and lowest in social and domestic intercourse, could they possibly be ignorant that they were living in the midst of a contagious disease, which in the previous month had carried off many of their neighbours?—Impossible.

One half of the medical men in Port Sal Rey saw the disease in the sick of the "Eclair." The third gentleman, the Governor-General's surgeon, saw it in the case of Pedro Manoel, who is accused with his comrade of having introduced the fever into the town; and the fourth, Dr. Nunes, (who it is said was brought from Porto Praya on account of the sickness in Boa Vista, but who is identical, I believe, with the above personage designated the Governor-General's surgeon), must have seen many patients, if we are to rely on Dr. McWilliam's account; the whole of them therefore must have been aware of the nature and character of the disease, and they must have been familiar also with every symptom belonging to it in the current stages of its progress; and yet those medical men, and the people of Port Sal Rey, were all confident until the 20th of November *that the fever was caused only by miasmata, from "the presence of stagnant water."*

Whether their alarm was caused by the quarantine manifesto of Sir William Pym and Dr. Arnott, published immediately after the "Eclair" arrived in England, it is impossible to say; but this is certain, that Mr. Consul Rendall, in his letter to the Earl of Aberdeen (from St. Antonio, date 22nd December), refers to that document in the following words:—

"If the authorities of the place could have imagined that the

fever on board the 'Eclair' had exhibited a dangerous type before her arrival, they never would have granted the vessel pratique. The Report of Sir William Pym and Dr. Arnott says that such was the case; and the information appears to have been derived from the survivors on board the 'Eclair.'—Correspondence, p. 37.

But where did the Consul first learn "that there was also a fever of a milder type prevailing, arising from the presence of the stagnant water?" *Ibid.* Certainly not from the medical men, "both ashore and afloat," who remained ignorant of the fact up to the 20th of November. How could they know it? Fevers from malaria are unknown in Port Sal Rey!!—(441 and 1543, Dr. McWilliam's Report.)

After the 20th of November then the disease was pronounced to be *Yellow Fever and highly contagious*.—This assertion of the medical men, that the same cases which on the 19th were only "*miasmaticas*"—the common coast fever,—not contagious;—had on the following day (the 20th) become the Yellow Fever and highly contagious;—is quite as legitimate an inference, but of no more value than the conclusion of Dr. McWilliam that the fever of the "Eclair" had in some mysterious way acquired contagious properties after the sick were landed at the fort.

The results of the panic, however, which I have now to particularize, supply us with further corroborative and circumstantial evidence that the epidemic commenced first of all in Port Sal Rey, but not even there until the very end of October.

1st. The Governor-General, his family, staff, and all the employés attached to head-quarters, left the morning of 24th November for the island of Brava; consisting (as we are informed by Dr. McWilliam in one of his late contributions to the 'Medical Times') of sixty persons. But an incident occurred during that short voyage which is worthy of notice. Dr. McWilliam has asserted rather hastily that the islands are in sight of each other, which is a mistake, though of no importance in the argument; the voyage to Brava, which lies to the southward and westward of Boa Vista,

ought not however to have occupied more than a few days; yet in that brief space of time, and in a small and crowded vessel, a case of Yellow Fever occurred,* and what resulted? The Governor-General declared at a later period that the disease had not been communicated to any of the other islands by the people from Boa Vista.

It is true, precautions were taken when they landed at Brava; but supposing the disease to have been contagious—and in this case we are not perplexed with plausibilities about “the germs of fever,” for the disease was developed, the symptoms were manifest, and there was one, if not two medical men on board—how then, in conformity with the laws of contagion, could the rest of the passengers have escaped under such circumstances?

2nd. The Governor of Boa Vista, collector, and others, had left for the island of Sal some days previous to the departure of the Governor-General, and Mr. Consul Rendall and his family left Boa Vista on the 1st of December for the island of St. Antonio.

3rd. Dr. Almeida, whose residence (Boa Esperança) is situated about two miles to the south-east of Port Sal Rey, and to windward of a chain of small marshy pools which intervene, seems to have thought that even there he was too close to an infected locality, for with his whole family, including slaves, amounting to fifty-six persons, he removed on the 19th of November to Fundo das Figueiras, the centre of the three villages,

* When at Boa Vista I heard some ugly stories about this case. I was told that the poor boy, for he was only a lad, was placed in a detached hut, with soldiers about it at a respectable distance. Dr. McWilliam says that he was placed in a cave; but it matters not where he was isolated, for the usual and selfish expedient of the contagionists was adopted, the “cordon sanitaire,” which is a very convenient device, for it localizes the disease, and, what is still better, it gives an artificial and meretricious colouring to the conduct of a certain class of medical men who have an inherent dread of coming in contact with the Yellow Fever. The patient is kept in and the doctor is kept out by the soldiers. It would have been very satisfactory, therefore, if Dr. McWilliam had given us the slightest intimation that any provision had been made for the preservation of the patient; whether any doctor, or, indeed, any other person, attended him; and whether, in his helpless and abandoned condition, he had the common necessaries of life. I have reason to fear that in this sad case the old Jewish maxim was the rule of conduct,—“It is better that one should die.”

which lie in nearly a direct line east and west, separated from each other by a distance only of about a mile and a half; and what renders the selection of this place for a temporary habitation rather remarkable is the statement that in the villages on either side of him the fever had previously commenced and carried off many of the people. It appears also that Senhor Baptista, with his family and dependents, amounting to forty-two persons, left Port Sal Rey on the 19th of November; and what is remarkable in this case also is the fact that he removed to his house in Boa Ventura, close to Cabeçada, where we have been told that the fever had raged for a month previously and destroyed many of the inhabitants. We have positive evidence therefore that about the 20th of November, and within a few days of each other, nearly two hundred persons fled from Port Sal Rey. But this remarkable social revolution in a small town happened just three months after the arrival of the "Eclair" at Boa Vista. It is evident, then, that not only the people, but the medical men, were quite ignorant until the 20th of November that a malignant and contagious disease prevailed in the town; previously, both in the ship and at the fort, it was only the common coast fever, or *miasmaticas*, as they call it.

The poet's question will here perhaps recur to the reader, "What's in a name?" In the discussion of this question it seems to me that everything depends on a name. The different designations of synochus, bilious remittent, common coast fever, &c., all pass current, and are considered harmless; but when the same disease is named yellow fever, it is immediately invested with the contagious properties of reproduction and self-propagation. I shall endeavour to illustrate this by an episodical reminiscence of Bermuda.

After the termination of a very severe epidemic yellow fever in Bermuda in 1843, His Excellency the Governor (Colonel Reid) sent me a number of a medical periodical published in New York, with a

request that I would read and return it as soon as possible, and at the same time state my opinion as to the nature of a disease which was recorded therein. On perusal I found that at the very time we were suffering so much from Yellow Fever in a cluster of small islands in the middle of the North Atlantic Ocean, an epidemic disease broke out in the town of Rondout, situated near the confluence of two rivers, and I believe (for I quote only from memory) about sixty miles distant from the capital of the United States. The outbreak of the disease had occasioned a great deal of alarm, not only in the town itself, but in New York; a "cordon sanitaire" was immediately established, and all intercourse prohibited; but at the same time, and very judiciously, a certain number of competent commissioners were sent to the spot to ascertain the cause and nature of the epidemy.

The results of the inquiry were explicitly stated:— A number of cases of the fever were minutely detailed; the commissioners arrived at the conclusion that the disease had manifested no contagious properties, and the quarantine restrictions were therefore at once annulled.

The history and symptoms of each case, as they were recorded, I perused with deep interest; in many there was yellowness of the skin, and in no inconsiderable number there was black vomit; and the ratio of mortality was even much higher than at Bermuda Hospital. Was it then Yellow Fever? I have no hesitation in asserting that the fever in those remote places, about six hundred miles apart, was identically the same disease. But the commissioners thought differently,—probably they were contagionists theoretically, and had never seen a case of Yellow Fever before. Be this however as it may, they decided that the disease was an aggravated or concentrated remittent—it was not the Yellow Fever, which is a contagious disease. In both localities however we have abundant proof that, whether the disease was a remittent or Yellow Fever epidemy, it was not contagious.

In referring to the death of the two Portuguese soldiers at the fort, Dr. McWilliam asks (in his Remarks on my Report, p. 6)—

“How are these startling facts to be explained?—The proposition is plain and unmistakeable. Two soldiers, in sound health, go from an island everywhere healthy” (but it was in an unhealthy season) “to another island where there are many sick and some dying daily. They also sicken and die.”

And he draws the inference that such were the results only of contagion. Where was the contagion from in the case of José Sancha, already referred to?

But there are startling facts also of a similar character occurring every day and in every part of the world, which Dr. McWilliam cannot account for so easily, and which cannot be explained by anything we know of the laws of contagion. I may not touch on the beaten ground respecting the nature of sporadic cases of Yellow Fever, mysterious incidents of frequent occurrence in the tropics, but I shall refer to some important facts in the history of an epidemic which came under my own notice in the West Indies, and which will probably be more to the purpose.

A detachment of the 81st Regiment, consisting of 208 men, 30 women, and 47 children, altogether 285 persons, were embarked at St. Kitt's, in the West Indies, on the 16th December, 1842, in H.M. troop ship “Crocodile,” for a passage to Barbados. The ship was then quite healthy, and, as far as could be ascertained, no fever, at least no case of Yellow, Fever had been reported on the island for some months before the troops departed. Three days after the ship sailed fever commenced (19th), attacking the commander and four of the crew, one of whom died before the vessel reached her destination, and others were being attacked daily with the same disease. On the 26th of December, at Barbados, the officers and ship's company of the “Crocodile” were landed, and encamped in tents on shore until the 18th of January, when they were re-embarked. During this period (22 days) only two cases of fever had occurred;—they were only on board

two days, however, when the fever again broke out, and between that time (the 21st) and the 27th of January seven cases of fever, and four of dysentery which terminated in fever, were added to the sick-list. It is a fact then that only two men were attacked with fever in 22 days on shore, and that immediately afterwards, and within six days of each other, eleven men were laid up with fever on board the ship. An opinion was then entertained that some cause of the fever, probably of a miasmatic nature, existed in the ship, and the conviction was so strong that the officers and ship's company were again and immediately removed on shore. The ship was cleaned and fumigated, and the cabins and store-rooms whitewashed, by a party of negro soldiers belonging to the 1st West India Regiment. Such is an outline of the case, and such was the state of matters relating to the "Crocodile" when H. M. S. "Illustrious," bearing the flag of the Commander-in-Chief, arrived at Barbados, on the 30th of January, 1843. By orders from the Admiral, I immediately inspected the ship, visited the encampment, and received information from the different officers respecting the commencement and progress of the fever, together with their opinions as to the cause or causes of its development on board; and last of all I went to the Military Hospital and saw the patients who had been sent to that establishment. This line of duty was daily adhered to until we left the island, and generally in company with the Commander in Chief.

I was informed by Mr. McFarlane, assistant-surgeon, that a considerable number of the soldiers were attacked with fever on the day after their second debarkation from the "Crocodile," of whom seven or eight died at the Military Hospital with the usual symptoms of Yellow Fever; and on inspecting his sick-book I found that there were then fifteen patients on the sick-list and fourteen at hospital suffering from fever, diarrhœa, and dysentery. Eight persons belonging to the ship had died since the commencement of the fever, and several of the patients at the hospital were in a precarious if not a hopeless condition. When the "Illus-

“trious” sailed from Barbados on the 9th of February, the officers and ship’s company of the “Crocodile” had been re-embarked several days, for reasons which I then stated, in writing, to Sir William Burnett.

When the flag-ship arrived at Jamaica, after visiting some of the other West India Islands, both the Admiral and myself received letters from Barbados, from Mr. Elson, commander of the “Crocodile,” and Mr. McFarlane, the assistant - surgeon, which contained the sad intelligence that the fever had again (the third time) broken out on board, had spread with even greater rapidity and virulence than before, and that, with the view of saving the remnant of the people, all of them were again disembarked.

The beneficial effects of the change from the ship to the shore were a third time manifested, and the further progress of the fever arrested ; when, the opinion which had always been entertained, that the cause of the fever belonged exclusively to the ship, being so fully confirmed, the Governor and the military authorities determined to incur no further risk by employing the “Crocodile” as a troop-ship. As soon therefore as the crew had sufficiently recovered, the vessel was sent to England without any passengers.

Here then we have a series of startling facts.

For some months before the detachment left St. Christopher’s no case of Yellow Fever had occurred on the island, but the disease appeared on board the “Crocodile” on her passage from thence to Barbados. Immediately after the ship anchored in Carlisle Bay the detachment of the 81st Regiment, consisting, as I have stated, of 285 persons, including women and children, were landed and marched into barracks, where they mixed freely and without any restriction with the other soldiers and their families in the same barracks. But the disease did not spread, although some of the 81st who had arrived by the “Crocodile” were sent next day to the Military Hospital with Yellow Fever, and on the same day the sick from the ship were also admitted.

The officers and ship’s company of the “Crocodile”

were landed within a few days after arrival: they had daily intercourse with some portion at least of the inhabitants of Bridgetown, the capital of the island. Their encampment was not within any enclosure; there were no sentries, for they had not a marine belonging to the ship; there were but few officers: and the consequence was, that a considerable number of the men went into the town every night, and some of them only returned next morning, not rarely in a state of intoxication. Yet after all this free and uncontrolled intercourse, no epidemy ensued, nor had the disease been communicated to any individual on the island.

That the fever on board the "Crocodile" originated in the ship herself, will appear from the following circumstances. Trusting, probably, that the voyage would only last two or three days, there was a total neglect of the most obvious sanitary precautions. The lower deck was appropriated to the troops, and, had it been kept quite clear, there was but little accommodation for their persons alone; but unfortunately, the whole of their baggage was piled up on the middle of the lower deck, and completely divided the fore from the after part, thereby obstructing the free current of air between the two hatchways. The ship had to beat up all the way against a fresh trade-wind, and there was (to use a sailor's phrase) a "jumble of a sea," which necessitated the closing in of all the scuttles on the lower deck, and all the ports on the weather side of the main-deck; and as the sailors occupied the main-deck, immediately above the soldiers, the ventilation below must have been very limited, and the people were therefore deprived of the necessary supply of air.

The Assistant-Surgeon attributed the cause of the disease to the crowded state of the ship, insufficient ventilation, damp decks, and the dirty habits of the women and children.

Those habits of the women and children, being one of the alleged causes of the fever on board the ship, are now to be considered with the view of ascertaining whether we may not reasonably infer that from their effects an important element had been supplied neces-

sary for the sudden development of miasmata, and which, concurrently with the predisposing causes already mentioned, produced the disease.

During the voyage from St. Kitt's to Barbados, "owing to the strong breezes and swell of the sea," the motion of the ship was very distressing to the passengers, particularly the women and children, who became weak and helpless from sea-sickness; but even had they been accustomed to the motion of the ship, and been able to move about, could it have been expected that women and children, when obeying the calls of nature, could scramble over the bows of the ship into the head, where the men resorted? Unfortunately no other accommodation had been provided for their necessities, and the consequence was that the lower deck soon became little better than a common privy. The filthy contents of chamber utensils were continually thrown into the hold through the holes for the passage of the chain cables, into the chain-lockers. All this abomination, unhappily, was ascertained when too late, and (I believe) only when the ship was cleaned and purified the second time by the negro soldiers belonging to the West India Regiment.

It may be thought that I have unnecessarily introduced into the present discussion the above sketch of an epidemy altogether unconnected with the "Eclair;" but as I am not now restricted by rules or instructions, and as the fever began in one of H.M.'s vessels, and was not communicated to the inhabitants of Bridgetown, although, had the Yellow Fever been a contagious disease, it ought to have spread immediately over the whole island, I have exercised my own discretion in bringing the above facts under the notice of the reader, as an illustration in proof of the verity of the doctrines entertained by anti-contagionists, viz.:—

1st. That this disease (Yellow Fever) is not capable of being imported, or of becoming invested with contagious properties.

2nd. That specific local causes alone, independent of any epidemical condition of the atmosphere, are amply

sufficient to produce Yellow Fever in the tropics, or an equally malignant disease in more temperate regions.

With respect to the climate of Boa Vista, it is not unimportant to inquire into the general salubrity of the Cape de Verdes, from authorities more disinterested and less prejudiced than the inhabitants themselves. Even upon Dr. McWilliam's own showing, the island of Boa Vista is not exactly a spot on which to place the temple of Hygeia, its geographical position being "within the legitimate domain of Yellow Fever."

Let us however consult some other authorities, remembering that misgovernment deprives the inhabitants of the means of developing even the few natural advantages which they possess, and consigns them to extreme poverty, hopeless ignorance, and disgusting filth. Dr. McWilliam speaks volumes of their uncleanness when he says

"Syphilis in its most disgusting form is very common."

All who know Lisbon, and still more they who know the poorer villages in the provinces of the country of which Lisbon is the capital, may imagine the sanitary condition of these obscure and neglected dependencies of that kingdom. The population, products, and trade of this miserable group of islands are so contemptible, that they stand the very lowest in the list of civilized communities, and consequently very little is known of their history. Where there are no free institutions, no press, no literature, no science, no manufactures, no commerce, nothing beyond the rudest husbandry,—it is vain to look for any records of epidemic diseases in former periods. The gross population, scarcely exceeding fifty thousand, is dispersed over the ten islands forming the cluster, in small villages, each consisting of a few houses of the meanest kind. The whole group is too insignificant to have attracted the notice of the historian; and therefore to assume that no similar epidemics have previously existed, because none may have been recorded, is simply absurd.

Lind however thus notices them in 1768:—

“ Passing from the Canaries to the Cape de Verdes, we find St. Antonio and St. Nicholas the only two islands in that cluster where strangers are not exempted from a general sickness during the rains.”—p. 72.

Afterwards, enumerating the proofs of an unhealthy country, he says—

“ The fifth is a sort of sandy soil, such as that at Pensacola, Whydah, and the island of Boa Vista (commonly a small loose white sand), which is found by experience to be injurious to health. The pestiferous vapour existing during the summer months, and in the heat of the day, from such sandy deserts in South America, in Asia, and in Africa, can only be characterised by its effects. This blast, which is called the Samiel wind, proves instantly fatal both to man and beast in the hot sandy deserts; but when it passes over a soil covered with grass and vegetables, its effects are mitigated.”—p. 129.

From the notes of Senhor Baptista, in an old volume, I found that in 1821, thirty-nine persons died; in 1822, fifty-three persons died; and in 1827, forty-two persons were carried off by fever, in Boa Vista.

The following extracts are from the description of the Cape de Verde Islands in the ninth edition of ‘Purdy’s Sailing Directions:’—

“ In the rainy season, which is during the months of July, August, and September, the island of Boa Vista is subject to light airs of changeable winds. (Page 419.)

St. Jago. In the months of July, August, and September, the rains are frequent, and the southerly winds which prevail cause a great sea in the bay with a great surf on shore: the inhabitants in these months are subject to dangerous fevers. (P. 421).

“ The heat is very oppressive, and the sailors are liable to get sick, owing to the heat and the facility with which they are supplied with the spirits of the country, which are wretchedly bad.”

The editor, in a note, states that a dreadful mortality prevailed among the cattle in the month of March, 1828: the greater part is “said to have perished.” Another note immediately follows:—

“ The Salem Register (American paper), in 1832, gave the

following melancholy details of a famine at these islands: 'By the arrival at this port of the *Fredonia*, Captain Rider, in 30 days from Port Praya, we learn that a universal famine extends through the whole group of these once truly verdant islands: most of the animals in the island, have died from starvation.'” (P. 424.)

In page 425 Captain Fitzroy remarks that—

“From August to October is the rainy or sickly season. I would advise a stranger not to overheat himself, or sleep on shore at night; for fatal fevers have been contracted by Europeans who were unguarded as to their health, while passing a few days in this hot climate.”

The correspondence of a medical friend contains some interesting information on the subject:—

“*Lisbon, July, 1847.*”

“YESTERDAY I met *Señr. Joao — —*, a very respectable merchant and landed proprietor, and lately a resident in the archipelago of the Cape de Verde, who has informed me that 600 of the inhabitants of Boa Vista left it in 1829, to go to St. Nicholas, on account of famine and fever being then prevalent at Boa Vista; others went to the Brazils. He could give me no information respecting the nature of the fever which prevailed in Boa Vista in 1829; he, like all the others, appeared anxious to encourage trade and free intercourse.

“*Señr. M. Chambrá*, the principal ship-broker at Lisbon, has informed me that he was at Pernambuco in 1829, and that a vessel which arrived there from Boa Vista was placed in quarantine on account of a severe form of fever being then prevalent in that island.

“*Señr. Manuel C — C —*, a proprietor in the Cape de Verdes, who arrived at Lisbon 21st July, having left Santiago on the 21st May, told me that Boa Vista was not a healthy locality, indeed that it stands low in the scale of salubrity in the group of islands, a remittent or intermittent form of fever being prevalent there every autumn, which in certain years assumed a dangerous character. Every one connected with the islands, as well as the government authorities, are most anxious to make it appear that this archipelago is generally healthy, and wish to pass over the subject of fever in silence; but all allow, when questioned closely, that it prevails in an epidemic or endemic form every year during the mouths of autumn.”

In consulting the first volume of the work of Jose Cornardo Carlos de Chelenichi, Lieut. of the Corps of Engineers, on the Chorography of the Cape Verde

islands, I find he states that the inhabitants of Boa Vista amount to more than 3000.*

“With regard to the diseases most assailing this province,” says this author, “relatively to the islands, it may be said that there is no severe disease of any kind except the great endemics, which appear to us nervous remittent fevers, and sometimes intermittents, which, without putrid symptoms, have their seat in the nervous system; and yet, as we have already said, this fever is little or nothing felt beyond the islands of St. Jago and Maio, and sometimes as much at Boa Vista.

“The symptoms of the disease of the country (fever) are severe pain in the loins, spinal marrow, and all the large joints of the extremities, great languor of the body, with sense of exhaustion: . . . the three months of August, September, and October, so much as they are the best for the land, are the worst for the inhabitants. All the sickness consists in an acute fever, of which the precursory signs are the same as those of fevers and constipations; to these follow immediately a violent fever, and the seizures are equally strong in proportion to the cause. How happens it that there is no means of curing these diseases?”

In remarking on the scarcity of medical men in the different islands, he says—

“In Boa Vista there is a surgeon, Senor Hippolito (Dr. Almeida); but this good citizen, of whom we have always spoken in terms of deserved praise, is occupied with his own affairs, and attends only to his own friends, and this gratuitously.”

The melancholy occurrences at the fort have been referred to as an overwhelming proof that the disease was contagious; and the sickness and death of the two Portuguese soldiers, within seven or eight days after the departure of the “Eclair,” is stated to be inexplicable without admitting the reality of the fearful, mysterious, but very capricious agency of contagion in the propagation of the fever.

When Dr. McWilliam visited Boa Vista, he

“failed to discover the least evidence of the cause in the earth, in the air, or in anything animate or inanimate on that island, or on

* According to the survey of 1834, published in the statistical table of Senr. Lopez Lima, the population of Boa Vista amounted to 2818 free inhabitants and 513 slaves.

the small island, unconnected with the 'Eclair,' to account for the illness and death of these soldiers."—(Remarks, p. 8.)

This language is too vague for the discussion of so important a point, for the soldiers (Europeans) were precisely in the same situation and under the same condition, as the English sailors, and were therefore equally with them exposed to all the obviously predisposing and exciting causes of the disease. All this Dr. McWilliam knew; and although he, as well as I, inspected the locality at a healthy season of the year, and when nothing was to be seen to relieve the dismal stillness and monotony of the scene, except the spectral appearance of one or two scantily-dressed negro soldiers, he might then have realized some of the sad conditions which, after their location at the fort, were unavoidably imposed in the sickly season on that unfortunate ship's company.

In calmly and safely contemplating that ruinous and deserted building, which must ever be associated with the premature death of a number of gallant men, was there no object to bring vividly to his mind some idea of their actual position at the time? Could he have been ignorant of the extraordinary concurrence of deleterious causes which, singly, are in general admitted to be sufficient, not only to produce, but to give a pestilential character to Yellow Fever?

This practical question Dr. McWilliam has answered in his own way—he saw none "unconnected with the 'Eclair.'" It is for me therefore to specify some of those physical causes of disease which were certainly at that time in combined operation and exercised a malignant influence in the fort.

Dr. McWilliam has sarcastically remarked that I have brought nothing to light respecting the fort, except the dust-hole and the privies. Did I not mention the fact, which he has only lately and reluctantly admitted, that the place was much overcrowded?—that, had the whole interior been in good repair, which it was not, nor had been for many years, there was not sufficient and proper accommodation for half the number who were crowded into it during that, the hottest

period of the year? I shall not, however, dwell on this particular part of Dr. McWilliam's criticism, but proceed at once to the enumeration of those causes which I believe were influential in aggravating the disease in those who were sick, and inducing it in those who were in good health.

1st. The open privies within the four walls of the building, which had been the common receptacles of all the impurities and filthy abominations of the place, probably for years, were receiving, during the time the crew of the "Eclair" were in the fort, a quantity of fresh fermentable soil, that must have rendered them doubly active as sources of insalubrity; and the Researches of Parent Duchâtelet prove beyond any doubt that such matters, even under the form called "Poudrette," when exposed to the influence of heat and moisture, may alone give rise to severe and fatal fevers.

2nd. The greater part of the men were unavoidably exposed to the powerful influence of the sun during the day, and the equally noxious effects of the chilling winds of the night.

3rd. Intemperance must be laid to the charge of a number of the men, not merely on the report of some of the officers, but from the fact that two men of the island were suspected of smuggling, and a third was detected and flogged for supplying spirits (the "agua diente") to the people in the fort.

4th. The water they had for cooking and drinking was of the worst description; the whole that was supplied both to the ship and the fort was obtained from holes or pits dug in the sand near the beach, at the bottom of the bay.

5th. The meat supplied to the ship and fort was diseased and unwholesome; there had been a continued drought from September 1844, until about the same time in 1845; but before this last date the cattle on the island were dying in great numbers.

Lastly. Dr. McWilliam, in his 'Remarks' and 'Observations,' has laboured to show, on "the concurrent testimony of Mr. Macaulay, the Hon. Mrs. Macaulay, Mrs. Pettingal, and every one," that "the weather was

never more beautiful " than up to the 25th and 30th of September, and he has invoked the Consul's diary to prove "no mention of rain is made (and it is particularly noted) until the 5th of October." Will it be believed that in his haste to establish this point he has overlooked the evidence of his friend Dr. Almeida, who, in reply to Qy. 1547 (Report), says, "some rain fell in August, and it continued until the middle of October."

Besides, the Doctor's evidence is corroborated by the unimpeachable testimony of Captain Buckle and Dr. Carter of the "Growler," both of whom state that *rain fell occasionally* between the 5th and 13th of September, namely, from the time of their arrival at, until their departure from, Boa Vista. This evidence will be deemed quite sufficient to prove, in so far as rain is concerned, that "the recognised elements for malarious evolution" may have existed not only before Anna Gallinha was attacked, but also before the first case of sickness occurred among the soldiers in the fort, though the heavy periodical rains did not set in until later in September, and these, according to Consul Rendall's letter, continued to the 9th of October.

Dr. McWilliam says (Remarks, p. 10), "No labourer (with the exception of Portajo, the slave who died) ever was within the walls of the fort, although some were at the gate to get water." In his official Report the water-cask was only near the gate, but now it is placed outside altogether. John Jamieson pointed out to me where the water-cask stood, and that was against the dusthole inside the walls. But we have now to deal with something more important. "No labourer ever was within the walls of the fort except Portajo, the slave who died."*

What inference are we to draw from this but that the slave caught the fever from his frequent inter-

* It appears from the evidence of Sopriano and Felipe dos Santos, at p. 60 of Dr. McWilliam's Report, that both had been within the fort, the latter in company with "Portajo, the slave who died," in November; but this evidence has been overlooked.—See Queries 1170 and 1178.

course with the sick in the fort? But to enable us to form a just opinion, why did not Dr. McWilliam mention the dates when the man sickened and died? he knew them well. It is admitted also in a note, that four persons besides the slave had been inside the fort; and as most of them had been in actual contact with the sick, it will be interesting to know the result of that perilous intercourse.

Portajo, the slave, is first on the list; he was attacked with fever the 20th and died on the 24th November, two months after exposure.

Dr. Kenny died on the 27th November, after an illness of four or five days, still longer after exposure to contagion at the fort.

John Jamieson was attacked with fever in August of the following year, nearly twelve months after exposure.

Dr. Almeida and Jose Pedro Pons escaped the fever altogether.

A most important clause of the instructions which were furnished to Dr. McWilliam and myself,* for our guidance in pursuing the inquiry into the causes of the Boa Vista fever, was to ascertain—

“Whether there are any circumstances from which it may be inferred that the fever lately prevalent at Boa Vista was an indigenous production, or that it originated in causes unconnected with the ‘Eclair?’”

To this instruction no response was made in Dr. McWilliam’s Official Report. In my own Report, on the contrary, will be found the following:—

“I shall notice very briefly a few circumstances from which it may be reasonably inferred that the disease was an indigenous production, and that it originated in causes unconnected with the ‘Eclair.’”

“The situation of Port Sal Rey, and the whole district of Rabil, in the immediate vicinity of swamps and pools of stagnant water, and the patches of rich alluvial soil near the other villages, expose the inhabitants to those noxious exhalations, during the autumnal

* See Appendix C.

months, which are generally admitted to be the common remote causes of fever. The lower classes are extremely poor, and often badly fed; they breathe a polluted atmosphere in their crowded and ill-ventilated abodes; and there is a general disregard of cleanliness in the streets and about their houses. Now, such a combination of morbid causes would produce malignant fevers in any part of the world; but in Boa Vista, in the years 1845 and 1846, there was this addition or aggravation,—the common atmosphere was unusual and epidemical. . . . Whether this peculiar constitution of the air depended on the causes I have mentioned, or on some deleterious emanations from the earth or its surface, its general operation was evidently inimical to animal life in all its gradations.

“That the common air which was inhaled by every living thing on the island was in an epidemic condition in the months of October, November, and December, in both years, is sufficiently demonstrated by the simultaneous occurrence of universal sickness and great mortality among the cattle (including cows, horses, mules, donkeys, and goats) at the very time that fever was raging among the inhabitants: and further, there was this remarkable coincidence, that after an interval of some months, and the disappearance of disease both in man and beast, the same fever broke out again in the towns and villages about the rainy season in the following year, and was again accompanied by the same murrain among the cattle, which in the two seasons proved fatal to two-thirds of the whole stock of the island.”—Dr. King’s Report, pp. 8 and 9.

It is quite certain that the disease among the cattle commenced before the “Eclair” arrived at Boa Vista, and the fact that epidemics among the lower animals commonly occur simultaneously with epidemics among mankind is universally recognised.

“Epidemic fevers,” says Dr. Copland, “are not, however, confined to the human species; the causes in which they originate, and the influence which promotes their extension, frequently affecting also the lower animals,—a circumstance of importance in our speculations respecting the origin and nature of this very important class of maladies.”—Dictionary of Practical Medicine, p. 894.

Dr. McWilliam has lately attempted* to throw doubts on the prevalence of disease among the cattle in 1845.

In reference to the statement in my Report,—“There was this remarkable coincidence, that after an interval

* Medical Times and Gazette.

of some months, and the disappearance of the disease both in man and beast, the same fever broke out again in the towns and villages about the rainy season"—he says, "Dr. King has not supplied us with the facts on which he built this statement." I have done so in general terms only; I may state, however, that, in addition to the information I received from all classes of the inhabitants, these facts were partially corroborated by the evidence of my own eyes;—for while I was at Dr. Almeida's house, on one occasion, several mules or donkeys happened to arrive from the Eastern plains, loaded with the skins of cattle that had died but a few weeks before.

Notwithstanding his ready production of a contradiction of my Report by Dr. Almeida on the unimportant question of his medical opinions, no attempt was then or has since been made, by any of Dr. McWilliam's numerous correspondents, to impugn the really important fact of the existence of an epidemic condition of the atmosphere during the season of the "Eclair's" arrival, for the simple reason that it could not be denied that in the two seasons of 1845 and 1846 two-thirds of the cattle on the island perished.

Dr. McWilliam proceeds,—“but I am in a position to prove that the first case after I left the island occurred on the 19th or 20th July, 1846, in a person well supplied with the necessaries of life, in one of the largest, cleanest, and best ventilated houses in the town. Recovery took place after extreme peril.” No doubt,—for it was a wonderful recovery! We are to infer, then, that this first attack in 1846 resulted from contagion; but from whom was the disease derived? The Doctor has not thought it necessary to mention the name of this first sufferer; I shall supply the omission. It was John Jamieson, a man who, ten months before, had been in almost hourly contact with the people of the "Eclair," both on board and in the fort, and who, eight months previously, attended night and day on Mr. Kenny.

In the course of these observations, Dr. McWilliam

makes the following complaint against the General Board of Health:—

“Nor is there in the Report on Quarantine the slightest notice taken of the well-established instances of exemption from fever procured during its prevalence at Boa Vista by isolation and segregation of healthy individuals from infected districts . . . There surely appears in such a mode of procedure a one-sidedness more becoming a reckless crusade against quarantine and contagion than a philosophical and impartial search after truth.”

Although I know nothing of the authors of that Report, and am not called upon to defend its contents, I can easily understand the reasons for leaving unnoticed a part of the argument which tells more against contagion than in its favour.

The case of F. A. Ascensao (at p. 70, Dr. McWilliam's Report) is an excellent illustration of this immunity in consequence of seclusion. When asked (1420),—

“Have you seen any sick people?” he replies, “Yes, I have; I took goats to the house of Matthew Soares da Graça at Cabeçada, and he was then sick. I stopped one night under the same roof with him, but in a different room.”

Yet Ascensao and all his family escaped the fever in their place of seclusion at Bella Vista.

This question has been settled long ago;—that it is only necessary to shun the infected locality in order to escape the disease, as I myself witnessed at Bermuda in 1843.

My Report on the Boa Vista fever, which was sent in shortly after my return to England in July, 1847, was at length printed, by order of the House of Commons, on the 10th March, 1848; and very soon afterwards I found, to my great surprise, that not only my Report, but my character as a physician and as a man of integrity, had been assailed by Dr. McWilliam (10th April, 1848) and Sir William Pym (15th May, 1848),—whose attacks were evidently preconcerted, and altogether unprovoked by anything I had stated.

Their respective papers, ‘Observations on Dr. King's Report,’ by Sir William Pym, and ‘Remarks on Dr.

King's Report,' by Dr. McWilliam, were printed—the first by order of the House of Commons, and the other by Dr. McWilliam ; and both again published, the one in the 'Medical Times,' and the other in the 'Morning Chronicle.'

The principal charges which have been brought against me by Sir William Pym are contained in the two last sentences of his 'Observations on Dr. King's Report,' (p. 15) :—1st,

“ And I think I may safely state, that, if his [Dr. King's] opinion upon that disease had not been well known before he left England, he would not have been selected for that particular service.”

And 2nd,

“ The mission appears to have been most unnecessary, and its results not very creditable to the parties concerned ; its object having evidently been, not to search after and ascertain the truth, but to support a false and erroneous theory, the upholding of which has proved most destructive to human life—more particularly on the coast of West Africa and in the West Indies.”

In reply to the first of these, I beg to state that there are a great number of very clever men in the Navy, but, unfortunately for Sir William Pym, the majority hold the same opinion as myself upon this disease ; and I am not quite so confident as Sir William Pym appears to be that there was any scope for selection. There was one candidate in the field most certainly, but he had already disqualified himself by having prejudged the question ; and Sir William Pym would find it extremely difficult to suggest an adequate motive that could have induced every Surgeon in the Navy to volunteer such a mission. It was a temporary appointment ; the pay and allowances would barely cover the necessary expenses ; and in the event of the officer surviving his employment at Boa Vista (which, from the accounts received, was not considered probable), he would have the certainty, if his Report should not support the doctrine of contagion and the utility of quarantine, of being involved in a professional controversy, in the settlement of which he had not the slightest personal interest. But this is not the point :

the accusation conveys the most serious charges, not only against myself, but against the Director-General of the Medical Department of the Navy. Sir William Pym would represent Sir William Burnett as an unprincipled man, bent upon upholding "a false and erroneous theory" by the most corrupt means; and myself an unscrupulous and convenient tool, who, reckless of my life, and regardless of the interests of my family, went to an island where it was said a malignant and contagious fever prevailed, which had carried off nearly all the inhabitants, not only to support the "false and erroneous theory," but also to furnish some information about the weather, in corroboration of the statements of Mr. Macaulay and the British Consul, which "it was hoped" (Sir William Pym's Letter, p. 13) "would have overturned the whole of the conclusions come to by Dr. McWilliam." "Upon this supposed state of the weather is founded Dr. King's mission."—*Ibid.*

Under any other circumstances it would be displaying a vain affectation, and be a work of supererogation besides, were I to undertake the defence of any part of Sir William Burnett's conduct in this transaction, for his character stands infinitely above the reach of any such attacks. But my own position is altogether different, being but little known beyond the circle of my personal friends; and it is necessary for my own justification that I should state what passed between Sir William Burnett and myself, not only when I was offered the appointment to Boa Vista in 1846, but at different times previously.

Being at home and unemployed in the year 1846, I read in the 'Times' newspaper that the "Eclair" had arrived at the Mother-bank the previous evening; that many of her officers and men had died from fever; and that numbers were then suffering from the same disease, and lying in a precarious, if not in a hopeless condition. I afterwards accidentally met Sir William Burnett in the street, and asked him whether the account was true: he answered in the affirmative. I then added, "Sir William, you know well the deep interest

“ I take in this disease, and that I earnestly wish to have
 “ another opportunity of grappling with the Yellow
 “ Fever ; pray accept my services, and I shall in a few
 “ hours join the ‘ Eclair,’ and take charge of the sick.”

Some months after the panic had subsided, which originated in a dread of the fever of the “ Eclair,” I wrote to Sir George Cockburn, and, after explaining the object I had in view, entreated him to send me to the coast of Africa.* As it was necessary, according to the regulations of the Service, to obtain first the sanction of the Director-General, I submitted that letter to Sir William Burnett, by whom it was attentively perused in my presence, and received his full approbation. At the moment of leaving, with the open letter in my hand, I met Sir William Burnett’s confidential clerk, who questioned me as to the nature of my business with Sir William ; on hearing which, he replied, “ If
 “ that letter is sent, it may seriously affect Dr. McWil-
 “ liam’s interest, for he is now, or is about to be, nomi-

* When it is recollected that medical officers in the Navy have thrown up their commissions rather than incur the risk of going to the coast of Africa, it must appear strange that an old medical officer—his constitution already affected by previous services in the tropics—should be, not only willing but anxious to be allowed to serve on the African station. Yet such was the case, and I shall now briefly state why it was so.

When at Bermuda, I changed my views on more important points connected with the Yellow Fever than the question as to its remote cause. Those points were its proximate cause, and the principles to be adopted and relied on for the cure of the disease. I became convinced (no original idea), that the disease depended on a poisoned or vitiated state of the blood, and that poison or contamination had been imbibed into the system, most probably through the organs of respiration : I adopted therefore a mode of treatment in accordance with that theory, and felt quite assured after a time that my practice could be defended on sound physiological and pathological principles. But unfortunately, having been unexpectedly removed from Bermuda, I found that the grand desideratum was still wanting, for I was thereby deprived of the means and the opportunity of furnishing that amount of evidence as to the results of the practice, without which no hypothesis, however plausible, can be safely adopted : and hence that uncontrollable desire for another opportunity of treating, not only the Yellow Fever, but two other diseases nearly as fatal, cholera and dysentery, which I believe are more closely allied to Yellow Fever than is generally imagined.

Now, all this was well known to the Medical Director-General of the Navy ; it was known also to the Lords Commissioners of the Admiralty ; and, moreover, during the prevalence of the late epidemic cholera in London, it was known to my old messmate, Sir James Duke (then Lord Mayor), and to Mr. Simon, the City Officer of Health ; for to each of them I applied in person, and offered to take the medical charge, gratuitously, of any number of the poor and destitute sick who were labouring under the disease.

“nated for a particular service on the coast of Africa.” After this piece of information, I need not tell those who are personally acquainted with me that my letter to Sir George Cockburn was never sent.

Towards the end of November in 1846, and when about to leave town for a lengthened residence in Devonshire, I was unexpectedly summoned by an Admiralty messenger to attend without delay on the Director-General, at Somerset House. As a matter of course, but without imagining that my services could be required, I went immediately, and found Sir William Burnett, who informed me in substance that the Yellow Fever had again broken out at Boa Vista, that it had carried off some of the principal inhabitants of the town of Port Sal Rey, and in short was committing great havoc throughout the whole island; and to add to the overwhelming calamity it was feared that there were neither medicines, nor medical men to administer them to the sick. This was all I heard at that time, for here Sir William Burnett stopped and immediately said, “Now, Sir, will you go to Boa Vista? Some medical officer must be sent there forthwith;”—and, as this was the very opportunity I had so long desired, I replied, without a moment’s hesitation, “I shall undertake the mission with much pleasure, Sir.” The whole transaction only occupied a few minutes, and not one word was said respecting the duties I should have to perform, nor did I know anything of the nature of my instructions (for I received none, oral or written) until the day before I sailed from Devonport;* and in fact my official acknowledgment of their receipt was written on board the “Sphynx,” when we were under weigh.

But to explain more clearly my object in accepting that appointment I may state that at the above interview, just before leaving the room, I expressed my fear to Sir William that, notwithstanding his desire to send me off and my own anxiety to go by the earliest opportunity, I might arrive there too late to be of

* See Appendices B and D.

any service to the inhabitants, and thereby lose the chance of accomplishing my own purpose. I said, "The fever may have subsided, and I may find on my arrival that the island is healthy." He replied, "I hope you will find it so, but it is not at all probable." My rejoinder was, "I hope so too, for the sake of the people; but, should such happily prove to be the case, allow me then, for my own sake, to go on to the coast of Africa." On the following day, or the day after, I was appointed Medical Inspector on the African Station.

This narrative satisfactorily refutes Sir William Pym's gratuitous assertion, that the second mission (Dr. King's) to Boa Vista "was for the sole purpose of reporting on the supposed state of the weather, as related by the Governor-General of the Cape de Verde Islands, and the British Consul there."

As regards the real grounds of the second mission to Boa Vista, is it at all likely that Sir William Pym was so utterly ignorant of the facts of the case, when he wrote his letter to the Lords of the Privy Council, containing charges against two officers in the public service, the humblest his equal in professional rank, and the other his superior?—is it probable, (from the intimacy between him and Dr. McWilliam), that he knew of no other grounds than those which he stated, rendering a second mission to Boa Vista absolutely and unavoidably necessary? It is charitable to think so, and I wish that I could believe it, but I must at the same time enlighten my readers on the subject. The document from which Sir William Burnett read some extracts,* before he offered me the appointment to Boa Vista, contained sufficient information (unknown to me at the time) to induce the Lords of the Admiralty to adopt the course they did; they could not do otherwise than despatch immediately a medical officer to Boa Vista, without an abandonment of every humane and philanthropic principle. That information was furnished, and I believe solely furnished, by

* See Appendix A.

Dr. McWilliam ; and that the mission was not, as Sir William Pym asserts, "most unnecessary," is shown by the fact that Dr. McWilliam in the same document volunteered his services, and, to meet the emergency, offered to return immediately to the Cape de Verde islands.

The letter from the Governor-General of the Cape de Verde islands to the Portuguese Consul-General at Gibraltar, 27th January, 1846, which has frequently been alluded to in this controversy, I consider to be a document necessary to a clear understanding of the whole case, and the more so, as we may see in it the first indication of an indirect but powerful influence, which controls the free expression of individual opinion ; I need not then apologize for introducing the following extract from that letter :—

"It is true that the disease, which was perfectly endemic—for not one of those who migrated to the different islands of the Archipelago had the disease, or communicated it to others—did not make its appearance till a month after the departure of the steamer ; but as Boa Vista was permitting the landing of the sick of the 'Eclair' on a small island at a mile distance from the port of Sal Rey, where the pestilence broke out, it was natural enough that the public should attribute to my condescension the evils which took place ; and I consequently look forward to bitter censures and severe animadversions." "I feel nevertheless that I have complied with a sacred and binding duty of philanthropy ; and that the disease had its origin in the great falls of rain which took place at a very advanced period of the season, and which remained stagnant in the neighbourhood of the place, as happens every year in Villa da Praya" (the capital of St. Jago) : "I therefore calmly wait the result."

"It was natural enough," says the worthy Governor, "that the public" (the inhabitants of Boa Vista, I imagine) "should attribute to my condescension the evils which took place."

Perhaps so ; but that belonged to the *past* : he was aware of it, if such was the case, when he wrote the letter.

"And I consequently look forward to bitter censures *and severe animadversions.*"

Here the responsibility for his condescension is *prospective*. It cannot apply to the inhabitants of Boa

Vista, for the whole united population would not have ventured to question the Governor-General's conduct in terms of bitter censure and severe animadversion. From whom then, and from whence, did he anticipate that condemnation? The following extract from the letter before quoted, written by a medical officer of high character, who was in Lisbon in 1847, may assist us in forming an opinion:—"Every one connected " with the Cape de Verde islands, as well as the Go- " vernment authorities, are most anxious to make it " appear that this archipelago is generally healthy, and " wish to pass over the subject of fever in silence; but " all allow, when questioned on the subject, that it " prevails in an epidemic or endemic form every year " during the months of autumn."

The Governor-General concludes his letter by stating his conviction "that the disease had its origin in the great falls of rain which took place at a very advanced period of the season, and which remained stagnant in the neighbourhood of the place."

Having so plainly stated the reasons which led him to a conclusion altogether opposed to the theory of contagion, well and appropriately might he, as an honourable and independent man, say, "I therefore " calmly wait the result."

After an interval of two years it was thought necessary to bring forward the Governor-General as an important witness in this case. (See Dr. McWilliam's Remarks, p. 10.) We left him an anti-contagionist calmly waiting the result. We now meet him again, a decided contagionist, whose opinions, "upon a calm " review of the facts of the case, have undergone a com- " plete change;" and to confirm this I suppose, in a letter to Dr. McWilliam, dated January, 1848, his Excellency says, "You now see I have changed my first opinion." It is quite evident he has changed his opinion, but we wish to know, and have a right to demand, on what grounds and for what reasons. Dr. McWilliam gives no explanation whatever, but refers to a correspondence between the Governor-General and myself, with the view to intimate, as it appears to me, that I was fur-

nished with this information when at Boa Vista; and perhaps to insinuate also, that if the Governor-General did not adhere to his original anti-contagionist opinions, it was not my fault.

“In December, 1846, his Excellency, in reply to a letter from Dr. King, pronouncing his opinion that the disease was of indigenous origin, says—‘Regarding the difficult question of deciding if the disease be contagious or have a local origin, I cannot give my opinion.’”

It may be naturally inferred from the above extract, that, having first pronounced my own opinion, I was anxious to obtain a similar declaration from the Governor-General; and it may be surmised likewise, that in this correspondence between the Governor and myself (which is not alluded to in my official Report) some important information had been communicated, but was suppressed.

If this was Dr. McWilliam’s design, why did he not lay before us the Governor-General’s reply to my letter *in extenso*?

But altogether in this note (Remarks, p. 10) we may discern a very singular vacillation in opinions.

1st. “Long before his Excellency wrote to Dr. King, he stated in a letter to my friend, Mr. G. Miller, of San Nicolao,—‘I am convinced the fever was contagious from its commencement, and during its progress over the island.’”

2nd. “In December, 1846, his Excellency, in reply to a letter from Dr. King, says,—‘Regarding the difficult question of deciding if the disease be contagious or have a local origin, I cannot give my opinion.’”

3rd. “In a letter to me, dated January, 1848, his Excellency says,—‘I am quite convinced that the fever was contagious, and that it was introduced by Her Britannic Majesty’s ship ‘Eclair.’”

To the above I may now add, that my letter to his Excellency was written at the end of January 1847, and was sent by a small vessel, which sailed from Boa Vista on the 3rd of February, direct to the island of Brava, where the Governor then resided. Dr. McWilliam makes it appear that the Governor received and replied to this letter in December, 1846, five weeks at

least before it was written: this of course is a mistake, but I am rather puzzled to account for another mistake; the Governor must have received my letter in February, and it appears he replied to it, but to whom did he address that reply? To me—to Dr. McWilliam—to Mr. Rendall the Consul, or Mr. Miller at St. Nicholas, who are friends of Dr. McWilliam, and partisans, having taken from the first a prominent part in the discussion of this question?—I declare most solemnly, for my own part, that I never received any communication whatever from the Governor-General, and I was not even aware that he had received my letter until I saw an extract from his reply in Dr. McWilliam's Remarks!

The nature of the information which had been received by the Admiralty, through Dr. McWilliam, from the Cape de Verde islands, which rendered a second mission to Boa Vista necessary, and which hurried me from England at a few days' notice, has already been told. I have now to state in continuation that we arrived, in the "Sphynx," at Madeira on the 10th of December, 1846, and, after coaling, sailed on the afternoon of the following day. While we remained there, however, the captain, purser, and myself, called on the English Consul, who fully confirmed everything regarding the sad condition of the inhabitants of Boa Vista which I had previously heard at the Admiralty.

We arrived next at St. Nicholas, one of the Cape de Verde islands, on the evening of the 21st December. The captain went on shore as soon as the ship was anchored, and after an absence of about two hours returned on board with the same dismal and disheartening tale. I was on deck at the time, and he immediately addressed me in the following words: "Doctor, I have very bad news for you." He then entered into particulars, which altogether amounted to this,—that, from fever and famine, the island of Boa Vista was nothing less than a great charnel-house.

On the 23rd of December, P.M., Her Majesty's steamer "Sphynx" entered the bay, and anchored off the town

of Port Sal Rey, and soon afterwards two boats were seen approaching—one from the fort on the small island, and the other from Port Sal Rey. As the official orders and instructions, both to the captain and myself, were explicit and peremptory on one point, viz., my immediate debarkation when the ship arrived at Boa Vista, my baggage was on deck, and I was quite ready and willing to leave as soon as a boat came alongside. When the boats approached near enough to be hailed, the captain ordered them to “lie off,” and then questioned them as to the sanitary condition of the island, and whether there was a sufficient supply of the necessaries of life.

The answers, which were given in plain English, and heard by every man and officer in the ship (for all hands of their own accord were on deck at the time), fully confirmed the previous reports, and seemed to justify the worst anticipations. The fever (the second epidemy) had carried off a great number of persons, some of them of respectable station: the disease was raging in Port Sal Rey and the different villages throughout the island, and numbers were then dying every day. Such was the information communicated to Commander Cragg, of the “Sphynx,” by John Jamieson, the Consul’s storekeeper, who was in one of the boats, and replied to the captain’s questions.

The boats were now ordered to come alongside; my baggage was soon placed in one, and I took a passage for shore in the other. Before leaving the ship, however, two very kind proposals were made to me; the first by the commander, who offered to supply me, on his own responsibility, with as much flour, bread, &c., as could be spared from the ship, and the other by the assistant-surgeon, who had but lately entered the service: he could not, he said, bear the thought of my landing alone under such circumstances, and earnestly begged to be allowed to accompany me.

Within a couple of hours after landing I ascertained beyond doubt that there was, besides a case of rheumatic fever, *only one case of endemic fever* in Port Sal Rey, that of a poor slave, lying in a wretched

hovel, who had been ill about twenty days. A few days after, I had sufficient reasons for believing that *every other part of the island was equally healthy*.

I had left the ship under the full and reasonable expectation of finding in every house on the island the sick and the dying, but found that I had taken up my temporary abode on an island just as healthy as any small provincial town in Great Britain. It is not for me to account for the discrepancies between the reports and the realities regarding this Boa Vista fever, but I have stated facts which came under my notice, and which can be corroborated by several living witnesses now in England.

After I had been several weeks on the island, I was called on by Dr. Almeida and two or three of his friends, all of them men of the highest respectability and character. Their object was to explain that the island was perfectly healthy (which I knew already), and to request me to write to that effect to the Governor-General, begging him to annul the unnecessary restrictions of the quarantine laws. This I consented to do, but only on one condition, viz., that the requisition should be made to me in writing, and attested by the names of the most respectable inhabitants of the island.*

It is true then that I wrote to the Governor-General before I left Boa Vista, but it was at the urgent request of the inhabitants. Owing to the quarantine laws, the usual traffic of the island had been suspended nearly eighteen months; and, in consequence, many of the poorer classes, particularly in Port Sal Rey and Rabil, who earned their subsistence chiefly by working for ships, when they arrived as formerly on their way to the southern hemisphere, were now almost destitute; and at the same time everybody knew that the island was quite healthy; yet a vessel leaving Boa Vista under such circumstances, for any of the Cape de Verde or Canary islands, would have to submit to a quarantine of thirty or forty days; and even on the coast of Africa,

* See Appendix E.

twenty days at the Gambia, and the same ordeal at Sierra Leone, "the White Man's Grave."

Such only were the reasons which induced me to write to the Governor-General.

When I read Dr. McWilliam's Remarks on my Report on the Fever at Boa Vista, I was greatly astounded by the following observations (p. 14):—

"There is yet another statement in Dr. King's Report that requires to be noticed before these remarks are brought to a close. Dr. King (p. 4) says, 'All persons with whom I conversed, except Dr. Almeida, insist on it as a fact not to be doubted that the fever was imported by H.M.S. "Eclair," and therefore its origin was not to be referred to Boa Vista, nor to any of the other islands. Dr. Almeida considers the disease to have been an aggravated type of the bilious remittent.'"

Dr. McWilliam then says—

"To this I shall without comment refer to my Report, in which is recorded Dr. Almeida's opinion as to the origin and nature of the epidemy eight months previous to Dr. King's visit to Boa Vista, and append a letter of Dr. Almeida's written six months after Dr. King left that island."

Of this letter, which was addressed by Dr. Almeida to Mr. George Miller, of St. Nicholas, the following is an extract:—

"I have treated the inhabitants of this island, of all and whatever sicknesses with which they have been attacked, and it has never come to my knowledge that contagious fevers have been introduced into this island, nor have originated in it; but only fevers 'miasmaticas,' exhibited with intermittent or remittent symptoms, which only took place some years in the rainy season, from the effect of stagnant water in the ravine of Rabil, and attacked the people living in the neighbourhood thereof, whilst those living in the other villages were exempt. It was only in the year 1845 that I have known in the island the contagious or yellow fever, which, unhappily, was introduced by Her British Majesty's steam-vessel 'Eclair,' and to such an extent devastated this unfortunate people.

(Signed) "J. XAVIER D'ALMEIDA."

I confess that when I read the above letter I could not help admiring Dr. McWilliam's good management in bringing forward so opportunely a letter written by Dr. Almeida six months after I left the island, and

eight months before my Report was published, and which conveniently anticipated and flatly contradicted a statement of mine in that official Report respecting himself.

I never asked Dr. Almeida whether he was a contagionist or not; he might possibly have entertained the same opinion as Dr. McWilliam, that the disease became contagious "in virtue of a series of causes." I knew, however, from himself that he had placed a "cordon sanitaire" round some house or houses in Funda das Figuiras, one of the eastern villages, during the prevalence of the first epidemic, but which was of no avail; and I might have inferred also that he considered, at that time at least, that the disease was contagious, from the conversations we had at different times respecting the distribution of the money which the people of the island believed the British Government was to award them, not as an act of charity, but in payment of a just debt, and as a compensation for injuries sustained.

I stated in my Report, and partly in reply to the 3rd query,—“Dr. Almeida considers the disease to “have been an aggravated type of the bilious remittent.” This is contradicted, and appears to be a mis-statement; but allowing for a moment such to be the case, what has it to do with the discussion between us?

I had previously stated (p. 3, Dr. King's Report),—

“If the testimony of the people themselves is to be considered exclusively as evidence of the contagious nature of the fever, then I must admit (as they were all contagionists) the conclusion is inevitable that the disease was introduced by the ship.”

And subsequently, in reply to the 4th query, I stated also, and without any exceptions, that it (the disease) was universally believed by the inhabitants to be of a contagious nature.

Dr. McWilliam's argument rests on a partial and narrow view of the whole case, and is supported only by the vague evidence and opinions of persons who were neither competent nor disinterested witnesses; mine, on the other hand, is founded on a number of

important and remarkable occurrences, coincident with the fever, which cannot be controverted, and which supply evidence absolutely necessary to enable us to form a just opinion. Those occurrences have been entirely kept back by Sir William Pym and Dr. McWilliam.

In any of the arguments I have adduced in support of my own opinion, that the disease on the island was not a foreign production, but the result of local and indigenous causes, I have not availed myself of the statements or opinions of any individual, but on the contrary have admitted everything which Dr. McWilliam seems to think alone necessary to establish his case, viz.:—The island was healthy immediately before the “Eclair” arrived; the inhabitants suffered afterwards from the same fever; and all believed that the disease was contagious.

For what purpose then has Dr. McWilliam introduced in his Remarks this letter from Dr. Almeida? it has not strengthened his position in the least, but he thought perhaps, naturally enough, that it must weaken mine, when my veracity was thus publicly impugned.

I have now to meet the charge.

On the 8th of January, 1847, and within two hours after my return from the eastern villages, Dr. Almeida called on me. During his visit we had some conversation respecting the cases of fever I had just seen, and as soon as he departed I made the following entry in my commonplace-book.

“8th January.

“Dr. Almeida called on me this afternoon; after talking about the fever cases which I saw yesterday at the village of João Gallego, he asked me what I called the disease—Yellow Fever?—‘Yes,’ I replied, ‘it is the same disease which many persons call the Yellow Fever, but I think it is a bad designation, because, the greater number of patients have neither yellowness of the skin nor black vomit; the first is not always an unfavourable symptom, for it frequently comes on during convalescence, and the latter is to be considered merely as an indication of the unfavourable tendency of the disease, and but few recover when it has taken place’ To my surprise, Dr. Almeida said he was quite of my opinion respecting

the disease; it was caused by miasmata, and he had, on different occasions before, seen black vomit."

In my private diary the following entry is made on the 9th:—

"I have been visited again by Dr. Almeida, who says, in confirmation of what he stated yesterday, that he had often seen black vomit in the last stage of remittent fever, which, he believes, arises from miasmata, and prevails to a certain degree every year. He says black vomit appears in about one in every fifty patients with the fever."

Towards the end of the month (January), and when I was in daily expectation of the arrival of a vessel to take me from Boa Vista, I employed some of my spare time every day in looking over the memoranda I had made during my sojourn on the island; and, on reading the above entries, it occurred to me that it was advisable to get the doctor's statement in writing from himself. I therefore called at his store, but found that he had gone on a visit to the eastern villages.

A few days afterwards I was requested to see some persons who were sick at his house, situated about a mile and a half from Port Sal Rey. On my return the same evening I wrote to him the following letter, which was sent next day by Senhor J. Baptista, the Vice-Consul:—

"My dear Dr. Almeida.

"Having been requested to call at Boa Esperança, to see some of your family who were indisposed, I went there to-day; and I am happy to tell you that nothing particular was the matter, and the few invalids I saw are likely soon to be quite restored to health. I am sorry to find, however, that you are not expected to return for many days, because I am anxious that what has passed between us in conversation about the late fever should not be misrepresented; and this is necessary, not only from the respectability of your station in society, but from your great professional experience in the island.

"Did I understand you aright when you stated to me on the 8th instant that you were quite of my opinion respecting the nature of the disease, that it was the bilious-remittent fever, and that you had on different occasions, before 1845, seen the black vomit? Did I clearly understand you, on the following day, when you repeated that you had often before seen the black vomit in the last

stage of the remittent fever, which prevails in a modified form to a certain extent every year in Boa Vista, that you believed the disease to be caused by miasmata, and that the black vomit appeared in one person out of fifty patients afflicted with fever? If you have time to answer the above questions in a few days, you will greatly oblige

“ Yours very truly,

“ GILBERT KING.”

The expected man-of-war did not arrive so soon as I had anticipated, and day after day passed without any reply from Dr. Almeida; at length, one day, I saw him near the Consul's house, where I then resided, and immediately sent a person to say I should be glad to see him. Soon after he was seated I asked whether he had received my letter; he admitted that my letter was duly received, but stated no reason for not acknowledging its receipt; I then referred to the object I had in view in writing, and requested a distinct reply; and he again assured me that I had made no mistake, but had correctly understood his meaning. A few days afterwards I left the island.

It would have been very easy for Dr. Almeida to have replied to my letter when I was on the island, but I can easily understand his reasons for not wishing to commit himself in writing. After reading the letter which Mr. Miller has drawn from him, it would be idle to speculate upon his reasons for making contradictory statements. Lest I had misunderstood his meaning, I gave him the opportunity of correcting me, but he acquiesced in the truth of my representation.

Dr. McWilliam imagined no doubt that he had triumphantly exposed a gross misrepresentation on my part, and that he had produced at the same time an important and consistent witness in favour of contagion; for, besides the letter already noticed, he refers us to his Report, in which is recorded Dr. Almeida's opinion as to the origin and nature of the epidemy eight months previous to my visit to Boa Vista.

Dr. McWilliam's Report, Dr. Almeida's Examination, query 1561:—

“ What was the disease with which the crew of the ‘Eclair’

were at this time [at the Fort] affected?—Yellow Fever.” Query 1562. “Have you often seen this disease before at Boa Vista?—Never.” Query 1567. “What was the nature of the disease? [that from which the inhabitants of Boa Vista afterwards suffered]—“The same as that which the crew of the ‘Eclair’ laboured under when I saw them at the fort.”

I need only refer to a quotation given at page 59, where Dr. Almeida’s opinion as to the origin and nature of the epidemy is declared, after frequent opportunities of forming a correct judgment. It was, up to that time, against importation, and therefore hostile to the doctrine of contagion. Such were his views more than two months after the “Eclair” had sailed,—four months previous to Dr. McWilliam’s visit to Boa Vista.

When it is recollected that Dr. McWilliam’s Official Report occupies 112 pages, and that all which I thought it necessary to say on the same subject (in strict compliance with my instructions) is confined to 13 pages, it gives a colouring of probability to the assertions of Sir William Pym (Observations, p. 3)—1st, That I had merely gone “over the same ground” and followed “the same course (but by a shorter road) “which had been taken by Dr. McWilliam;” and 2nd, (p. 7), That “if Dr. King had executed his commission with half the zeal and search after the truth “as Dr. McWilliam, he would have been informed as “follows,” &c.

Besides, in a note to his Remarks, p. 11, Dr. McWilliam says,—

“I cannot account for the difference between Dr. King and myself as to the aggregate number employed (labourers). Dr. King’s table gives a total of 63 men, including those that died; while my Report contains the evidence of at least 70 survivors, who at one time or another were in some way employed in the service of the ‘Eclair.’ The men were called before me by the lists in possession of Joao Baptista, Senhor Carvahal, and others, by which the men received their wages.”

To meet Sir William Pym’s first assertion I have only to say, that, according to the plan of inquiry which I had decided on, and afterwards adhered to, in my researches on the island of Boa Vista (Report, p. 2), I

must have examined most of the surviving witnesses who had been employed about the "Eclair." To this extent I admit that I have gone over the same ground as Dr. McWilliam,—how could it be otherwise? but I have gone much farther, and have taken up a position adverse to contagion, which neither he nor Sir William Pym has ventured to assail.

The charge against me, of having "taken a shorter road," is quite legitimate, for I confess honestly that I never thought it necessary to ask any man from whom he got the fever, nor who caught it from him!

In reply to the second assertion, which is supported by Dr. McWilliam in the above quotation, I might safely oppose the simple statement, that, in my endeavours to ascertain the truth during my brief sojourn at Boa Vista, I spared myself neither trouble nor expense.

Dr. McWilliam cannot account for the difference between him and myself as to the aggregate number of labourers employed; of course not; but I shall now give the necessary explanation, which I hope will remove from his mind any unworthy suspicion. The fact is, I was not so fortunate as Dr. McWilliam in getting a list of the names of the labourers who had been employed about the "Eclair;" I could only obtain the evidence of those persons who presented themselves to me voluntarily for examination; but that there should be some inducement for the attendance of all, I promised and paid to each of them,—soldiers, labourers, and washerwomen,—a small sum of money, as a compensation for their loss of time.

I knew nothing of the lists referred to by Dr. McWilliam, and I had not the honour of knowing Senhor Carvahal and others, who were in possession of these lists; but I was rather intimate with the acting Vice-Consul, Senhor Baptista, and I examined all the labourers, &c., belonging to the district of Rabil, in his house and through his interpretation. He knew the pains I was taking to gain information, and he saw me pay money for that purpose to every one who had

done any work for the "Eclair." I believe him to be a most honourable and upright man, but he did not tell me that he had lists in his possession which would have saved me a great deal of trouble, and enabled me perhaps to have examined a few more persons. Before concluding this part of the subject, I think it necessary to notice another assertion of Sir William Pym (*Observations*, p. 6):—

"If Dr. King had looked more to the soldiers of the fort (for he seems to have examined Miguel Barbosa only, who was one of the first taken ill), he would very soon have come to the same honest conclusion as Dr. McWilliam."

And the Doctor himself echoes (*Remarks*, p. 7)—

"Surely it would have been better had Dr. King enabled himself to speak much more decidedly on this point."

Whether Miguel Barbosa was one of the first taken ill (as thus stated parenthetically and for an obvious purpose by Sir William Pym) I shall not stop to inquire; but in refutation of what he has said, and which is implied also by Dr. McWilliam, I must refer to my *Official Report* (p. 3), where I stated:—

"I examined every day a certain number of persons who were said to have had direct or indirect communication with the ship or the people on the [small] island, until I had obtained by personal interrogation the evidence of all the survivors of the labourers, the washerwomen, and the *soldiers*. . . . The replies of each person were recorded on the spot, and carefully transcribed into another book at my lodgings. . . . But should any discrepancies be found on comparing it [my Report] with the result of Dr. McWilliam's examinations, I have still the original papers to prove (if necessary) that I have not erred wilfully."

I certainly examined a few more of the soldiers than Miguel Barbosa; and their replies, where I have given them, were interpreted to me by John Jamieson. Their evidence, however, was anything but satisfactory: I could learn nothing from them as to dates, nor indeed any information whatever to indicate the immediate connexion of the fever on board the "Eclair" with the subsequent epidemy on the island; but I looked most confidently to another quarter for the means of getting over the difficulty, and removing

all obscurity from this most important part of the question. I could not doubt that the Commandant of the Troops (who had under his orders Lieut. Joaquim dos Santos and a number of non-commissioned officers) had in his possession various documents to show when and where each and every one of the soldiers was attacked with the fever. In this belief, and soon after my arrival on the island, I sent to the Major, by Senhor Baptista, a sheet of paper ruled according to the form of the sick-list used in the Royal Navy, and begged him to fill it up with the names, dates of attack, and results of the disease among the soldiers. From the verbal acknowledgment I received, I had no reason to anticipate a disappointment; and as he had consulted me, on more than one occasion, respecting his health, it would have been no very great personal favour had he complied with my request. But I am sorry to say I received no communication from the Major until the day I embarked and left the island, and even then, instead of the document I expected, I received a copy of one that had been given to Dr. McWilliam, showing only the dates of the deaths of the soldiers, with a polite intimation that that was all the information which could be given me concerning the soldiers.

But it would be tiresome, and divert attention from the main argument, were I to follow my two opponents in the erratic course which they have adopted in their attacks on my Report, where they have jumbled together statements, arguments, implications, and objections, "*rudis indigestaque moles*," without the slightest regard to method or connexion. If they were determined again to rush into print in new characters, as reviewers and critics in a case where they were interested parties, why did they not follow me in the order I adopted in my official Report? and, in reviewing the queries and replies seriatim, have shown the fallacy of my conclusions, and controverted the facts which supported them? This course would have been in conformity with the conventional rule which I believe is invariably adhered to by the press in literary criticism; but it would not have suited Sir William

Pym and Dr. McWilliam, for it must have brought them on dangerous ground.

Dr. McWilliam, in the 'Medical Times and Gazette,' (29th May, 1852), says, in reference to the eastern villages,—

“With regard to Cabeça dos Tharafes, the most important in this inquiry of the three villages, inasmuch as it was the first in which fever appeared in that part of the island, I have good reason to believe that Dr. King did not once enter this village.”

Why should I have done so? I got all the information that was to be obtained from the chief person of the district—the judge at Funda das Figueiras. Cabeça dos Tharafes certainly contained 73 huts, but at that time there was not one sick person in the village.

The Doctor proceeds:—

“As respects Port Sal Rey, the mode in which Dr. King obtained his evidence there was chiefly, if not wholly, thus:—His list of queries were written down, and John Jamieson, the Consul's storekeeper, alone went the round of the houses, getting answers to those queries in the best manner he could, and then brought them to Dr. King, who transcribed them, thus obtained, into his own journal or note-book.”

In a note Dr. McWilliam adds,—

“I received this information from John Jamieson himself, a man whose word I never had reason to doubt.”

It is quite correct;—the information was obtained in that manner, and transcribed into my journal, &c., which proves that John Jamieson has a tolerable memory when he likes. Some explanation therefore is now required concerning this matter. About four or five days before I left the island it occurred to me that it might be useful were I to visit every house in Port Sal Rey,—to make inquiries, of course, but, except for the general purpose of gaining as much information as possible, I had no particular object in view, for it was no part of my plan of investigation to visit every house. John Jamieson was immediately made acquainted with my design, and, as there was no time to lose, I told him that it would facilitate the execution of the

business, were he to go over the ground himself first of all, and then, with his transcribed list in my hand, I should be able in a shorter time to visit every house myself. Accordingly I gave him instructions to begin at any part of the town he pleased, visit as many houses as he could every day, until he had gone regularly through the whole; and every evening the result of his day's work was transferred according to his own reading (for I could not decipher a word of his writing) into my own papers and journal.

The queries it will be seen were not in Dr. McWilliam's style at all. The first column was for the names of heads of families,—the second for the date of commencement of fever in each house,—the third for the numbers in the family,—and the fourth for the deaths that occurred in each house after the departure of the "Eclair." Contrary to my expectation the above inquiries, made in each house in Port Sal Rey, were completed and fully transcribed on the evening before I left the island. Supposing I had visited the houses myself, what advantage could have accrued from it? I must necessarily have had John Jamieson with me as an interpreter, and it would have rested solely with him to repeat or contradict the facts he had supplied me with on the preceding day; for unfortunately I knew just as little of the Portuguese language as Dr. McWilliam did when he was at Boa Vista, although he now boasts of having put the questions to each person and received the answers himself.

It is true, however, that the information I received respecting the progress and results of the fever in Port Sal Rey was acquired through the agency of John Jamieson; and for that very reason I have never made the slightest use of it, directly or indirectly: on what pretence, then, has the matter been brought before the profession and the public?

I am by this time well acquainted with Dr. McWilliam's tactics; and although it is perhaps impossible for him to refrain from egotistical display, or from ungenerous and discourteous allusions to those who differ from him, I suspect that his motive for intro-

ducing such irrelevant gossip into this discussion was to evade or neutralize the effect of a disclosure of dates, adverse to many of his ingenious statistical details. Be this as it may, the document is still in my possession; I have referred to it in these pages without scruple, and the more readily as it is well known that John Jamieson is at hand, with Dr. McWilliam, in the Customs Department.

Having thus fulfilled a most painful duty, I have only to add, that if, in the preceding pages, there appears any undue display of acrimony, I hope it will not be attributed to an uncharitable spirit, although I have been sufficiently provoked by Dr. McWilliam in his Remarks on my Report, and in his late papers on the Boa Vista fever.

The remote cause of epidemic fever is beyond our knowledge or control; it might be expected, therefore, that gentlemen—members of the profession—could give an honest opinion, if not without the risk of being charged with prejudice, at all events without the imputation of delinquencies of a graver character.

I have been impelled by no other desire than to reveal the truth, and to clear up a matter which has been long obscured by misrepresentation and imaginative speculations.

Having obeyed the dictates of duty, and of duty only, I appeal to the judgment of mankind, and “calmly wait the result.”



APPENDIX.

[A.]

“THE mission appears to have been most unnecessary, and its results not very creditable to the parties concerned; its object having evidently been, not to search after and ascertain the truth, but to support a false and erroneous theory, the upholding of which has proved most destructive to human life, more particularly on the coast of West Africa and in the West Indies.”—*Sir William Pym's "Observations," &c., in a Letter to the Lords of the Privy Council, p. 15.*

SIR,

3, Oakly Place, Southsea, November 22, 1846.

I hasten to forward to you the following extract from a letter, of date the 30th September, which I this day received from Mr. George Miller, a most respectable and intelligent merchant at the island of San Nicolao, in the Cape de Verds:—

“The Macaulays left in H.M.S. ‘Rolla,’ a short time since, for Boa Vista, I think very unwisely. Our intelligence from that island is not satisfactory. Of the deaths of Joao Baptista’s father-in-law, and Theodore, the Consul’s clerk, we had heard before the Macaulays left, but to-day a vessel has arrived from San Antonio, bringing the sad intelligence of the death of one of Dr. Almeida’s sons and a son of Mr. Antonio Joaquim Martines, a young gentleman who fled with his family from Boa Vista in November last, but who, imagining the place was healthy again, returned and has fallen a victim to the Yellow Fever. Mr. Joaquim Banos and his wife (a daughter of Dr. Almeida’s) are sick with the fever, riding quarantine at the island of San Vincente, on board the ‘Herveina,’ a schooner you have often seen at Boa Vista. Pray don’t let these sad reports reach Lord Denman’s family, as I am sure it will very much alarm them.”

From the above extract I infer that the Consul and other English functionaries, besides Mr. Macaulay and his family, are all at Boa Vista; and without stopping one moment to speculate upon the cause of the fever having again broken out on that island, I cannot refrain from expressing to you the great apprehension I entertain for the fate of the residents there, English and Portuguese.

The intercourse between the "Rolla" and the shore was, I dare say, limited to landing Mr. Macaulay and his family. The same in all probability was the case with the "Bulldog," when that vessel arrived there, and consequently those on the island must in case of need be perfectly destitute of the assistance of any English medical man, as Dr. Kenny died last year. It is also possible, if not probable, that the Portuguese naval surgeons had left Boa Vista, in which case, should the fever have spread to those who left the island during the early period of the epidemic, the English as well as the Portuguese residents are in a very serious and lamentable position.

The possibility of such a contingency as that which I have spoken of will, I doubt not, be considered by you of importance, and you may possibly judge the case as sufficiently urgent to recommend immediate assistance being sent to Boa Vista. The "Grappler," about to sail for the coast of Africa, could, without going out of her way, be there in about a fortnight. I am quite prepared to proceed on this service, and can be ready in a few hours. An opportunity will also be offered to investigate the whole of the circumstances connected with the re-appearance of the disease, which cannot fail to be highly interesting; and from my acquaintance with Mr. Martines and other respectable residents in the Cape de Verds, I could make arrangements, after the island of Boa Vista is in pratique, to visit the other islands of the group, which the rigorous quarantine prevented me doing when I was last at the Cape de Verds.

I have the honour to be, Sir,

Your most obedient servant,

J. O. McWILLIAM, M.D.,

Sir William Burnett, M.D., K.C.B.

Surgeon R.N.

[B.]

SIR,

Admiralty, November 30, 1846.

The Right Honourable the Lords Commissioners of the Admiralty having signified to me their approval of my recommendation that you should proceed to Boa Vista, for the purpose of investigating all the circumstances relating to the late fever at Boa Vista, after the visit of the "Eclair" to that island, and also as to any previous or subsequent epidemic or fever which may have appeared at that place; and their Lordships having given directions for your conveyance thither from Plymouth in H.M.S. "Grappler," you will be pleased to join that vessel on her arrival at Plymouth for that purpose; and, on arriving at Boa Vista, you will, without the vessel's communicating with the shore, be placed

with your baggage in a shore-boat, and landed there for the purposes of the inquiry.

As their Lordships will repay all your expenses, you are permitted to draw upon the Accountant-General of the Navy for such sums of money as you may from time to time require for carrying on this service, and in pursuing this inquiry you are to govern yourself by the strictest impartiality.

The enclosed instructions will serve to guide you in the general discharge of the inquiry, but you are nevertheless to take advantage of any circumstances which may arise in further elucidating the subject.

Having completed the object in view, you will make a full report of all the circumstances which have come to your knowledge, and transmit the Report to me by the first favourable opportunity.

I have also to acquaint you that their Lordships have appointed you Inspector of Hospitals and Fleets within the limits of the African Station; and I therefore transmit herewith a copy of the Foreign Naval Hospital Instructions, as well as of those for the Service afloat, for your information and guidance; and in fulfilling the duties of this appointment you are to avail yourself of a favourable opportunity to visit the island of Ascension, to ascertain the state of the hospital, and also that of the garrison, &c., of that island, making a Report of your whole proceedings.

As I presume about a month's stay in Boa Vista will enable you to accomplish the objects of your visit to that island, I have suggested to their Lordships that one of the ships of the African squadron may be allowed to call for you there, in order that you may be able to proceed on the execution of your other duties with as little delay as possible.

I am, Sir, your humble servant,

W. BURNETT,

Director-General, &c.

*Gilbert King, Esq., M.D.,
Inspector of Hospitals, &c.*

[c.]

INSTRUCTIONS to Dr. GILBERT KING, M.D., Inspector of Naval Hospitals and Fleets, who has been directed by the Right Honourable the Lords Commissioners of the Admiralty to inquire into the circumstances and nature of the Fever which has prevailed at Boa Vista.

You are to ascertain whether fever was prevalent in Boa Vista or in any of the other islands at the time the "Eclair" arrived there, and if so, how long had it prevailed.

What was its character—epidemic, endemic, or sporadic.

Whether it had originated on the island, or in any of the other islands, or been imported.

And whether there was any proof of its being of a contagious nature, or data to lead to a contrary conclusion.

You are to ascertain if any of the strangers or islanders who visited or were employed on board the “Eclair,” while she remained at Boa Vista, or other individuals or strangers who were stationed in the fort on the small island, or visited the island during the time the crew and sick of the “Eclair” were disembarked there;—and to ascertain if any of either of those parties have since been affected with fever similar to that of the “Eclair,” and if so, to obtain—

A list of their names;
Date of attack; and the
Result of the disease.

And to state whether it appears the disease was contracted from exposure to some morbid agent of a miasmatic nature generated or existing within the vessel, or from exposure to a specific contagion emanating from the bodies of the sick.

The latter query applies particularly to the soldiers stationed as a guard in the fort.

You are also to ascertain whether there is any direct proof of the disease having been communicated by those individuals to a second party, and from that to a third party, and so on; and if any men have died in the fort, you are to make particular inquiry if they were on board the “Eclair.”

And whether it appears that the fever was communicated to any individual in the house where the sick officers and their servants resided, or to any person in its immediate vicinity.

Also whether any of the women who washed the officers' clothes contracted fever, and were they Africans or islanders—black or coloured.

Whether there is any proof of the same disease breaking out in other parts of the island, where, from the distance from the town and anchorage, or other circumstances, the inhabitants could have had no communication, either direct or indirect, with the “Eclair.”

Whether the disease has spread to any of the other neighbouring islands, and by what means.

And whether there are any circumstances from which it may be inferred that the fever lately prevalent at Boa Vista was an indigenous production, or that it originated in causes unconnected with the “Eclair.”

You are also to be very particular in your inquiry as to the state of the weather (as related by the Governor-General of the

Cape de Verdes and the British Consul) previously to the commencement of the fever, and to take every pains to ascertain the date of its commencement, and effects on the surrounding country, and, as far as possible, to affix dates to all the transactions: and it having been reported that a similar fever prevailed at Boa Vista in 1829, causing the departure of a number of persons from the island, you are to make a particular inquiry regarding this occurrence.

You will also, if possible, ascertain what number of deaths from fever took place on the island of Boa Vista for two months *previously* to the arrival of the "Eclair" at that anchorage, and how long the "Eclair" had left the island before the general sickness took place.

In pursuing this inquiry you are to keep a diary of your proceedings, and also to pay particular attention to the directions contained in my letter of this date, and in all cases you are to state the sources from whence you obtained the information.

Dated this 30th day of November, 1846.

W. BURNETT,
Director-General of the Medical Department
of the Navy.

[D.]

SIR,

Admiralty, December 2, 1846.

With reference to that part of my letter, dated the 30th ult., wherein I mentioned that a vessel of war will be instructed to call for you at Boa Vista at the end of a month after your arrival there, I have to acquaint you that their Lordships have signified to me their desire that you should hasten your inquiry at Boa Vista as much as possible, and be ready to re-embark on a vessel arriving at an earlier period than that at first mentioned, so as to allow you to proceed on the ulterior parts of your mission, viz., the visitation and inspection of the squadron on the coast of Africa, and the island of Ascension.

You are therefore to govern yourself accordingly.

I am, Sir, your humble servant,

W. BURNETT,
Director-General, &c.

*Gilbert King, Esq., M.D.,
Inspector of Hospitals, &c.*

[E.]

The following is a translation of the letter referred to in the text, p. 91, which was drawn up with the concurrence of Dr. Almeida, though not signed by him :—

“ Island of Boa Vista, February 2nd, 1847.

“ The undersigned, knowing by ocular testimony that you, having, during the nearly two months you have resided on this island, effected the cure of a great number of persons belonging to the different towns here, can circumstantially show to the Governor-General its healthy state, and that, with such information from you, the said Governor may be induced to relax the rigorous quarantine regulations, which have been a source of so much annoyance to the inhabitants :

“ For this reason the undersigned rely on your honour, and beg you will lay the same before him, thus adding another to the many eminent services you have already rendered, besides your successful efforts to reduce the sickness with which this unhappy island has been visited.

“ JOAÕ ANTONIO MASCARANHAS.
IGNACIO OCTAVIO CARVALHO.
MANUELO DE BRITO HINAS.
JOAÕ BAPTISTO DE SILVA SANTOS.
CHRISTOVAO ANT. LURAN.

“ To Dr. King.”

