

**Observations on the manners and customs of the Egyptians, the overflowing of the Nile and its effects, with remarks on the plague, and other subjects : written during a residence of twelve years in Cairo and its vicinity / by John Antes ; to which are added, Bonaparte's expedition to Egypt, 1798 ; interesting memoirs of Admirals Nelson and Keith, Sir Sidney Smith, ... &c.; &c.; ; with an enlarged account of the Battle of the Nile, ...**

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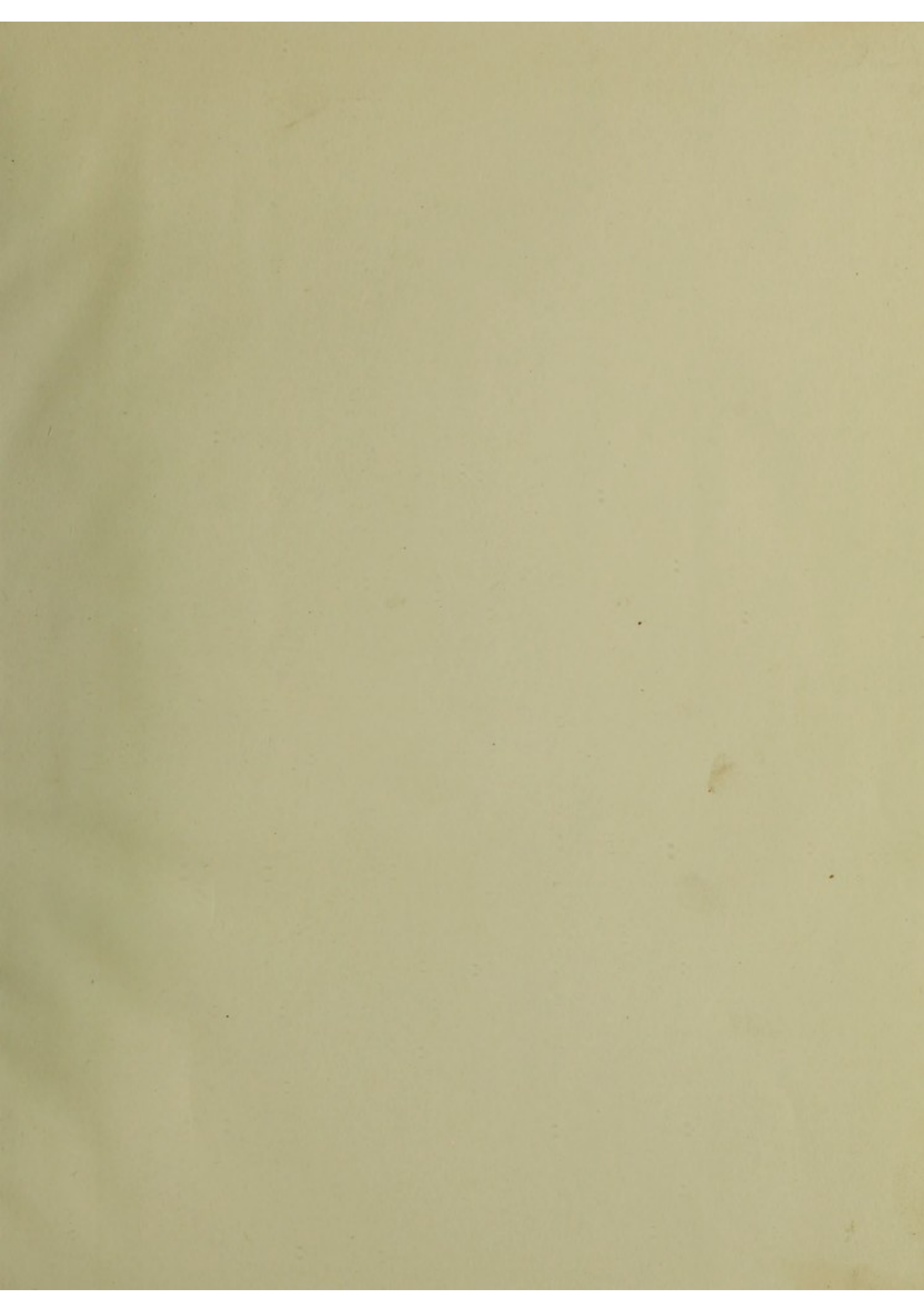




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*John Antes*

OBSERVATIONS  
ON THE  
MANNERS AND CUSTOMS  
OF THE  
*EGYPTIANS,*  
THE  
OVERFLOWING OF THE NILE AND ITS EFFECTS;  
WITH  
*REMARKS ON THE PLAGUE,*  
AND  
OTHER SUBJECTS.

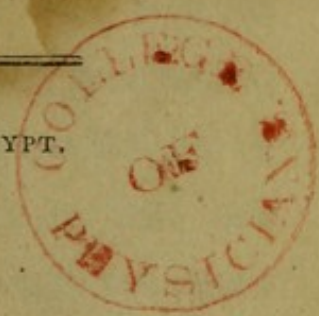
WRITTEN DURING A RESIDENCE OF TWELVE YEARS  
IN CAIRO AND ITS VICINITY.

---

*BY JOHN ANTES, ESQ.*  
OF FULNEC, IN YORKSHIRE.

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ILLUSTRATED WITH A MAP OF EGYPT.



London:  
PRINTED FOR JOHN STOCKDALE, PICCADILLY.

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1800.

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## TO THE PUBLIC.

**T**HE following sheets were never written with a view to publication; but as they had passed through the hands of several respectable men, who gave it as their opinion, that they contained some useful information, which should not be withheld from the Public, as they might throw additional light upon that dreadful disorder, the Plague: this argument had some weight with the Author, as even the probability of doing the least good would encourage him to publish his observations, which otherwise were noted down merely in order to gratify his own curiosity. Some of those gentlemen even thought the Author ought to compile a history of the country, its customs, inhabitants, trade, &c. but when he was considering about it, Mr. Savary's Letters on Egypt, and soon after Mr. Volney's Travels, made

A 2

their



their appearance, which occasioned him to abandon that scheme entirely: not because he approves of every thing that they say, far from it; but he saw he would often be obliged to contradict not only one, but both of them, and thus confound the Public: for what reason has he to expect, that his assertions should be more entitled to credit than those of others. Besides this, it can be of little benefit to the Public to know, that an insignificant upstart, acting without any settled principles, like Ali Bey, was born in Abassa, Circassia, or Georgia; that he died in this or the other way, &c. for in my idea it is sufficient for most readers to have a general knowledge of the Mamelucks, and their government, which have varied but little these many years, of which Pocock, Norden, Niebuhr, (these three authors, particularly Norden, I would recommend, in preference to all others, to the reader) have given very good information, and Mr. Savary's and Volney's accounts are mostly copies of it. For, though the former describes the whole of Upper Egypt, he never was himself beyond Cairo; of which I was an eye-witness.



ness. The latter came to Cairo near one year after I left it, staid but seven months without the advantage of the Arabic language, and in a troublesome time, when travelling into the interior parts was dangerous. We can, therefore, not expect that his narrative should be sufficiently correct to pass for the standard of truth.

The Reader will always keep in view, that these sheets were originally written many years before Mr. Savary's Letters, and Mr. Volney's and Bruce's Travels, and also long before I had seen Mr. Alexander Ruffel's Treatise concerning the plague. If, therefore, there are particulars in them on which we all agree, it is only a corroboration of the evidence on the side of truth; and if they should furnish hints to a more enlightened writer, from whence to draw some useful conclusions for the good of the Public, the Author will think himself amply rewarded for his trouble.





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# EGYPT,

called in the Country  
**MISSIR,**

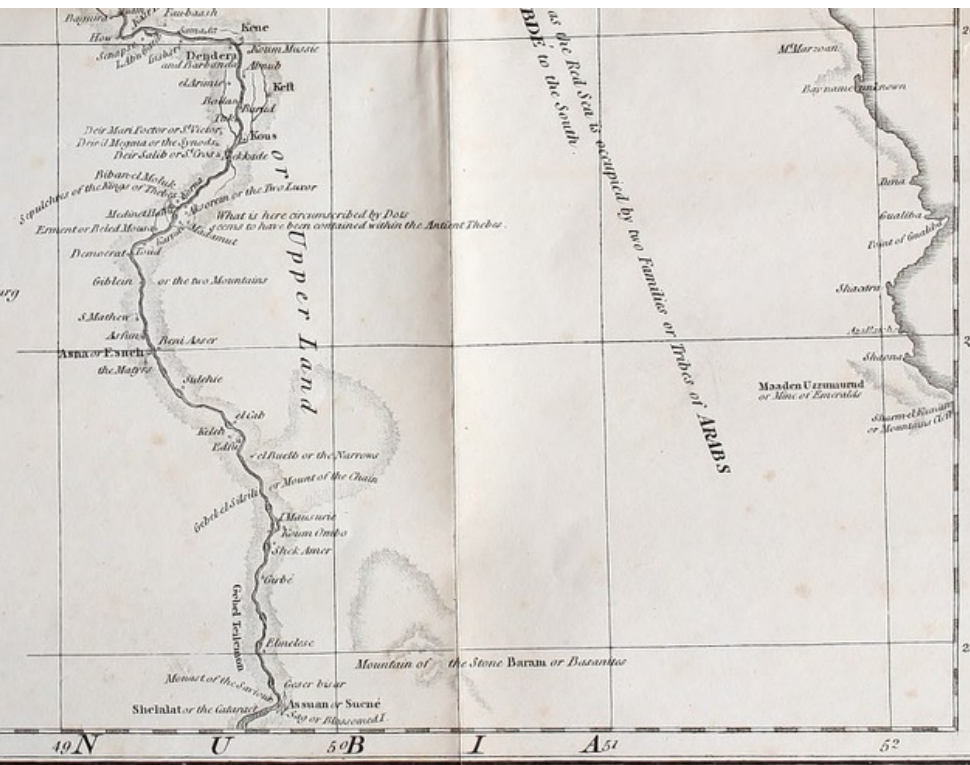
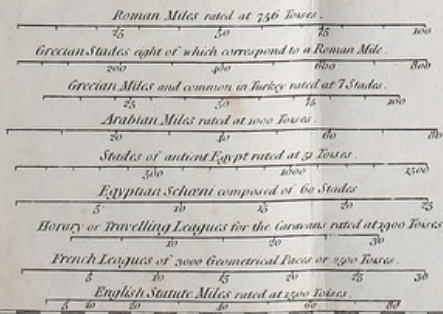
BY J.B. D'ANVILLE,

of the Royal Academy of Belles Lettres, & of that of Sciences of Petersburg

MDCCLXV.

Published 4<sup>th</sup> July 1789, by JOHN STOCKDALE, Piccadilly.

## SCALE.



as the Red Sea is occupied by two Families of Tribes of ARABS

What is here circumscribed by Dole seems to have been contained within the Antient Thebes.

TO THE HONOURABLE

DAINES BARRINGTON.

SIR,

SOME time ago the Rev. Mr. Latrobe informed me, that it would be agreeable to you to see some of those remarks, which I had made on different subjects in Egypt. In consideration of the friendship and esteem which my late worthy brother-in-law had for you, I would have immediately complied with this request, had I made them in the English language; but having noted them down in German, it required some time to translate them, which on account of my other employments, I could not finish till lately. I now take the liberty to send them.

But I beg leave to observe that, although I have always considered myself as an Englishman, my father having been naturalized and intrusted with offices in the King's service, in America, yet having been educated, and having spent most of my time among foreigners, I am

B.

far



far from being able to express myself in the English language with any degree of accuracy; and you will, therefore, excuse my presenting you with such an imperfect account.

From my infancy I always was very fond of geographical knowledge. But as my situation, and other circumstances, did not permit me to extend it as I could have wished, I was obliged to content myself with picking up as much as I could from private instruction, or from books. However, this did not in the least damp my desire to come, as much as possible, to the bottom of every thing that presented itself to my view, or of which I had any information. I seldom could content myself with the first answer I received, when I enquired into any subject, for I wished always to know upon what foundation it was grounded, and whether the person, who gave me the answer, was qualified to give a satisfactory one or not. This disposition made me oftentimes act the part of a dumb spectator, particularly in Egypt, where I frequently observed that travellers, even such as otherwise had all the advantages of learning, gathered their materials, not only to satisfy their own curiosity, but to compile a narrative of their travels for sale. I have, sometimes, myself, assisted these gentlemen, and often advised them not to note down all they heard from unqualified persons; knowing, by my own experience, that the Arabs will never leave you without an answer, though they do not at all care whether there be any truth in it. Some of them will give an answer, because they like to appear as if  
they



they knew every thing; others, and most of them, will do it, because they hope to reap some little advantage by it; and I have often been amazed to hear the incoherent stuff, which those inquisitive gentlemen received as answers to their questions.

If a foreign traveller, passing through our polished country, should afterwards pretend to give a description of the manners, customs, government, and particularities of the country and its inhabitants, by such information as he might have gathered from inn-keepers, coachmen, chambermaids, and from the company he might accidentally have met with in coaches, as we now and then find to be the case, he has to blame himself only; for, if he be a man of learning, he may always find people enough, capable of informing him of any thing he would wish to know, and also of conversing with him in one or other of the common languages.

But this is quite otherwise in Egypt. Travellers there, though they may be otherwise very well informed, and may have all the advantages of learning, commonly know nothing of the language of the country, which is Arabic. They must, therefore, address themselves to an European to be their interpreter, or hire a Greek or an Armenian for that purpose. These latter are, upon the whole, not sensible of the importance of giving always a correct and satisfactory answer: they are, perhaps, at the same time, as well as many of the Europeans, ignorant where to apply for proper information.



As long as I was at Grand Cairo, I was not acquainted with any Europeans residing there, who were furnished with learning sufficient for this purpose; though otherwise well informed for their sphere of life. All the information they could give was what they had gathered in the narrow circle of their acquaintance. Supposing even, that a few merchants, in the way of commerce, had formed an acquaintance with some one or other of the most learned in that country, as I also had done; yet these people are either ill-tempered, or unwilling to inform Europeans of the truth, or such intolerable boasters, magnifying every thing which they think may add the least to their honour, that very little dependance can be had upon their information; and, indeed, having by long experience learned to know the disposition of most of the Arabs in this particular, it has made me mistrust the whole account of their ancient and modern history. There are still Arabic writers of chronicles at Grand Cairo, who will give the most boasting accounts of a trifling and insignificant fight between the Egyptian Beys, where, perhaps, five or six out of several thousands were killed; which, I am sure, if they should be read some hundred years hence, would appear to be greater battles than any one fought between the King of Prussia and the Austrians in the seven years war. I will allow, that the Arabs, in their first fire of superstition, may have exerted themselves more than they do at present; but I am still apt to think that great allowance must be made on account of their national disposition to boast. It is true, it will make the effeminacy of those whom they



they have conquered appear still greater ; but if we consider that it is not effeminacy alone, but internal dissensions, which make people fall a prey to their enemies, we shall not wonder at it, for this was too much the case in those times. But I am led from my subject.

What I have observed above serves only to prove, that if a traveller goes by way of curiosity to Egypt, who may otherwise be very well qualified, but does not remain long enough in the country to become master of the language, and able to see with his own eyes, he must necessarily content himself with what he may partly guess at, or may have gathered imperfectly from the natives, or from this or the other European merchant, who is, perhaps, not accustomed to very accurate observation. From this he must compile his narrative, and often full credit is given to every particular of it, in proportion to the rank the author holds in the learned world at home, or on account of the elegant style and embellishments with which it may be adorned. His assertions are frequently cited, and copied by others, for the whole next century ; and this is, probably, the cause of so many errors and misrepresentations as are frequently met with in geographical descriptions.

Mr. Volney, in his Travels into Egypt, p. 70, says: " That the dryness of the air, particularly in the Desarts of Egypt, is such,  
" that



that dead carcasses are found in it, dried up in such a manner, and so light, that a man may easily with one hand lift up the entire body of a camel."

It is a pity that such absurdities are copied and inserted into some of the latest Dictionaries of Arts and Sciences, by which they are handed down from one century to another. For a little reflection would have told him, that though the aridity is great, and dries the fleshy parts up to a great degree, yet the bones of a camel cannot weigh less than about 3 cwts. and these are never dried up, or become light, in the same degree as the flesh, as may be sufficiently seen by the bones of the mummies scattered about the pits, which certainly had time enough to dry.

Page 62. Mr. Volney describes the southerly wind, which he endeavours to make as dangerous as the well known samour, or samiel, so common in Mesopotamia, and likewise mentioned by Mr. Bruce as frequent in Nubia; but this is by no means the case in Egypt. During the twelve years of my abode there I never heard of one person being suffocated by it, and I myself have been many times overtaken by it in the open field, and once, in particular, where I had little or no shelter, but I felt no other inconveniency from it but a more difficult respiration than usual, and an intolerable dust, exceeding fine, and penetrating every where.

It



It must be allowed that all accounts are not of this kind: some of them have been written by very able men, who did not merely pass through, but resided a long time in those parts which they described. But we have, however, of late, too many hasty productions which are fully credited; when, at the same time, a man like Mr. Bruce, who has spent four years in Abyssinia, and made himself perfectly master of the language, and well acquainted with the country, can scarcely find any credit, because he relates one or other particular, which has never yet been heard of.

Supposing, as you have also very justly observed, I should be the first to relate such facts as I have often seen in Egypt, as, for example: that the natives will eat serpents, or half a dozen large scorpions, with their stings, and alive, that they suffer themselves to be stung by them, or to be bitten by the most venomous vipers, without any harm;\* that I have seen men eat chopped straw like an ass, and  
many

\* Mr. Savary says, vol. i. page 65: "That the serpent-eaters avoid their bite." If those whom he has seen avoided it, they cannot have been of that class of people who possess a secret, not only to fascinate, but likewise to prevent the bad effects of their poison, and of that of other poisonous reptiles, such as scorpions, &c. (centipedes I have never seen in Egypt.) They must have been merely serpent-eaters, as pigs, crows, and other animals, often are.

Being so long resident at Grand Cairo, I had frequent opportunities to observe them. I have often met them in the street hung all around with serpents, some wrapped around their necks, others in their bosom, and all of them alive, which  
at



many more things of this kind, without adding any further explanation, would not all sensible people call me an impostor? And yet all these assertions may every day be proved to be facts at Grand Cairo.

at first appeared not a little alarming. When Mr. Bruce was at Cairo, he wished likewise to see it. He lodged with a French merchant, Mr. Rose, a friend of mine, who sent for one of these people to exhibit before us. When he entered the house, he was asked where he had his serpents? He put his hand in his bosom and brought out a large horned viper (cerastes) and threw it on the ground; the animal, rather enraged at such rough treatment, made toward Mr. Rose; fearful that it might bite him, the man run after and got hold of it in the middle with his naked hand, when it turned round and bit him between the fore-finger and thumb, so that the blood appeared. He seemed not to mind it at all, and only rubbed it with a little common earth; nor was it followed by any bad consequence. Had he really taken out the fangs and the bladder containing the poison, the animals which were bit by the same viper immediately afterwards would not have died so suddenly. Several fowls and a cat were afterwards bitten by it, and died immediately. I have seen several little boys that could do the same. When Baron Tott was at Cairo, some of the Europeans residing there speaking of it, made him very curious to see it. A little boy happened just then to be passing along the street, who often used to come a begging; and, as we knew he was one of that class, we offered him some paras if he would get some scorpions, and shew us what he could do. The boy, who had not one rag of clothes about him, except a little red cap on his head, went immediately to some old garden walls, and came back in a short time empty handed. We asked him where he had his scorpions? He took off his little cap, under which he had five very large ones, which he threw upon the ground, and began to play with them before us; they frequently stung him, but he seemed not to mind it at all. I myself grew very suspicious, that he might have  
taken.



When Mr. Bruce returned from Abyffinia I was at Grand Cairo. I had the pleasure of his company for three months almost every day : and having, at that time, myself had an idea of penetrating into  
Abyffinia,

taken away their sting, and therefore stooped to examine them very closely, but he warned me not to come too near, and to convince me of the contrary, he took some of them up with his fingers, and shewed me the sting. I then asked him how he came to it, to be able to do what some of his companions could not do? He answered : My father gave me something to drink, and the Sheick or Priest, made me swallow a paper with something written upon it, after which he told me, that no snake or scorpion could hurt me, and this has been the case ever since. As I have always been very backward to believe things which had so much the appearance of mere superstition, I examined many others of this class of people, in order, if possible, to find out the true cause of it, for the good of mankind in general, but I was never able to succeed. All agreed that they had swallowed something; but, I suppose, partly to hide the true art which they possess, and partly to inspire me and others with a sense of the merits and supernatural powers of their Sheicks, they always wrapped up the whole in so many superstitious additions, that I could never make any sense of it. I only wish that some future enquirer may be more lucky, as it would be of great benefit if generally known. Setting aside the superstitious part of it, there might be something in the draught capable to operate such a change in the human frame, as to make it proof against such poison. It is, certainly, not easy to conceive how this can be, therefore we often disbelieve it, because we cannot immediately compare it with things to which we are daily accustomed. But there are similar circumstances which we can as little account for; for instance, how is it that a person, who has once had the small-pox, or measles, should, for ever after, be proof against the infection? Have all those humours, or whatever else it may be, which before made him liable to it, been for ever removed out of his body? If so,



Abyssinia, I was very inquisitive about that country, on hearing many things from him which seemed almost incredible to me. I used to ask his Greek servant Michael, (a simple fellow, incapable of any invention)

how is it that, notwithstanding, children born of parents, both of which are of this description, should again become liable to it: this seems full as incomprehensible as the above; but we see it daily, we get used to it, we have, perhaps, in the beginning, thought about it; but, finding ourselves unable to find out the cause, we drop it, and content ourselves with knowing that it is so. Is it, therefore, not quite impossible, that there exists a remedy to make men proof against such poisons?

To fascinate serpents, so as to draw them to ourselves, seems, at first sight, likewise to favour of superstition; yet it cannot be denied that these people possess a secret by which they are able to do it. Besides the many instances which I have heard from men of the most respectable characters, I was myself eye-witness of some. A friend of mine, Mr. Bruno Arnaud, who lived at Cairo, in an old house, had found once a serpent in his bed-chamber; not being over fond of such company, and suspecting there might be more, he sent for one of these men to take them away. When the fellow came in, my friend told him, that he was afraid he had brought some serpents with him in his bosom, which he would afterwards make him believe that he found in his house. He seemed affronted, and began to throw off one part of his clothes after the other till he was quite naked. Thus he went from one room to another, muttering something all the while, and actually gathered, in a short time, five large serpents around him; at last he said there are no more. When we hear such a thing for the first time, we are very liable to disbelieve it, because we never heard nor saw it before: but, should we not do the same, had we never heard nor seen what our rat-catchers can do with rats and mice. There may exist some ingredients of which serpents are as fond, as mice and rats are of oil of rhodium, and cats of valerian, &c. which such a man may place between his toes, or anywhere else,



invention) about the same circumstance, and must say, that he commonly agreed with his master in the chief points. The description Mr. Bruce makes concerning the bloody banquet of live oxen among the natives, he happened never to mention to me, else I could have made the same enquiry. But I heard not only this servant, but many eye-witnesses often speak of the Abyffinians eating raw meat. There is no doubt at all of Mr. Bruce having been at the source of the Nile; but I cannot approve of his laying so very great stress upon this particular, and his signifying as much as if he was the first European that ever had been there. P. J. Lobo's description is very well known, and differs little in the main points from Mr. Bruce's. Besides this, I wish there did not appear so much egotism through the whole performance, that he had been a little more accurate in mentioning distances, bearings and names, and that he had not coloured every thing so very high, which may incline readers to scruple the whole. I selected many errors and contradictions of this kind, and intended to send them to him, because he had mentioned to me an intention to publish his travels again with additions and amendments, when I heard that he was no more. His description of the pyramids

else, in order to draw them to him. With his muttering sentences he only wishes to make his skill more important.

As for people eating chopped straw, I have seen that done many times; they had it in a bag hanging on their shoulders. It was an act of beggars, who did it commonly standing near a public back oven, in order to excite compassion from those that passed by.



in Egypt is quite erroneous, and seems to be a copy of Wansleb's opinion. I have visited them above twenty times, and could bring strong arguments against his theory, as likewise against the ridiculous idea of forcing them (copied by Savary from Mr. Maillet, a French Consul at Cairo, at the beginning of this century), if it answered any good end. I will only mention thus much, that if the builders of them had been so over anxious to conceal the chambers within, they would have done it much more effectually, had they left an irregular passage in the common walling, which afterwards, when the corpse was deposited, they might have walled up with the common stones; for, by making such smooth passages, some of them lined with curiously worked red granite, they effectually pointed out the road to the chambers, as soon as the beginning of them was discovered, if even they had, according to Mr. Maillet's idea, been filled up ultimately. But if I endeavoured to contradict Savary in all where he, as well as Volney, is wrong, I should swell my observations to a disagreeable length and size.

I have learned by experience, how very difficult it is to come to the bottom of a single and seemingly trivial thing. As for instance: the people of Egypt are divided, and called either Saad or Haram, somewhat in the same manner as the English into Whigs and Tories. Though no animosity be observed between the two parties, yet every individual will immediately tell to what class this or that man belongs. I have, for many years together, laboured to learn  
the



the origin of it, and I have asked many hundred people, but could never get a satisfactory answer, till shortly before I left Cairo a person told me, that it originated from the death of Ali, Mahamet's son-in-law, viz. When the party of Omar had killed him, they cried out, *Hadah Nahar Saad!* which signifies: This is a lucky day. The counter party said, *Hadah Haram!* or, this is unlawful, unpermitted, wrong, &c. This answer or explanation seemed to me the most probable. Now, considering this difficulty, and observing the common method taken by travellers to collect their materials, I must own it made me exceedingly diffident of all hasty productions; nay, I often thought no geographical description can be entirely free from mistakes, as it seems to be out of any man's power to observe every thing himself, or to qualify himself for being able to judge of all subjects with equal precision. But why do I detain you with these reflections? They cannot be new to you.

Having, as observed above, not had the opportunity to qualify myself sufficiently, it has always made me exceedingly diffident of my own abilities; nor could I ever think myself capable of being of any service to the public, in endeavouring to rectify some of the errors we so frequently meet with. I have, therefore, never attempted to note any thing down with a view to lay it before the public, or I should have taken more pains to gather materials, and to have made a greater number of exact dimensions, distances, and measurements, than I have done. But being in Germany after my return, in the  
year



year 1782, I was oftentimes very much surpris'd at the incoherent questions that were put to me, even by such people as pass'd for very learned, and as I observ'd they had false notions of the climate, the overflowing of the river Nile, and the plague, I have written these observations from some remarks I had from time to time not'd down during my stay in Egypt, merely with a view to satisfy my own curiosity, in order to give some of my friends a true idea of them. But I cannot look upon them but as a confus'd heap of materials, among which a skilful artist might, perhaps, select some parts which he might employ for the public good. As for the truth of the stated facts, I am very sure they might all be proved, if you should even think that they might be of any use to the public, as some of my friends wish'd to persuade me, yet I could not easily consent to have them published, unless they should be dress'd in a better style, which is out of my power. Besides, I would willingly omit every thing which might reflect upon learned men in general, or which might appear to be personal, as I would not willingly give offence to any one.

If the remarks, as those I send, should be of any service to you in particular, I would willingly furnish you with others, if you will let me know the subject; and I shall always be glad to have an opportunity to shew how much I am, Sir,

Your most obedient humble Servant,

*Fulneck, 30th April, 1788.*

JOHN ANTES.



## TO CAPTAIN BLANKETT.

SIR,

*Fulneck, 8th June, 1788.*

I DULY received your favour, dated 30th May, and I am very willing to give you all the information I can concerning the caravans which go from Egypt to the interior parts of Africa. I am very sensible, that it is absolutely necessary to advance nothing but what, according to the best of my knowledge, is strictly true, as it might be of great consequence to those persons concerned in it, and therefore I will do so.

As much as I know, there are but two caravans that set out from Cairo for the interior parts of Africa, viz. one that goes to Dongala, and by this way one may go to Sennar, and even to Abyffinia; and the other, which is the most regular, sets out from Cairo for Upper Egypt, from whence it turns off to the westward, or better to the south-west, (according to what I could understand of them) to a country or place which they call Tarfur. There is, indeed, a third caravan that comes from Morocco with pilgrims for Mecca, and goes back the same way; but this caravan does not go very far inland, and mostly follows the sea shore: besides this, Christians would not be permitted to travel with them.

The



The caravan that goes to Dongala is conducted by, and consists of Nubians, who, in Egypt, are called Berberi. They are strict Mahometans, but I do not think it impossible that an European might travel with them; and I have known some Greek merchants who had made that journey in their company. There is always some danger to travel in any of those parts; and, though it may not be on account of those nations with whom one travels, yet there are almost every where roving tribes and parties, against whom one must be upon one's guard. As for the Nubians themselves, I do not think them so treacherous. There is a vast number of them at Grand Cairo, where they come to seek for service with merchants, as footmen do. They pass for remarkably honest, and the merchants are very fond of having them on that account. They often send them on messages with large sums of money, and I do not remember to have heard that any of them proved unfaithful. It is true, they might be so at Grand Cairo from self-interest, and perhaps prove to be the reverse in their own country; for it is known that their King, at Sannar, has murdered a French ambassador, Monsieur Du Roule, in his way to Abyssinia, under a frivolous pretext, in the year 1705: but, it must be considered, that he tempted them by his own imprudence, by exposing to public view all the presents he had brought with him for the Emperor of Abyssinia. However, I am inclined to think more favourably of that nation; for, if treachery was their natural character, it would be more observable among so many of them at Grand Cairo, where they seem to be a quiet and inoffensive people.

They



They are commonly of a slender make, like the Arabs, and resemble the Abyffinians in colour, which is a brownish black. They have their own language; but any gentleman that may be inclined to travel to their country, may easily find faithful servants of that nation, at Grand Cairo, who would go with them, and who are masters of the Arabian language: this, I think, would be highly necessary, and should not be omitted.

The second caravan, which goes to Tarfur, consists of, and is conducted by a people called Julape at Grand Cairo. They resemble the Nubians in some measure; but have, at the same time, more of the negroes in their colour and features: they are also Mahometans, but they do not seem to be quite so strict, nor so superstitious, as many others. I have myself been acquainted with the leader of this caravan, who seemed to be a good natured honest man. He several times invited me to go with him to his country, and I would have had no scruple to trust myself to this man, if I had had any intention to make that journey. By all I could gather from his relations, I could not but think that they came from a great distance; for he told me, in broken Arabic, that they travelled a long time, and suffered great hardships on the road; that they oftentimes meet with no water for several days, and that many of their camels die on the road. He told me there was no danger for strangers in his country, and every thing was in great plenty, and the ground very fertile. They bring a great number of negro slaves of both sexes to Cairo,

D

who



who entirely resemble the Guinea negroes; but most of the males they sell at a certain village in Upper Egypt (the name of which has slipped my memory), where they are made eunuchs, and then they are sold in all parts of Turkey. Their other commodities are elephant teeth, gold dust, some black ebony wood, bisam, monkeys, civet cats, corbages made of the skin of the hippopotamus, and bullocks hides cured for borachios, or water bags, to convey water upon camels through the deserts; and one must allow, that this leather is so well cured for the purpose, that no other can come up to it: besides the above, they bring some other articles of less consequence.

Soon after I came to Grand Cairo, I saw a Damascene Christian that had been in their country; this shews plainly, that these people are not such enemies to the Christians, in general, that they would not suffer them to travel in their company. But, as I then understood but very few words of the Arabian language, I could not gather any intelligence from what he related about the country, and the journey thither; but, by all that I could observe, and by what I could gather by several of these people, I would, for my own part, have had less scruple to venture upon a journey with them, than upon one to Nubia. I do not doubt that these people have connections, and travel far beyond their own boundaries, and to the most interior parts of Africa, yet I could never learn that they join any other caravan from Tripoli, Tunis, or Algier; but I also did not enquire particularly into this.

The



The travelling with a caravan, in those deserts, is connected with many difficulties. No other animals will do so well for it as camels and dromedaries; these must serve to carry all the baggage, and also to ride upon. There are three ways for this: 1st. Either to ride upon their backs on a saddle; or, 2d. To have a sort of basket, of which they place two upon one camel, and so two persons may ride, and even sleep in them. 3d. They have a sort of horse-litter, which they call *tachteravan*; this is carried by two camels, and this is the most commodious, and mostly used for women, and weak people of quality. A traveller must always carry a sufficient quantity of provisions for the whole journey: he must also have the necessary utensils to dress his victuals: he must have one or more camels merely to carry water, as they often meet with none for several days: he must also be provided with a tent, to shelter himself wherever they stop in the night, or from the scorching sun in the day. It is absolutely necessary that he should know so much of the Arabian language, that he may make himself understood. He should also provide himself with faithful servants, of those people to whose country he intends to go. These would serve him, at the same time, for interpreters; but one cannot be too particular in the choice of such a one, because, too often, those that appear at Cairo, where they are under controul, all submission, and full of zeal to serve you, prove quite the contrary when they find or think themselves to be at large; yea, even sometimes they become one's worst enemies, and thereby not only frustrate the whole aim of the journey, but may likewise bring



one in danger of being robbed, and to lose one's life. He should also take care to be recommended to the leader of such caravans, by those merchants who deal most with them. This may easily be obtained at Grand Cairo, by means of some of the European, but still better by the Damascene merchants, who are connected and deal with them. Besides this, he should have something that will serve for presents for the princes and officers of the country to which he intends to go, of which, he must neglect none, if he will be well protected. But these things need not always to be of great value; for these people can make little distinction between things, well or half finished, if it is only something new, and what strikes the eye, and what they cannot manufacture themselves. But all this may be had more suitably at Grand Cairo, according to the advice of those merchants that deal with them, than whatever may be provided at random, by setting out from home. There are several merchants at Grand Cairo, as well Europeans, as country Christians and Turks, who may be very capable of giving good advice and assistance; and to such as these a traveller should be recommended, of whom I might perhaps name several, and assist in it.

By some acquaintance I had with various merchants from Tripoli, Tunis, and Algier, I heard that they travelled far inland from all those places. Their manner of travelling is quite the same, but I can give little advice about the rout they take, nor to what distance they go. I remember an Algerine merchant, at Grand Cairo, with whom I  
have



have dealt in various ways, who had been far inland, but I do not recollect the name of the places he went to. He was a very honest man, and I would have ventured to go any where with him. But it must always be kept in view, that such as he are very rare, and a traveller ought to be very cautious not to make a hasty friendship with every one that may make him a friendly face, for such friends too often become very troublesome, if not dangerous.

Such travels are, upon the whole, hazardous, and a person who undertakes them, must certainly not be afraid of danger, for, though all may appear very favourable, one can, however, assure nobody of a successful issue.

This is all I can say for the present, in answer to your letter, and if it is to your satisfaction I shall be glad.

I have the honour to be,

Sir, Yours, &c.

JOHN ANTES.

P. S. By reading your letter once more after I had wrote the above, I thought I had not been explicit enough in answering the following questions :

1st. Who are the most proper persons to be employed on a service of that nature? And what are the qualifications most necessary?

2. How



2d. How far does the supposed enmity of the Moors to the name of Christian prevail, and in what manner can it be best obviated ?

For an answer to the first, I can only add to what I have said before, that besides being qualified, and having the necessary apparatus to make proper observations, a traveller ought to have a constitution able to bear any fatigue, which is unavoidable on such a service. If he can draw, or has a person in his company able to do it, it will add greatly to the illustration and utility of his observations. For answer to the second, I must add to what has been said before, that the enmity to the name of Christians among the Moors is not absolutely general. There are some generous thinking people among them, and these are more found among the commercial part, of whom these caravans are always composed. It is quite a custom among those people to be under the protection of some superior, and there is scarce a beggar at Cairo who has not somebody to look to for this. It is therefore adviseable that a traveller endeavours to get one of the better and most generous thinking among them for his protector, but he must be delicate in his choice, as I have said before. This may be obtained by a small present in the beginning, claiming at the same time his protection, and then by an open and friendly behaviour, by which they are easily gained. And they make it a point of honour to protect those that intrust themselves to them, and will always take their part, if some more superstitious would offer to insult them. Common sense will tell any gentleman that he must  
never



never show, much less talk with contempt of their religion or government. The generous thinking among them esteem every body that is faithful to his religious principles, and do not easily disturb them; but they despise a man who professes a certain religion, and does not observe his duty: so they will despise a Greek, or a Roman Catholic, if he does not keep Lent; but they will not take it amiss of a Protestant, as soon as they hear that he is not bound to it by his religious rites.

OBSER-





## OBSERVATIONS ON THE PLAGUE

IN

*E G Y P T.*

**T**HE plague is, without contradiction, the most terrible of all the disorders the human species is subject to. At the same time, it is a disorder from which any one may be perfectly safe, who has it in his power to perform a strict and rigorous quarantine, though he may be in the midst of a city where it rages with the utmost fury. The practice of the Europeans for centuries in Turkey, will prove this to be a fact, and it will also be confirmed by the following observations, which I made at Grand Cairo, in the years 1771 and 1781, when this calamity raged violently, as well in that city as in other parts of the country, particularly in Lower Egypt.

By a quarantine the following is to be observed, viz. as soon as it is known and evident, that symptoms of the plague are in the town, or in its neighbourhood, precaution must be taken not to mix too much in a crowd, particularly of the lower class of people. It is much easier known at Grand Cairo than in most other parts of

E Turkey,



Turkey, as it is most commonly brought from Smyrna, Constantinople, or other such parts, first to Alexandria or Damietta, and thence by degrees to that city. When the contagion begins to spread, all close connection with other people must entirely be avoided; and in order to do this more effectually, the houses ought to be locked up, and nobody permitted to enter, till it has ceased.

The usual way of doing this among the Europeans is, to make a partition of boards at the inside of their house door. In this partition a small door is fixed to receive the necessary provisions. This little door is kept constantly locked, in order to prevent careless servants from taking any thing in secretly. Before this door, on the inside, a tub of water is placed, into which the servant, who is kept without, puts all such victuals as will bear water, out of which they are taken on the inside with an iron hook. But bread, rice, coffee, or any such dry article, are found not to convey the infection, and may, therefore, be taken in with safety from a board upon which the servants hand them in. Such things may also be drawn up through a window, by a rope formed of the filaments of the date tree, and a basket made of its leaves. But any thing of woollen, cotton, linen, silk, and the like, must by no means be taken in during the time of quarantine. The house door is commonly so contrived that the latch may be opened by a rope from above stairs, in order to let the servant in to bring provisions; and there is commonly a place behind every house door for him to sleep or sit, that he may be at hand.

Letters



Letters are usually taken in by a pair of tongs, and then smoked or drawn through vinegar. But the Europeans frequently convey their letters, or what else they may have to send to each other, in a wooden box sealed, about which there must be no packthread or the like; and this is always received without scruple, provided one is assured that the persons who send it keep a strict quarantine themselves. I have still to mention, that all the windows may be open, and on the tops of the houses, which are all flat, and commonly flagged, you may enjoy the fresh air, which often is exceedingly agreeable at that time of the year.

There is no instance of any European or others having caught the infection, who began and performed a strict quarantine in due time: but many persons, who have had the imprudence to take but a single cunce of silk, or a handkerchief from without, have lost their lives by it, of which I have seen some remarkable instances. The following is one of the many ridiculous stories which might be related: A man at Alexandria having locked himself up to perform quarantine, but being unable to shave himself, sent for a barber, and in order not to touch him, for fear of catching the disorder, put his head only through a small hole to be shaved by the barber, without being touched on any other part of his body. However he paid dear for his folly, and died a very few days after. There is else no danger in talking with people infected with the plague at a very small distance, which is often the case when such infected persons apply to European physicians, who perform quarantine. I have even myself been



walking in the street, where people dropped down dead, before I locked myself up in the house, and I only took good care not to touch any body.

To determine the cause of the plague, by physical arguments, seems to me to be a very difficult task. There is scarcely any thing real in the theories which have been hitherto formed, even by people of whom one might naturally expect something satisfactory: they are liable to be contradicted by various observations upon the spot. Even that which may appear to be true at Constantinople, or other places, proves often to be the reverse at Grand Cairo. There is upon the whole so much seeming contradiction in this phenomenon, that our thoughts are often at a stand, and a keenly thinking philosopher may find a large field for many useful reflections.

Long experience has shown that the infection may be very easily prevented, even in the midst of the surrounding danger, by a strict quarantine as observed above. The various observations which I have made in consequence, seem to contradict many of the theories formed hitherto, and I will now mention them, without being answerable for their infallibility.

1st. Many reasons have been given in ancient and modern writings, to prove that Egypt was properly the country where this distemper was originally produced. It has frequently been asserted, that the yearly overflowing of the river Nile leaves such a quantity of water and  
mud



mud in the ponds and lowest parts of the fields, which afterwards becomes putrid, and consequently infects the air to such a degree as to produce the plague. This plainly pre-supposes an infection of the air. If we allow this, how could its influence be prevented, merely by avoiding all communication with infected people, when at the same time, these very persons must live in the same air? Nor do they attempt in the least to rectify it, and they cannot shut it out; on the contrary, they choose to enjoy it as much as possible, and oftentimes even sleep in the open air on the top of their houses, as it is commonly very dry from the month of February till near the end of June, which are the months when the plague rages most, if it is brought thither. One should also imagine, that if the air was really infected, the many thousands who are continually sick and dying in it, would certainly not mend the air, but increase the infection. But the strongest argument against the above assertion is: that the water of the Nile has by no means those qualities imputed to it; but on the contrary, it never putrifies, as shall be fully shewn by different remarks, when I come to treat of that subject.

2d. Others maintain that it is produced by the supposed filthiness of the Turks. This must also pre-suppose a corrupted air occasioned by it, which the above arguments seem equally to contradict. Besides this, it is a great injustice to the Turks to call them a filthy or dirty people. They are quite the contrary, particularly the better sort of them, who are remarkably cleanly, and their religious principles



principles oblige even the common people to be in some measure so. To this I must add, that the streets in the city of Grand Cairo are, upon the whole, by far not so filthy as most of the streets of our own towns, to which the local circumstances contribute not a little; for instance: as fuel is very rare and dear, every thing which in any way will serve for it is very diligently gathered from the streets, and on this account, no dung of any kind, nor straw, &c. is ever left in them. Dead carcases of any bulk are carried out of the town, and there they, as well as every thing of the same kind, which might remain in one or another corner of the town, are presently devoured by innumerable dogs and birds of prey, who live in the streets upon any thing they can find, especially as the dogs have no masters.

3d. Several writers suppose the plague proceeds from the canal or calige, which passes through Grand Cairo. It is very true that the remaining water is horribly corrupted, by the filth thrown in from the adjoining houses, and the great number of necessaries that empty themselves into it, which occasions a most abominable stench for several months of the year, tarnishing in a short time even gold and silver in the houses near it. But in this case also, a corrupt air is naturally commonly supposed to be the cause, which will likewise not agree with the above-mentioned observations. At the same time another strong argument may be brought against it, which is founded upon a very long experience, viz. All the houses of the European merchants in Grand Cairo have, for more than two hundred years, been



been situated close to this canal or very near it; and neither have these, nor any of the other inhabitants, who live in the same situation, been more affected with diseases than the rest. This is a truth, which all the European physicians, who have for some time resided at Grand Cairo, will confirm. Nor has any of those merchants, who have performed a strict quarantine, been ever affected by the plague. But though such a circumstance would certainly prove very pernicious in our countries, yet it seems not to be so here, and I know not to what to ascribe it, but to the excessive dry air of Egypt, particularly in that season. Some physicians have ascribed the salubrity to the quantity of acid conveyed into the canal by the numerous necessaries, but upon what ground I cannot tell. It is also particular that this smell does never extend much farther than the back rooms of those houses situated close to the canal.

I could never find sufficient ground to ascertain that the plague ever broke out in Egypt, without being brought thither from other parts of Turkey: and though there is a saying among the people, that the plague, which was brought from Upper Egypt, was the most violent, yet, whenever I persisted in my enquiries respecting the time when it was brought from thence, nobody could tell me. Some Europeans have, by constantly hearing it, also repeated the same thing, but without being able to prove it; for all depended on hearsay, and those from whom I chiefly heard it, did not appear to be people qualified for making proper observations. On the other hand,



one must allow, that traditions have often some truth in them ; but as they are frequently, by length of time, stripped of all the circumstances necessary to be known, little dependance can be placed upon them, and it is a question whether this tradition be not as old as the memorable plague at Athens, which is said to have originated in Upper Egypt.

During the twelve years of my abode in that country, which was from the 13th of January, 1770, to the 26th of the same month, 1782, the plague was three times there. At my arrival at Alexandria there were symptoms of it, which soon afterwards spread, and it became very violent there, as well as at Rosetta, and other parts of Lower Egypt; but, besides a very few accidents, it did not reach Cairo so as to become general. But the next year, 1771, it was brought again into the country by some Mameluks from Constantinople, and raged with great violence, as well at Grand Cairo, as in all the Lower, and in some parts of Upper Egypt: but, as the Russian war broke out at that time, by which all communication between Constantinople and Smyrna, in Turkish bottoms, was entirely cut off, the plague was kept perfectly out of the country during that period. At the same time there was but little of it at Constantinople; but, mean while, it visited Bagdad and Buffora, where it had not been before for time immemorial. In the year 1781, it was brought, first to Alexandria, thence to Rosetta, and soon to Grand Cairo, by some Jews, who, having bought a chest of  
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old clothes at Smyrna, where it raged very furiously at that time, brought it to Egypt to be sold at Grand Cairo. As soon as this chest was opened at the three different custom-houses, the infection immediately took place, and spread so as to become general in a very short time. That the infection will remain in such articles for years together, and be conveyed to any part, is a well known fact. In this way the plague once remained inactive in Cairo a whole year. The fact was this: a Damascene merchant had two black women slaves who died of the plague; he very imprudently had their clothes locked up in a chest, without first airing them. About the same time of the following year, he bought two new black slaves, and dressed them in these clothes, by which they immediately caught the infection, and afterwards spread it through the whole country.

From all these observations, I think Egypt cannot, with any truth, be called the mother of the plague; and I am sure that, by a strict quarantine, in the maritime towns, it might as certainly be banished out of that country as out of any in Europe.

The symptoms of the plague are exceedingly various, as are also its effects. The infection seems to be most active when it first breaks out in the country, and very few of those who are infected by it in the beginning escape. Some of them may continue even ten or twelve days before they die: others are frequently carried off in a



few hours. Again, others apparently quite well, will drop down dead in an instant: and the signs of the plague can only be depended upon after death. These are buboes in the arm-pits, or the soft part of the belly, with a few dark purple spots, or carbuncles, on the legs, &c. When the buboes break, and discharge a great deal of matter, such patients may chance to recover, if their constitution be strong enough to resist the disorder: and this is often the case, particularly when the infection begins to decrease. It is a mistaken notion, that a person, who has been once infected with the plague, should not be liable to have it again, as is observed in the small-pox. I myself have known a person who had it the seventh time, and died of it at last. Mr. Wortley Montague assured me, that he had had it three times himself. The sick commonly complain of an intolerable heat, and say they feel as if thrown into a fire.

The plague often rages with great fury in one quarter of the town, and all at once ceases, and begins with equal violence in a quite opposite part, where little or nothing of it had been before. Sometimes a house is entirely cleared of its inhabitants, and, in another house, it perhaps takes one or two only out of twelve, fifteen, or more, and those sometimes die in the arms of others, who, with all the rest, escape unhurt. There are instances of two people sleeping in one bed, one of whom shall be carried off by it, and the other remain unaffected: it notwithstanding remains true, that it is extremely  
dangerous



dangerous to touch any thing belonging to such persons. It is, indeed, exceedingly difficult, if not impossible, to give a satisfactory reason for all this; though, at the same time, it is evident, that there must be a pre-disposition in the body, by which some catch it sooner than others. But, I think, the great danger that attends a close observation will, perhaps, keep us for ever in the dark, at least, in a great measure.

In Egypt they are always pretty sure when the plague will cease, for it seldom remains after the 24th of June: this has given occasion to the following superstitious notions, not among the Turks only, but particularly among the Cophtic Christians. They say, and firmly believe, that angels are sent by God to strike those people who are intended as a sacrifice. All those who receive the stroke must inevitably die; but those that receive the infection through fear only, escape or recover. When they feel themselves infected, they say, *anna matrub bel cuppa!* which signifies, I am struck, or smitten, by the plague. As the 17th of June, according to the Cophts, is the festival of the Archangel Michael, on which day he lets a drop of water, of such a fermenting quality, fall into the river, as occasions its overflowings: they say that, at the same time, he, as the chief of all the other angels, orders all those occupied in striking the people to retire. The Cophts add, that if any of them should still lurk about in the dark after that day, they must absolutely fly before St. John on the 24th of June.



A thinking mind, though it acknowledge the hand of God in every thing, cannot content itself with reasons of this kind: for God, who has all the elements, and every thing in nature, at his command, can employ a thousand means to obtain his aim without working miracles.

The natural cause of the plague ceasing at that time in Egypt, is the great heat; Fahrenheit's thermometer, at that time, standing generally at 90 or 92 degrees in the shade; and that this must be the cause, will appear by the following fact. In the year 1781, the plague broke out about the middle of April, and increased with such rapidity and virulence, that sometimes one thousand people died of it in one day at Grand Cairo; but, about the middle of May, the wind shifted to the east, which occasioned a few days violent heat, in consequence of which it immediately diminished; and though, as the weather became again cooler, the plague did not leave the country before the end of June, yet it never encreased to the same degree as before, but continued dwindling away, till it ceased entirely when the summer heat became regular. It has always been observed in Egypt, that a great degree of heat, if even but for a few days, has this effect; but this time it was very remarkable. It has several times fallen under my own immediate observation, that vessels came to Alexandria from other parts of Turkey, with many people on board affected by the plague, after that period, but the infection never took; and even the patients who came on shore infected with that disorder.



disorder frequently recovered. These are facts which may always be proved at Grand Cairo, or any part of Egypt, and they seem to contradict entirely that notion which I have observed in many authors, viz. that the plague was nothing but a putrid fever in the highest degree; but a great degree of heat would rather increase than diminish a putrid fever. Observing this effect of natural heat, I have sometimes thought whether the same degree of artificial heat, so as to occasion a constant perspiration, might not be of more benefit, even to those infected by the disorder, than heating medicines applied for the same purpose? But, as I make no pretensions to medical knowledge, I will leave this to others to determine.

Constantinople seems to be seldom or ever quite free from it; neither do the inhabitants of Constantinople, Smyrna, and other parts of Turkey, know so certainly when it will cease, as those of Egypt: most probably the reason is, because the degree of heat is never so great there, for any continuance, nor so regular. At those places, particularly the former, the intense cold seems more effectually to diminish its fury; but it does not eradicate it with so much certainty as the heat will do it at Grand Cairo. That the cold should have the same effect at Constantinople, as the heat has at Cairo, seems to be another circumstance difficult to be accounted for.

The plague rages most among the lower class of people. Several reasons may be alleged for this, of which the chief is, their being  
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more stupid and superstitious ; for, as they believe that every man's fate, which is unalterable, is written upon his forehead, they think it absurd to use any precaution ; and, as they commonly are in want of clothes, they do not scruple to put on those of their companions who have just died of the disease : besides this, they live always more crowded together. The better sort of people, or at least those in power, are not so much affected with it, because they are not in want of linen and clothes, and every one is obliged to give place when they pass along the streets, and no sick person can easily enter their houses. Some of them are also not quite so superstitious, and therefore more cautious, nay, they even sometimes perform a sort of quarantine, either in their own houses, or by moving into the country ; and some would certainly perform it more rigorously, if they were not fearful of being despised, and called Frangi, or Europeans, by their more superstitious companions. But, if the infection finds its way into their houses, they are as little exempt from it as the poorer sort. I remember an instance in the year 1771, of every individual in the house of a great person dying by the plague, because the master had bought some Mameluks from Constantinople.

Some authors have asserted, without endeavouring to account for it, that the Europeans residing in Turkey were not so much subject to the plague as the natives. But they have, perhaps, not sufficiently considered, that even the very poorest of them take all possible care to avoid it ; and that all those who possibly can, perform a strict quarantine.



rantine. And I remember some striking instances where several of them lost their lives from the least imprudence: and indeed, what ground have we to expect, that they should be less liable to the infection, since it is very well known that the plague rages with much more fury in other parts of Europe, when brought thither, than even in Turkey.

It has been observed in Turkey, and particularly in Egypt, that persons of the age of seventy, and upwards, are not so much subject to the infection, and very old people not at all. The most vigorous and the strongest appear to be most subject to it.

The Friars de Propaganda Fide, at Grand Cairo, also perform quarantine; but they always appoint two of their number to visit the sick, and to administer extreme unction to those of their persuasion who are dying: and it happens but seldom, that any of these visitors die of the plague, which constantly inclines them to make a miracle of it. The only precaution they take is, to drink a great quantity of brandy, as much, and often more than they well can bear, without dishonouring their profession. A Venetian doctor, long resident at Grand Cairo, never performed quarantine, and even visited people who were sick of the plague, but never caught it himself. His antidote was likewise to take so much brandy, that he was seldom free from its effects; perhaps the increase of perspiration, occasioned by the  
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use of the liquor, might be the cause. It seems that brandy supplies, in this case, what a great degree of heat would naturally do. A timorous person, who is in constant fear and apprehension, will be much more liable to have it. It is well known that fear acts the contrary way, and will prevent or obstruct perspiration.

P. S. After I had written the foregoing sheets, a friend of mine favoured me with a volume of the so called City Remembrancer, in which I found a long description of the plague in London, in the last century; with various conjectures concerning the origin of this distemper, all of which pre-suppose a corrupt air. At the same time it is there said that it had been brought from Holland. In another place it is said, that all those people escaped who shut themselves up entirely from all connection with infected people. Quere: Did they not all breathe and live in the very same air? Many people were shut up and guarded in their houses by order of the magistrate, because they were infected. This could certainly be of no benefit to them, and must have been much worse for those who were with them.

Various experiments were also made to correct the supposed infected air, but acknowledged to have been without effect. One was, to make large fires here and there in the streets and open places. But this seems to me almost as ridiculous, as throwing a few hogheads of any liquid into the sea, to purify the water of an extensive part of  
it,



it, because it is supposed to be corrupted. How can any one suppose that such an insignificant attempt should be capable of purifying so large a body of air, which being almost constantly in motion, by means of the winds, cannot remain the same during only a very few minutes.

It is also maintained there, that the plague is nothing but a putrid fever in the highest degree. If this were true, then putrid fevers would commonly be the forerunners of the plague, which by degrees would degenerate into the former distemper; and from the influence of such fevers nobody could be preserved even by locking himself up. Neither is it observed that these fevers are more common in Turkey just before the plague than at other times.

Low and marshy grounds, particularly in a hot climate, are commonly very unhealthy; as we see in Batavia, Scanderoon, some parts of Cyprus, &c. Here it must be allowed, that the air is corrupted or impregnated with putrid and pernicious exhalations; but why is it corrupted to such a degree, that it seems to remain always the same? Because the origin of the corruption is never removed, but there is a constant supply of putrid matter on the very same spot. We often see, that if there happen to be a hill, or a more elevated spot, at a very small distance from such places, the air is commonly found to be very different, and by no means infected. This is particularly



ticularly remarkable at Bilan, near Scanderoon, may be observed in other places which are much nearer, and formerly was the case at Trieste, before the low marshes were filled up; the new town, then situated in the valley, was accounted exceedingly unhealthy, although the part adjoining to it, upon a hill, was quite the reverse. But in such unhealthy places, as observed above, it would be of no benefit to be locked up in a house; the disorder occasioned by the corrupt air would find its way into it, and attack those as well as others.

A change of weather out of the common course, a mild and wet winter, &c. by which the air may be impregnated with various pernicious exhalations, may occasion epidemical disorders in our countries, which otherwise are accounted very healthy. But these disorders vanish, as soon as the supply of the noxious matter ceases which was the cause of them; but during the time it continues, it would be of little use to perform quarantine in a house, though all other precautions may be proper; but as it is quite otherwise with the plague, the cause of it must be different.

The description of the last plague in London, in the City Remembrancer, did, therefore, not at all alter my opinion, that the plague, for the most part, and particularly when it is brought from other countries, is not occasioned by a corruption of the air; though at the  
same



same time it seems to be evident, that a certain state of the air is requisite for maintaining it, and another for suppressing it, otherwise we should be inclined to think that it would never cease in any season of the year, when it had once begun in a place; though much might also be said *pro* and *con* on this head. The disorder might cease, because it had already swept away all those who had a disposition in their bodies to catch the infection; yet, as experience has shewn, that the infection does not take in Egypt at certain times of the year, this seems to argue in favour of the first idea, that the air must be in a state to maintain it. But here a question will naturally arise: *How was the plague at first produced? And what has been the physical reason of its origin?*

The solution of these questions is indeed involved in obscurity, and it seems impossible to answer them by stating facts; we have also no such particular and exact records of those times, nor can we even say when it made its first appearance in the world; for when it is once produced, it is evident that it may be kept up by contact and negligence, by not taking proper care of those things which may retain the infection. There is, however, room for probable conjectures, viz. a combination of various circumstances may be necessary, which may, perhaps, not occur exactly in the same way, during the space of thousands of years: there may also be countries whose situation may make them incapable of such a combination, though susceptible



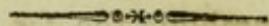
of the infection when brought there. We see this in some degree in every country. A fatal disorder made its appearance among the Romans, and many thousands died with sneezing. Other disorders, equally unknown before or since, made their appearance, proved fatal to many, and vanished again, because the combination of circumstances, or even the particular circumstance which occasioned each particular disorder, never occurred again exactly in the same manner. Such was the sweating disorder in England and other countries. So the small pox, measles, and the like infectious disorders, may originally have been produced, and may still be produced in countries liable to such combinations of things necessary for them, and be continued by contact, &c. Thus, likewise, disorders of which we have not at present the most distant idea, might be produced, without having recourse to miracles, which God may certainly make use of as often as he pleases, when he chooses to deviate from the common course of nature once established by him. I, for my part, find no reason to doubt that, if it were possible to make all nations, and all individuals of nations, perfectly sensible of the importance of a strict quarantine, and of destroying every thing coming from people and persons infected with the plague, this dreadful disorder might, with many others of the infectious kind, be banished out of the world. At the same time I look upon it as belonging to the dispensations of God, that this does not appear possible.



In short, the field for reflexion is so very extensive, that we might easily lose ourselves by rambling too far in it; and I will therefore rather stop short, lest some of the faculty might admonish me not to go beyond my sphere, as the painter did the shoemaker, when he began to criticise other parts of his picture besides the shoes. But it is to the judgment of those who make physic their profession that I submit these my unpolished ideas, to determine how far they may be well grounded or not.

OBSER-

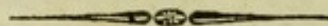




## OBSERVATIONS ON

## THE OVERFLOWING OF THE RIVER NILE,

## AND THE QUALITIES OF ITS WATER.



**T**HE river Nile is the treasure of Egypt; without it this country would be the most dreary waste imaginable. To be fully convinced of this, we need attend to those parts of the country only, which, from their elevation, cannot be overflowed. Without it this country would be entirely uninhabitable; all its fertility, and all the subsistence of men and animals must be ascribed to it. At the same time the Nile is the most convenient channel of communication from one extremity of the country to the other, being navigable for boats of considerable burthen, without any interruption from its two chief mouths, to the rapids near Assuan, and even above these rapids (for cataracts they cannot be called), through all Turkish Nubia; and, by all accounts, it might easily be made so to Sennar and still higher up. This communication by water is, likewise, no small advantage for the conveyance of merchandize from the Mediterranean



diterranean, and the produce of Upper Egypt to the capital. It is no less convenient for travelling, which is here chiefly performed on the river. I myself have made many a pleasant journey upon it, though the very first did not prove so.\* No part of the country is at any great distance from it, for even in Lower Egypt, where only the habitable parts spread to a considerable width, the river is divided into two principal channels, one turning to the east, the other to the west. Egypt is, therefore, one of the most singular and

\* In all other Turkish provinces, particularly those in Asia, which are often thinly inhabited, travelling is subject to numberless inconveniences, since it is necessary, not only to carry all sorts of provisions along with one, but even the very utensils to dress them in, besides a tent for shelter at night, and in bad weather, as there are no inns, except here and there a caravansera, where nothing but bare rooms, and those often very bad, and infested with all sorts of vermin, can be procured. Should sickness overtake a traveller, then his misery is complete, particularly, as in some parts he may meet with no habitation for days together; to this may be added, that a traveller is often obliged to entrust himself to guides, of whose language he is ignorant, consequently he is entirely at their mercy. Though I do not wish to entertain the public with my private adventures, yet, as a specimen of such a journey, I will give an account of one which I made in the Island of Cyprus, and which, at first, may appear entirely fabulous although strictly true. When I first went to Turkey, I landed on the above island, and was involuntarily detained for about six weeks at a very unhealthy place called Larnica, where all the Europeans reside. Not being able to procure a passage from thence to Alexandria, I had scarcely been there four nights, before I was attacked with a violent intermittent fever or ague. As I wished to leave this unlucky



and wonderful countries on the face of the globe: nay, I am very much inclined to think, that the existence of the habitable part of it, depends entirely upon this extraordinary river. Several observations

lucky place as soon as possible, particularly as the English Consul, and his clerk, with whom I lodged, were afflicted with the same disorder, I sent a messenger to a place called Limasol, about fifteen leagues west of Larnica, where I heard there was a vessel bound to Alexandria, to see if I could procure a passage. The next day a Greek arrived from thence with two mules, one for himself, and another for me. It happened to be the day for having a fit of the ague; but, as the guide could on no account be persuaded to wait a day longer, and was myself very impatient to be gone, I disregarded my disorder, packed up my luggage as well as I could, and hired another Greek with a mule to carry it, with part of my provision for the journey. As this man had much the appearance of a villain, I charged a pair of pocket pistols before his eyes, and placed them in my belt, to shew him that I was upon my guard: however, the circumstances which followed would have prevented them from being of much service, had not God himself protected me. Thus equipped, we left the place in the dusk of the evening; we had scarce proceeded a mile, before it began to rain very hard, and continued to do so the greatest part of the night, accompanied with very vivid and frequent flashes of lightning and thunder. As I was obliged to pay the utmost attention to cover myself from the heavy rain, against which I was not well sheltered in my Turkish dress, I threw a bed quilt, which I had placed upon my saddle, over my head, and was thus led on in a manner blindfolded, entirely at the mercy of my guides. After we had proceeded in this way about three or four hours, in a quite desert plain, one of the Greeks, who had the charge of my luggage, and the greatest part of my provisions, smelled out a bottle of strong liquors, of which he made such free use, that he could no longer see his mule, which took the advantage to run back to the place from whence



ervations, which I have made during my stay in this country, seem to favour this idea.

1st. The

whence it came with all its cargo ; the other guide endeavouring to help him to catch it again, likewise forsook me ; and, being so covered up, I did not immediately perceive it till after some time, when no longer I heard any one following me. I then uncovered myself, but it was so extremely dark that, except at short intervals, by the lightning, I could not discover any object at a yard's distance. I still thought for some time that I heard them at a distance. Not knowing immediately what to do, I dismounted, and tied my mule, by the bridle, to some brush-wood next the path (for there was no regular road), and began to walk back, hoping to meet one of my guides ; but soon recollecting myself, and seeing the improbability of success, I returned towards the place where I had left my mule, mostly feeling my road, except when I had a glance of it by the flashes of lightning ; at last, when I got near my mule, it gave a sudden jerk, got loose, and likewise ran away ; but as it had come from Limasol, it followed that road. Now I had no other prospect left but to remain in a desert, in a strange country, upon the spot where I was, and there to await day-light. After standing a considerable time, I perceived, by the lightning, a man coming towards me, mounted upon an ass, but I soon saw he was not one of my guides ; upon approaching me, he muttered something in Greek, but, seeing that I could not understand him, he left me and rode on. After a long disagreeable suspense one of my guides returned ; but this man could not speak one word of Italian, though the other could, and I not knowing Greek, could not enquire what was become of my luggage. He only asked me, with signs, what was become of my mule ? and I could do no more but to point the way it had run off. The poor fellow then dismounted, and made me mount his mule, and walked himself by my side through deep mire, during one continued rain ; after some time we perceived my mule, by the lightning, on the path before us, but he had a great deal of trouble to catch it. About midnight we reached a

H

place



1ft. The whole surface of its inhabitable part consists of the very same substance which the river leaves every year upon the fields, after its overflowing. This substance is composed of a very fine black mould,

place resembling a village, where he knocked at a door. Never in my life was I so rejoiced to get under a roof; but when the door opened, I found it was only a shed, and quite open on the other side; but there was a fire, and some men were lying on the ground around it. They soon stirred it up, and I began to dry my clothes, and disregarding my ague, eat and drank very heartily of such provision as I had with me, but there was none among all these men with whom I could speak a single word. After some time the master of the premises made me a sign to follow him, which I did, and he led me to a back building resembling a room, gave me a large great coat, and shewed me a place where a clean sheet was spread, and another great coat laid for a pillow, where I might take some rest. Being worn out with fatigue, I was exceeding glad to find such good accommodation, but soon perceived it was nothing but a large hard chest, with a sheet spread over it; however weariness made me fall asleep, and I slept pretty sound till about eight o'clock the next morning, when my guide came in and made signs to proceed. I rewarded my generous host as well as I could, and continued my journey, without being able to make any enquiry concerning my luggage. This day was extremely cold, being the 3d of January; what had been rain in the valley the night before, proved to be snow on Mount Olympus and the other hills, the sea likewise was much agitated by the storm in the night, and this proved very inconvenient to us soon after, for about three miles from the above village, the road went over the sands of the sea, the shore of the island being as steep as a wall: here the waves came continually rolling close in shore, and our legs were every time in the water, for it often reached the bellies of our mules. As this lasted from morning, till about four o'clock in the afternoon, I almost began to give myself over for lost, not thinking that

I should



mould, mixed with a little sand, which is often upon an average seven or eight feet deep. I have sometimes examined this mould, which the river leaves in great quantity in channels, and thought I found it

I should be able to stand the wet and cold any longer; however, approaching the shore late in the afternoon, I plucked up my courage, with the idea of warming myself by walking as soon as I got clear of the waves; therefore, the moment this was the case, I dismounted, and did my best, but soon found that I had not taken my exhausted state into the account; and after walking about two or three hundred yards, being unable to proceed, my guide was obliged to help me on my mule again, so we went on slowly, sometimes walking a few hundred yards, then mounting again, till at last we arrived, about nine o'clock in the evening, at the house of a Greek, who acted as English Consul at Limasol. As he spoke some Italian, I could now for the first time enquire about my luggage, which he assured me would not be lost, but would come the next day; and so it proved. My host shewed me into a room with a clean double bed, and having some tea, and a kettle with me, I got him to boil water, and I made tea by tying some in a linen rag, and putting it into the kettle, which very much refreshed me: however I got another fit of my ague that very night, but, contrary to my expectations, much slighter, and should have rested comfortably enough, if my bed, which was otherwise clean, had not been infested with innumerable fleas. I had to wait six days here for the sailing of the vessel, during which time I had the fits of the ague regularly every other day. At last we set sail, and I arrived in five days at Alexandria. At sea the fits of my ague left me, but it was not cured, for I suffered very much from it some time after. There were symptoms of the plague at Alexandria when I arrived, which soon became general; I therefore hastened away, but had many other difficulties to struggle with before I reached Grand Cairo.

When I left Cyprus, the English Consul at Larnica, Mr. John Baldwin, gave me



it much less mixed with sand than the common soil, and rather too tough to be very fertile, without such a mixture; but when I consider the small quantity of it that remains on the open fields, as also  
the

a letter of recommendation to a Tuscan gentleman, Mr. Marion, who acted as English Consul at Alexandria. But this man being continually at variance with all other Europeans, I soon found that my recommendation was worse than none; and I myself have not much reason to thank him for favours shewn in consequence of it. All he did was to get me a lodging with another Italian, where, for good payment, I was tolerably well cared for. Feeling myself very weak, and finding the symptoms of the plague in the place increasing, I was very desirous to leave it soon, and therefore desired Mr. Marion to procure me a Janissary who could speak Italian, to take me for a certain sum, board and passage included, to Cairo; this he promised to do. I staid only one day to see the most remarkable monuments of antiquity, and left Alexandria the next morning at four o'clock, in an open boat, for Rosetta. I soon perceived that the Janissary, whom Mr. Marion had procured for me, knew nothing of Italian, except one or two quite common words. The wind not being fair, we sailed heavily along the coast till we reached Aboukir Bay in the afternoon; here the wind turned still more a-head, and became boisterous, therefore all the coasting vessels, of which there were many, ran into the bay and cast anchor for the night. As it was cold and rough, I pointed to the houses or huts of Aboukir, and gave my Janissary to understand that I wished to sleep in one of them. He knew just so much of Italian as to say, *cattivi genti*, or bad people. Then he pointed to the boat, and told me, with signs, that I must spend the night there, for which he made a sort of a tent over me with mats. This night proved very boisterous, and I again had a fit of the ague; I therefore spent it very uncomfortably.\* The next morning about ten o'clock,

\* We were at anchor on the very spot where Lord Nelson defeated the French fleet, a little within the rocky island on which they had their batteries.



the little distance of the sandy deserts, from which the whirling south-east winds commonly scatter, every spring, a great quantity of sand all over the country, I can easily account for the mixture. This  
wind,

the weather grew milder, and we set sail, in company with sixty-five coasting boats, for the mouth of the Nile, which is quite on the other side of the bay. It is so broad, that when we reached the middle, we saw no land on either side, the shores being very flat; but this did not continue long, and the date trees below Rosetta soon began to appear as rising out of the water. Here my Janissary took some of the water seemingly out of the sea, which was sweet; this shewed that we were near the mouth of the river. About three o'clock in the afternoon we entered it, and sailed towards Rosetta, which is about six miles from the entrance. As Mr. Marion, for reasons above-mentioned, could give me no recommendation to any of the Europeans residing there, I was at my arrival very much at a loss to whom to address myself. After much exertion to find out one of them, my Janissary at last pointed to a man walking at the river side, and said, Consul! I soon made up towards him; for, in the situation I then was in, I should have rejoiced to meet even an European dog. When I came up and saluted him in Italian, he asked me whence I came, and whither I intended to go; this being answered, he enquired if I had recommendations to any of the Europeans; I answered, no. He soon understood the reason, when I told him to whom I had been recommended at Alexandria. However, he gave me a very friendly invitation to his lodgings, and treated me, according to the custom of the country, with coffee. Meanwhile my Janissary had embarked all my goods on board of another vessel; which was to sail up the river to Cairo, and had hired the cabin for me to sleep in. As my new European acquaintance had left me for a short time, and evening drew near, I began reflecting that I was not in a public house, and feeling myself very weak and exhausted, I went towards the boat where my goods were embarked, meaning to go to rest; but, coming near it, I found the same European walking  
there



wind, as it is of a whirling nature, is capable of carrying the fine sand far into the Delta ; and what confirms me in this idea is, that the soil seemed to me by far less mixed with sand in the middle, and  
lowest

there, who, when he perceived my intention to sleep in the boat, very generously invited me again to his lodgings, where he furnished me with an apartment with a very good bed, and likewise with board, at the *Patres de Terra Santa*, where he himself boarded.

The plague having broke out at Alexandria, they were at first afraid of me, thinking, as I was sick, I might be infected therewith ; but when convinced of the contrary, they became very cordial and familiar, and treated me with the greatest hospitality for six days, till the wind, which was contrary, permitted us to proceed up the river. I afterwards became intimately acquainted with this Gentleman, whose name was Signior *Alessandro Del Senno*, a native of *Pislarco* in *Istria*, where I paid him an unexpected visit, after my return from Egypt. The journey from *Rosetta* to *Grand Cairo* upon the river is commonly performed in three days, with any tolerable fair wind ; but, in order to complete my misfortune, it was eighteen days before I reached that place. In the lower parts of the Delta it often rains very hard during the winter season ; this was also now the case. My *Janissary* had, in order to save something, embarked in a very old vessel, which was far from watertight over head ; the heavy rain, therefore, penetrated every where, so that I had not one spot where I could sit dry, though under cover ; my bed soon began to moulder under me, till at last I contrived to suspend it with a cord, so that the penetrating water could run off underneath, which was of some service. My guide had provided sufficient, and very good victuals, for a journey of five or six days, such as bread, fowls, rice, &c. ; but as it lasted so long, all the bread by degrees grew mouldy, and the fowls were consumed. He endeavoured to get some rice bread from the Arabs, but it proved very insipid, and was as black and

as



lowest parts of the Delta. But there the river at present scarcely overflows its banks, and the ground may be improved by the rotten stubble of rice and other vegetables, and the pigeons dung, which is carried down in great quantities from Upper Egypt.

## 2d. The

as dirty as a coal : with some difficulty he procured some more fowls, but upon the whole we had very scanty fare ; perhaps this was the reason that my ague again forsook me. We frequently lay to at a paltry village, or at anchor in the middle of the river for four, five, or six days together, and no offer could make them exert themselves ; they continually exclaimed : Min Allah ! Mukkader ! &c. It is from God ! It is so written in the Book of Fate ! &c. All this was the more irksome to me, as I could not speak a single word with any one on board, not yet understanding Arabic. Once lying before a village, my Janissary ordered me by signs to charge all my fire-arms, of which I had two fowling-pieces, and a pair of pistols ; I did it, but never could learn the reason. At last we arrived before Bulac, the harbour of Grand Cairo, where, to finish in style, the vessel stuck fast in the middle of the river on a sand bank, and all the exertions of the crew could not move it. Here almost all my patience began to fail ; I made many strong signs to some boats which were in sight, till one of them came, and took me on shore, where I immediately mounted an ass, and was conducted by my Janissary to the street where the French merchants resided, from whence a servant directed me to my friends Drs. Hocker and Danke, where I was most heartily welcomed. But though my ague had to appearance left me, yet I felt it within me during the whole summer following ; and in November, when the air grew cooler and damp, it attacked me again with redoubled violence, for I had two fits of it every day ; one lasted from ten in the morning to six in the evening, and the other from ten in the evening to six in the morning, though the latter was in a slighter degree. As this continued for nine weeks together, it brought me so exceedingly low, that both Dr. Hocker and myself,



2d. The large quantities of muscle and oyster beds, with other productions of the sea, which are to be found under ground in various places, even not far from Grand Cairo, made me sometimes think, that most probably the whole Delta was originally nothing but a shallow bay of the sea, of unequal depth. I say shallow, because wherever I have been on the sea shore, the rocks appeared either very near, or above the surface in some places, which all seems to have contributed to enable the river to fill it up by degrees with the sediment of its water, of which the whole surface now consists, through which the river always found its way in several channels. These channels have from time to time changed their bed, and varied in number, and these continual changes must be the reason why the ancient authors differ so much in their descriptions of them. It is also probable, that if it formerly were a bay, there may have been

self, began seriously to despair of my recovery. However, it pleased God to restore me to health again, and though I had some slight fits of sickness at other times, yet I was never again seriously ill, during all the time that I remained in the country, which was from January 13, 1770, to January 26, 1782, a period which will for ever remain memorable to me, on account of the many, and oftentimes very heavy occurrences, through all of which the Lord has graciously helped me, and has likewise preserved my constitution from suffering any material harm, so that I am now at sixty as well, and even better in health, than I was at twenty-nine, when I first went to Egypt. His name alone be praised for it!

I will not, however, detain my readers longer with the recital, as the above will be sufficient to shew what travellers in Turkey, particularly in the thinly inhabited parts, are liable to.

some



some islands with rocky foundations in it. Near Rosetta there seems to be a striking proof that the country is still encreasing by the sediments of the river; by every appearance it seems that Rosetta was formerly situated close to the sea, and at the very mouth of that branch of the river; for this town is situated on the west side of the river, under a rocky hill covered with sand, which begins close behind the town, and extends itself without interruption towards Alexandria. However, below this town, there is a long narrow neck of land, consisting of the same above mentioned black mould, on both sides of the river, which at present removes the mouth of it at least five miles from that city. The surface of the whole inhabitable valley that forms Middle and Upper Egypt, consists also of the very same mould. This valley begins at Grand Cairo, and thence runs almost due south as far as Assuan, the last town of Egypt towards Nubia, between two rows of high rocky hills. It is of very unequal breadth, but seldom more than from five to eight miles, and in many parts not near so much, except about Faium, or the ancient town of Arfinoe, where it widens considerably.

The course of the river is at present mostly, and in many parts, entirely on the east side of this valley, and though it often changes, at least part of its bed, it seems that it has never moved considerably from the east side, as the ancients made several cuts to supply the western side with water, of which that, called Bacher, or Canal Joseph, which begins in Upper, and runs through the greatest part of



Middle Egypt, and empties itself into the Lake Mæris at Faium, is the most considerable. Having once sailed for two days up this canal, I found it exceedingly winding, which I suppose has been made so on purpose, to supply a larger tract of land with water; though, on the other hand, I thought it destroyed, by this means, too much of the valuable surface of the land, which might have been supplied with fewer cuts and engines. At Grand Cairo the mountains begin suddenly to divide to east and west, and thus make an opening for the famous Delta, which begins not far below it, where the river divides into its two capital branches, that of Rosetta and of Damietta. The river overflows but a small part, and the nearer to the sea, the less of this Delta, though the banks of it grow lower and lower towards the sea.

The lower parts are at present all converted into rice fields, and as the growth of it requires the fields to be most part of the year under water, they are all surrounded with small dams about two feet high, and then laid under water by means of wheels turned by oxen, commonly called the Persian wheels, an infinite number of which is seen in all Lower Egypt. There are two kinds of these wheels, which are also in use throughout the whole of the other part of the country, partly to supply the defects of the river in some places, and partly to raise vegetables at the time when the river is lowest. They are very simple, but answer the intended purpose very well, and I think the invention is very ancient. They are also made use of in the south  
of



of France, Spain, and Portugal, and most probably have been brought from the Levant into those countries.

The river Nile begins to rise annually about the 17th of June, and this is commonly so regular, that it varies but very few days one year with another. According to the Cophtic æra, by which all accounts are kept in this country, the 17th of June is the festival of the archangel Michael, and has given rise to a fable, which is firmly believed, as well by the Turks, as by the Cophts and other Christians of this country, viz. That the angel on that day, throws a drop of water of such a fermenting quality into the river, that it causes it to rise to such a height, as to overflow all the country. For this reason the 17th of June is called Nockta (which signifies a drop), by all the inhabitants of Egypt: and should any one contradict this notion, he would be charged with gross ignorance; as would also be the case were he to deny the merits of the prophetic well at El Garnaus, in Middle Egypt, which, according to their opinion, shews in the first months of the year, by a miraculous elevation of its water, to what height the river will rise that season.

Opposite to Old Cairo is the island of Rouda, if it may be called so, for at present it only becomes an island when the river is already much increased. At the upper end of it is the famous Nilometer in the middle of an old mosque. This has been sufficiently described, and many good drawings have been taken of it by Norden and



others. It is like a large square well, with steps quite down to the bottom on one side. There is a small opening below to let in the water of the river. In the middle of it is an octagon granite pillar, divided into karats or digits. I had the exact measure of it, but lost it among other things at sea. It is in the whole twenty-four draw or Turkish ells, which as far as I remember, is not much more than so many feet. This pillar is supported by a large cross beam, that lies on the top of it. The increase of the river on each day is, from the beginning of July, published in all parts of the town by public criers every morning; but they commonly conceal part of it, in order to have something to spare, if the river should fall an inch or two on another day, which is now and then the case. They likewise take care to have a great number of digits to give out the day before the canal, which runs through the town, is opened, on which day they often take a second round on that account.

The river commonly rises very regularly from two to four digits or inches in a day, but sometimes it rises a yard or more suddenly, and then on another day falls a few inches, which is in a great measure to be attributed to the strong northerly wind at that season. If it attains its full height, then the whole pillar of the Nilometer must be under water.

About the middle of August the river begins to overflow its banks, and about the end of September it reaches its utmost height, from  
which



which it begins to fall gradually. Should it happen to rise suddenly to a very great height, but not remain long enough to soak the fields sufficiently, it will not be a fertile year, and other bad consequences may likewise follow if it leaves the fields too soon, before the air begins to cool, for many sorts of vermin will breed in the ground which are pernicious to some kinds of vegetables.

As the river retires, the fields are sown, which is sooner or later, according to their respective elevations; for some fields are not free from water till the month of December, and, in some temporary canals, it remains still longer. The canal Joseph is never dry, though at its beginning it is very shallow, and therefore soon loses the supply from the river. It is reported by the country people to have many springs, but this I could never fully ascertain, and have reason to doubt their being of any consequence.

The canal, which runs through Cairo, and from thence, by way of Matarea to Lake or Birket el Hadge, (which signifies the Lake of Pilgrims, so called, because the pilgrims, which yearly go to Mecca, assemble there), is always cleaned as soon as the river begins to rise; but a dam, or bank, is made across its mouth at Old Cairo, which is not opened till the river has attained a certain height, which is commonly about the middle of the month of August, when it is done in presence of the Bascha with great ceremony. Should the river happen not to attain the height necessary for  
opening



opening the canal, then the Grand Signior has no right to demand any revenue for that year. But it seems they have taken care to fix the height of the river so, that this cannot easily be the case; for, if it should stop there, and rise no higher, then at least half of the inhabitants would perish for want, as it must rise a great deal more to make it a plentiful year. The day when this canal is opened, is always a day of great rejoicing among all classes of people, and indeed with great reason, as their whole welfare for that year depends entirely upon the sufficient rise of the river. Before this canal is opened, none is permitted to be opened in the whole country. The canal of Alexandria, which supplies that town with water all the year, and which begins at a village called Rachmania in Lower Egypt, is opened in the beginning of September; and a very large one, on the east side of the Damietta branch of the river, is opened towards the end of the same month. When the canal of Alexandria is opened, they let it run waste for three days before they turn the water into the cisterns, in order to clear it first from all sort of filth that may have collected there.

Near the mountains on the west side, particularly about Grand Cairo, and towards the Pyramids of Giza, the country is remarkably lower than it is close to the banks of the river. This must, according to my opinion, have been occasioned by the mud which the river has left next to the main stream in a greater quantity than it could well do at a greater distance. There have been several dams  
raised



raised upon those fields, to let only so much water flow upon the lower parts as was wanted to make them fertile, that they might not be drowned, nor too long under water, which from their situation they would be liable to. But, as these dams are very much neglected by the present government, the water often forces its way through, and runs at random wherever it can find a passage. Several remains of strong old dams and locks shew plainly, that the ancients knew how to turn the overflowing of the river to much greater advantage.

About Grand Cairo several causeways are made to the next villages, which are seldom overflowed, as the difference of the increase of the river, one year with another, is not much above two, or at most three feet: but it however sometimes happens that they are broken down, and, in this case, there is no other way than to go in boats from one place to another; but the common people often wade for miles together, up to their middle, and often to their chin, from place to place, with their clothes upon their heads: indeed they frequently meet with places where they are obliged to swim, at which they are very expert.

For the building of a village the most elevated spot is commonly chosen, and if no such is to be had, they keep the water out by dams, for which the common black mould is exceedingly proper; for, though it should be soaked quite through with water, it will not  
easily



easily become mud, but retain a firmness fit to resist any thing. I have often been surpris'd to see how small a dam, made close to the river side, was capable of keeping a body of water of two feet deep, perfectly out of the fields, as the Indian corn, and different vegetables, are not then ripe. When the river begins to cover the fields, in order to preserve those things, they are under the necessity of making dams round such fields to keep the water out; but they commonly make them so very slight, that the farmers are oblig'd to watch them both night and day; nay, so very careless are they, that I once saw an Arab lie down and sleep in a small breach, which he had stopp'd up several times before, thus substituting his body for part of the dam. But sometimes the river rises so rapidly, and to such a height, that all their endeavours are in vain, and all such vegetables are destroyed: but it is a loss for a few individuals only, which is amply compensated in the whole, by the river overflowing so much more of the country in other parts.

When the river is at its greatest height, the villages, which are commonly surrounded with a grove of date, and other fruit trees, appear as so many islands in an extensive sea, which is in some places broader than the eye can reach: this is a delightful prospect. With the water, millions of small fishes come upon the fields, with an incredible number of small frogs, which are never seen in any other season of the year. Now, as all these creatures must inevitably perish as soon as the water retires, one might imagine that this would occasion



sion such an intolerable stench as to corrupt the air; but the all-wise Creator has also provided against this: for, just at the time when the water begins to subside, such an immense number of various kinds of water-fowl make their appearance, that the edges of the water are constantly lined with them, and they consume every thing of the kind, so that with the most diligent search I could never find any dead frog or fish, though there was before such plenty of them in the water, that they might be caught every-where with the hands.

The Nile is not a rapid river; however it often carries away whole islands and villages: for, as no means are used to strengthen the banks of the river, the water commonly undermines those parts where a sudden winding of the river gives a turn to the current, which occasions the upper part to fall into the river by degrees, where it is softened and carried along with the stream. Those islands are particularly in danger which the river itself has made, and which have commonly no other foundation than a loose sand, which, in process of time, acquires a deep sediment of the common black mould. The current takes away from one place, and adds to another: nay, wherever it finds the least resistance, as perhaps a sunken boat, a piece of timber, or a stone, it will immediately throw sand against it, and in time form whole islands of many acres, which are by degrees covered with black mould, and by these means made capable of producing all sorts of vegetables. During my stay there I saw various changes of this kind: I observed large islands entirely carried away, and others



appear instead of them: again, others have been joined to the main land by filling up one of the channels. The first year such new made islands were, perhaps, just visible when the river was low, and consisted entirely of a fine loose sand: the next season they had increased several feet in height, and often very much in extent, and a small mixture of black mould was observable on the most elevated parts, which made them capable of producing water melons. The next year common reed would begin to grow here and there, which helped them greatly to gather new substance; and thus they kept increasing from year to year, till they became delightful fertile spots, and one would have thought they had been there since the creation. They remained in this condition till, by some other change in the banks of the river, the current was directed against them, by which they would be carried away, if not all at once, however in a very short time. Thus I have also seen villages carried entirely away, which did not even stand close to the banks of the river, at the time when I came first there; and I have seen others that were situated close to the water side, considerably distanced from the river by accidental addition of ground.

When I thus noticed what large pieces of ground were yearly carried away, and of course removed towards the sea, and considered that this must have been the case from the first existence of the river, it seemed to me a very strong argument in favour of the above mentioned opinion, that perhaps the greatest part, if not the whole of  
the



the Delta has been thus produced, and must be still encreasing by an encroachment upon the sea; for something must also be allowed for the immense quantity of sand, and black mould, carried out into the sea. This cannot well go to a great distance, for the colour of the water is not observed to be different from that of common sea water at a short distance from the mouth of the river; neither can the mould and sand be annihilated, but must remain somewhere. As a further proof of the Delta being thus produced, it might also be added, that no monuments of very great antiquity are to be found in these low places, but only on some few elevated spots, and even these few do not seem to be so old as those found in the upper parts of the country.

Some authors have asserted, and others have upon their credit repeated, that the water of the Nile is, just before it begins to encrease, of a green, and when it is at the highest of a red colour: but, I must confess that, though the inhabitants of Egypt also call the water of the river, when highest, *moye*, or *ma achmar*, which signifies red water, yet I could scarcely, with all the power of imagination, discern any of these colours. Just before the river begins to encrease it is always clearest, and of a whitish hue, much like the river Rhine, mixed with a few earthy particles; and, as the river rises the earthy particles encrease of course also; and, being of a dark or black brown colour, the water appears so too.





From the beginning of March to the middle of June the river contains a vast quantity of little worms about one-fourth or one-third of an inch long, particularly near the shore; but they are quite inoffensive, if even drank in great quantities with the water, though it is more pleasant when filtered through a cloth, or a fine sieve, on that account.

All the Europeans settled in Egypt will confirm, that the water of the River Nile is the best for drinking that can be procured any where; and I should for my part prefer it, even when impregnated with earthy particles, to the clearest water of any well or spring which I have ever tasted. It is exceedingly light, increases perspiration, is very wholesome, and particularly when the river is highest, it is quite delicious. It is true the Arabs commonly call the prickly heat, *Hamoun el Nile*, because it commonly affects people most in that season when the river is high; but this cannot be attributed to the effect of its water, but to the degree of heat at that time, as is every where the case, and common in hot climates where the Nile water is not drank.

It is customary, at Grand Cairo, to fill large jars with Nile water, in which it will settle very soon, and become quite clear and fit for use. If the inhabitants wish to make it settle in a few hours, they put a few pounded almonds, or peach kernels, into it, and stir them together, and this is found to answer the purpose exceedingly well.

They



They have a particular way to cool the water, which is well worth taking notice of. They have a sort of earthen bottles made of a sandy clay, and so porous, that it always lets some of the water through, at least so much of it as will keep the bottles constantly wet on the outside: for these they have a sort of frame, in which they place a number of these bottles, filled with water, into holes made on purpose to receive them, and thus they expose them as much as possible to the air. Under this frame a water proof vessel is put to receive the droppings, which are thrown away, though they are by far the clearest part of the water by being filtered through the bottles. This frame is exposed to a current of air in the shade, if any can be found. By the air playing upon the bottles, the water within will become, by many degrees, colder than the air that occasioned it; nay, if such a bottle is only exposed to the wind and placed in the open air even with the burning sun shining upon it, the effect will be the same, but in a less degree. These bottles are differently shaped, but the most common are of two sorts; one with a narrow neck, thus  and the other formed thus  which is wide above, with a partition in the neck of it, into which several small holes are made; and what is particular, if the last are filled quite to the top, the water above the partition will never grow cool, while that below is as cool as you could wish. By this simple method they can have very fresh water without the use of ice or saltpetre; but as soon as the pores of these bottles are stopped up, so that they remain dry on the outside, they will be of no service,

as



as the water will not cool, but grow warmer, in them. The best of these bottles are made at Kema, in Upper Egypt, and are of a light blue clay. Some are brought from Mecca of the same colour, which are highly esteemed, perhaps partly from superstition; though it must be allowed that they are very good, and the workmanship is far superior to those made in Egypt. Their size is very different, and vary from a pint to ten or twelve quarts.

Though most of the wells about Grand Cairo are brackish, yet there are some with excellent water: but Nile water is, however, always preferred where it can be had.

The water of the Nile never becomes putrid, nor shews any signs of fermentation. This can every year be proved by the many lakes filled with it about Grand Cairo, as also by the numerous cisterns both there, and more particularly at Alexandria, in which the water is kept from one year to another. It may be kept in a vessel in a house any length of time; no alteration can be observed, even if it is quite dried up. I myself brought a small bottle of it to Europe, which I left in a museum in Saxony, and which never has shown any signs of fermentation: it is, therefore, the best that can possibly be procured for voyages. As soon as the river begins to retire, so that the lakes and cisterns lose their supply, they will smell for a few days a little muddy: but after this the earthy particles soon subside, and the water becomes and remains quite clear, keeping perfectly  
sweet



sweet as long as there is a drop left : and I have often been surpris'd to see, that even the constant washing in the lakes about Cairo made no alteration in this respect.

This observation will, I hope, contradict entirely the idea, that the plague was occasioned by the putrefaction of the stagnant water which the Nile leaves upon the fields after the inundation ; but another convincing proof of the inoffensive quality of the Nile water is the following :

It is well known that almost all those countries where rice is cultivated, the fields of which must of course be under water, are very unhealthy, and that agues are no where more common than in them ; but this is not at all the case here : even in the midst of the innumerable rice fields, in Lower Egypt, agues are not complained of, either by the natives or foreigners, and they are upon the whole very rare in Egypt : but there are two valleys about three days journey to the west of Upper and Middle Egypt, commonly called the Oaffis, or, in Arabic, El Wach, which are both under the government of this country. The southernmost is the largest, and has, according to the report of some of my friends who have been there, five villages, and several springs, and among them one is hot, which forms a small rivulet that loses itself in the sand : this valley is called El Wach el Kebier, or the great Wach. The chief produce of it is dates, and a great quantity of apricots, and some other fruits, besides some wheat.

This



This valley is very healthy; but in the other valley which is more to the north, there are also some springs that form a small brook, which likewise loses itself in the sand. This valley is called El Wach el Sogeir, or the smaller Wach, wherein a great quantity of rice of an inferior quality is raised. The fields are laid under water by the small brook. Here the inhabitants are never free from agues. This must certainly be occasioned by the quality of the water, as the country is otherwise as dry, if not more so, than any other on the borders of the Nile.

I remember to have read, in some ancient authors, that salt might be made from the water of the Nile, and that all the salt used in Egypt was procured from it. They seem to have had some grounds for this assertion, though it requires explanation, as the common water of the river will produce none. The fact is this: the salt-pits are all near the sea shore, and mostly about Rosetta, and but very little elevated from the surface of the sea. All the ground in their vicinity is entirely impregnated with salt, which is every-where discernible in summer, in the fields and gardens, so that even the river, when it is lowest, becomes a little brackish several miles up the country, though there is not the least tide observable from the sea. Here they have salt-pits, where they let the water of the Nile in when high, by which the salt is drawn out of the ground, and found in great quantities after the water is dried up by the heat of the sun: it is of very good quality. There is also rock salt to be found in Upper  
Egypt,



Egypt, of which I once saw a very large piece, but it was of a bluish hue, and a little bitter.

Now it is well known that all those countries which abound in natural salt-pits, such as Cyprus, and several other Greek islands are exceedingly unhealthy; but this is by no means the case at Rosetta. On the contrary, it is one of the most healthy and most agreeable spots in all Egypt. May not this be in a great measure attributed to the water of the Nile?

The river Nile is but indifferently stocked with fish. I will not pretend to describe all the sorts it contains. Of those which are fit for the kitchen I know but three different kinds, which are very good. These are called by the natives, buri, bolti, and kesher; all the other various sorts are but indifferent. Those millions of little fish, that make their appearance when the river overflows its banks, so that all the water in the fields, and every pond, is filled with them, are, unless in that season, seldom or never seen. They are not larger than common anchovies, and are properly of two sorts. The one is called rajah, the other bessari. They are at that time both very good eating when fried, but the former is the best; it is distinguished from the other by being a little broader, and they have a few red spots on their fins. This sort grows to the size of a small herring, but then they begin to be disagreeable on account of the innumerable small bones, which are not observable when they

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are:



are small. The country people say they are bred by a fish in the Nile called *bunni*, to which, indeed, they bear a resemblance. At the mouth of the river Nile there is a great plenty of fish, and also a greater variety, because many sorts come into it from the sea, but do not go so far up as Grand Cairo. There are great fisheries, both at Rosetta, but more particularly at Damietta, the chief produce of which is the above named *buri*, which is salted and exported to many other parts of Turkey. Its roe is the well known *butargo*, which is highly esteemed all over the Levant. This fish is commonly from two to four pounds weight. I also once saw a sort of a torpedo that was caught in the river Nile near Cairo; it was an ugly shaped clumsy fish, about two feet and a half in length: the effect of its touch ceases with its life. The canal Joseph is also very well stocked with fish, but they are mostly of those sorts which are common in the river Nile. Some very good eels are also found in most parts of the country.

The crocodile is most common in Upper Egypt, and the further you proceed up the country the more numerous they are. They very seldom come as far down as Cairo, and never below it. The country people pretend that it is by virtue of the *mikias*, or *nilometer*, that they cannot descend any farther, and that it contains a talisman which prevents their going any farther; but the reason is, the vast number of boats that are continually sailing up and down the river between Rosetta, Damietta, and Cairo, so that they could not harbour there without disturbance: and as these boats are much less numerous  
above



above Grand Cairo, and fewer still farther up, those animals are more undisturbed, and less persecuted. Some few small ones, about five or six feet long, were caught a little above the town of Cairo during my residence there, which I saw alive. I observed two sorts of crocodiles, though I question whether the difference did not consist in the sex only. The one is, in proportion to its thickness, rather longer than the other, but it consists more in the tail; and of this sort are all those which I have seen in the museums at Florence, London, and some other towns in Europe. The other sort is by far more bulky, and the skin much rougher. I brought the skin, stuffed, of one of the latter with me, which is to be seen in a museum at Barby, in Saxony; and this was by far the largest which I have seen in any museum, particularly in circumference. In length it measured near sixteen feet.

The Nile horse is seen in the uppermost parts of Egypt only, and this for the same reason as above observed. That these animals abound much more in other parts of Africa, I guess by the immense quantity of corbages made, as I am informed, of the skin of this creature, and which are yearly brought to Grand Cairo by a caravan of blacks, who come from the inner parts of Africa, and who are called Julape, and the country they come from is called Tarfur. These corbages are a slice of half cured leather, cut out of the skin about a yard and a quarter in length, and about an inch in diameter,\*

\* The skin of the animal is on the back nearly an inch thick, and by cutting a slice out of it a little broader, and beating it sideways, it becomes that size.



which is the thickness of the skin on the back of the animal. They are used in Turkey to give the bastinado with upon the soles of the feet, and to beat carpets, &c. The outside of the skin corresponds entirely with that which I have seen of the Nile horse; but the skin of an elephant also does not differ much from it. Though I was myself acquainted with the leader of this caravan, who always told me they were made from the skin of an animal that lived in the water, yet I could never rightly learn whether they came from the river Nile, Niger, or some other large river, as he spoke but very imperfect Arabic, and perhaps knew no other name for it than El Bacher, which signifies both a river and a sea.

The cause of the annual overflowing of the river Nile is no longer a mystery; and we need not amuse ourselves with the many ridiculous fables of the ancients. The regular or tropical rains in Abyssinia, where this river takes its rise, which always set in at the beginning of June, and last to the end of September, is fully sufficient for this. Sometimes the rains commence as early as the middle of May, but in June they become more general and regular. It rains every day about three or four hours, and that commonly so violently, that it fills a tub of one foot diameter with 15 lb. of water in one hour's time, according to the observations of Mr. Bruce. This must make an enormous quantity of water upon such a large surface of country, which, except the small part of it that may soak into the ground, is all conveyed through innumerable natural and temporary rivers and rivulets  
into



into the river Nile, as the only one of consequence in that part of Africa, by which it can find its way into the sea. Upon the abundance of this rain depends the whole fertility of Egypt, and the welfare of its inhabitants. By this they may always know, near a year before-hand, what harvest they have to expect, because this country is not subject to the many accidents, which so often destroy the most promising prospect of a good harvest in European countries: no continued rain, nor any hail of a destructive kind is ever seen, nor can any great drought have an effect upon it. It is true the country is sometimes visited by locusts, but it is so very seldom, that I have only once in twelve years seen the air so filled with them, that they almost darkened the sky; but this is merely upon their passage, and at such a time of the year, when they can do little or no harm. The only thing capable of doing any injury, as far as I remember, is a certain worm that breeds in the earth after the river has left the fields. This worm destroys the roots of clover, which is the only food for cattle; but one cool night commonly destroys them all, and they are found upon the ground rolled together, where they become a prey to the birds. Just before the river overflows the fields, there is a great number of mice upon them, which find a good shelter in the very deep crevices of the earth, where they feed upon the remaining ears of corn, after the harvest, for before that time few or none are seen in the fields. These mice would certainly multiply amazingly, did not the river annually destroy millions of them in those very crevices



vices which gave them shelter. Besides this, the innumerable hawks, of all sorts and sizes, devour a great number of them, so that there is never any reason to fear much damage from them.

This being the case, the inhabitants of Egypt might be always free from famine or scarcity; for one very fertile year will produce a sufficiency for two years consumption, and in case of necessity, they might in good time import from other countries all that they so long before-hand know they may want. They might also in various ways, and with very little expence, improve nature; they could easily build mills or engines, by means of which the whole country might be laid under water, if the river should not rise even to half its usual height, or scarcely at all. These engines might be worked by wind, which in that country hardly ever fails for ten days in the course of a whole year, and much less in that season.

Another considerable improvement might be made, which would be more expensive, and not so soon accomplished, for it might, perhaps, require ages before it could be quite completed: but I do not in the least doubt that it would answer exceedingly well, and be very profitable in the end. This is by fortifying the banks of the river throughout its whole length, and by confining it into a narrower channel, which might be so far easily done, as it is not a rapid river. By such means a very considerable piece of valuable ground might be  
obtained,



obtained, and not a quarter of the water would be required to overflow its banks; for at present the bed of the river is by much too broad to convey the water to the sea when it is low: it would certainly be a great undertaking, but I have no doubt of the possibility of it. The ground gained would, according to my opinion, alone pay for every foot of thus fortifying the banks, particularly, as very good stones may be got every-where, at no great distance, and as the river runs very often close to the rocky mountains on the east side, the parts on that side would not be in want of it, but stones might be brought from such places by water down the river, to any place where they might be wanted. Besides the ground which would be gained, there would be the general advantage of having all the country overflowed with much less water. In short, a vast number of other improvements might be made to convert this whole country into a most delightful garden, where nothing would be wanted to make life comfortable and agreeable, and to effect a proportionable increase of its commerce, for which no country in the world is so excellently situated. But alas! to accomplish this, the conceptions of its present inhabitants are too limited; the avarice and tyranny of those in power is too great; they think no further than of the present, and it is even a saying among them, "We are all made for the sword; let us enjoy what we can to-day, for who knows who will live till to-morrow." In consequence of this their artists lose all courage for improving themselves; the son does the very same as he

saw



saw his father do, and on account of injustice and oppression, no European artist is easily tempted to assist them; thus this blessed country, which otherwise would possess such inestimable natural advantages, must lose them all through the bad management of its inhabitants, of whom the poorer sort must always be content to drag on a wretched existence, and even sometimes perish for want, in the midst of an earthly paradise.



## OBSERVATIONS

ON THE CLIMATE AND SEASONS OF THE YEAR  
IN EGYPT.

THERE is scarcely a country on the globe, where the climate is so very regular as it is in Egypt. This has no small influence upon the constitution of its inhabitants; and on this account it is not uncommon to see people one hundred years old, and there might probably be a still greater number of such, if they did not deprive themselves of this benefit by their irregularities. I have myself seen a man who was reckoned to be one hundred and thirty years of age; and though most of them cannot prove their age by authentic records, yet you may form some probability of the truth, when you hear them relate that they were present at such or such revolutions, as was the case with this man.

The seasons in Egypt may very properly be divided into spring, summer, autumn, and winter, as with us, with some small difference only. Spring may be reckoned to commence at the beginning



of February, because from that time the air grows considerably warmer. Those kinds of trees, which annually change their leaves, begin now to shew new ones, and the fruit trees of the same kind are all in blossom. Barley is commonly ripe towards the middle of March, and wheat begins to be ready for the sickle about the first quarter of April; and towards the end of the same month, all those sorts of grains are commonly gathered. The earth does still retain so much moisture, that after the wheat is got in, a crop of safflower (which is a bastard saffron, and an article of commerce there, used for dying silks) may be raised from the same fields.

The common summer heat is very regular from about the middle of June to the end of September, and this may, therefore, be called summer. During that time, until the river begins to overflow its banks, all the fields are burnt up, and look like a dry desert, upon which not a green leaf is to be seen, except where it is artificially watered. Towards the end of September the scene is entirely changed, and the whole inhabitable part of the country appears like an open sea, interspersed with as many little islands as there are towns and villages.

At the beginning of October the intense heat begins to decrease considerably; the Nile retires into its bed, and towards the end of this month, those trees, which annually change their leaves, drop the old ones. As soon as the river retires from the fields, they  
are



are sown with all sorts of grain; at the commencement of November, they begin to be green, and towards the end of the year the face of the whole country resembles a delightful meadow, diversified with various lively colours. It seems, therefore, natural to call it autumn from the middle of October to the end of November; and from this to the end of January might be called winter.

The difference between the greatest degree of cold and the greatest, or, more properly, the most usual heat in summer, does not exceed thirty degrees, according to Fahrenheit's thermometer. The room in which I made my observations, was in an upper story of the house; where, on account of the Turks being used to handle every thing they see, I kept my thermometer, which was one by Ramsden, in a bureau, not far from a large window. By this I saw, that the most common summer heat was from ninety to ninety-two degrees, from which it varied but very few degrees even in the nights. The lowest degree in winter was very regularly from fifty-eight to sixty, in the same room where no fire was ever kept. There are, indeed, now and then some exceptions, but they are rare: thus it happened on the 17th of June, 1778, that the thermometer rose and stood, even in the night about 11 o'clock, at 112 degrees, and a thermometer with spirit, that was placed for a trial on the top of the house, burst on that day; but this lasted properly but one day, though it was excessively hot for two or three days. It unluckily happened, that just at that time a large caravan from Suez to Cairo, laden with India



goods, was plundered by the wandering Arabs; the passengers, consisting of English, French, and Dutch, were all stripped naked in the desert, and being thus exposed to the violent heat of the sun from above, and the reflection of it from the hot sand below, destitute of water or any other liquor, eight of them perished most miserably, and only one Frenchman, Mr. St. Germain, arrived in a most deplorable condition at Grand Cairo, where he recovered and returned to France some time afterwards.\*

So it may also happen that the thermometer falls some degrees below fifty-eight, but it is very seldom. During the twelve years of my stay there, it never came any thing near the freezing point; and that this must be something very extraordinary, may be seen by the following anecdote, which I had from an old European merchant, who told me, that it really happened many years ago: that a little ice was found in some small ditches about the town, and the Arabs, who had never seen any thing of the kind, brought some small pieces for sale to the European merchants, as they observed that they were fond of buying all sorts of curiosities. In my time it never was so cold as to occasion a white frost, and snow I never saw till I returned to Europe; as therefore the degree of heat and cold varies but very little from what is mentioned above, it may be taken for

\* Mr. Volney says this happened in January or winter. But having kept a regular diary of all such occurrences, during the twelve years of my stay in that country, I commonly have been very particular to mention the days of the month.



the standard at Cairo. By the observations made by one of my friends at Alexandria, I found that the thermometer stood commonly two degrees lower there on the same day; and at Minie, in Upper Egypt, it was two degrees higher.

The most predominant wind in Egypt is due north, and it may be asserted with truth, that it blows, at least, three quarters of the year. Every attentive traveller may observe this immediately, upon entering and sailing up the river Nile. He will observe that all the trees, particularly those with slender branches, lean not only with them, but with the whole trunk, very perceptibly to the south: nay, even strong trees, such as the sycamore fig, cannot resist doing the same where they stand alone. This is particularly seen on the banks of the river, in sailing from Rosetta up to Grand Cairo. It is not a slight breeze, but a steady, fine, and strong blowing wind, especially in summer. It is of very great advantage to the country. From the end of May to the end of September, there is seldom any other wind; and even in the following months it is the most predominant. As it is commonly the strongest and least variable wind in summer, so it is also then the most beneficial: as it very forcibly keeps back the water of the river, it contributes to its overflowing, and is very advantageous for boats to sail up against the stream, which they do with amazing swiftness. It is by far more difficult at that time, to go with the stream down the river than up; and I have often been obliged to lie to, for days together, not being able to proceed  
with



with the stream. This wind is so cool in summer, that it is sometimes necessary to add some cloathing, notwithstanding the great heat and power of the sun. It is the most agreeable, as well in summer, because it is cool, as also in winter, when it is by far the warmest, and the air is delightfully sweet when it blows. It is mostly due north, but it now and then varies a few points; and as soon as this is considerably either east or west, and particularly when east, it feels disagreeable.

The south wind is most common in winter and in spring; but it seldom lasts more than two or three days at once, and commonly changes to the north. In winter, that is from the beginning of November to the end of January, it is by far the coldest wind, and of a very penetrating nature. It is always disagreeable, and makes the body feel heavy. It is most disagreeable when it blows from the middle of February to the end of May, for then it begins to be very hot, and frequently feels as if it came out of a furnace or oven. In spring it often changes to south-east, and then it is of a whirling nature, filling the atmosphere with such quantities of sand and dust as to make it almost totally dark. I once remember being obliged to light a candle at noon on such a day, as the sky was at the same time covered with thick clouds. This kind of wind always feels intolerably hot, though it is found by the thermometer, that it bears no comparison with the common summer heat. The reason why it is cold in winter and hot in spring, can be nothing else but the  
excessive



excessive large sandy deserts to the south and south-east, which in the longer winter nights are very much cooled, and after that time much heated by the power of the sun. The natives call the south wind Merifi, and the south-east wind Affiab or Chamfier. This last word is derived from filthy, because this wind commonly blows in the fifty days between Easter and Whitsuntide. The Italians call it Sirocco. When this wind has blown for two or three days, it frequently changes very suddenly to a north wind. This is commonly first perceptible by its effect upon the human body, by a freer respiration, and presently after it seems as if the whole atmosphere was in a convulsion, the north and south wind fighting together, till the former gets the better of the latter, as is always the case, and then the whole scene is changed in a very few minutes; the air is cooled all at once, just as it is after a heavy thunder-storm in this country, when all the dust and sand vanishes. As long as the south-east wind blows, there is no better method of defence, than to shut up all the doors and windows as close as possible, and even to draw the curtains, for a dark room will always remain cooler: but let a room be as close as it will, some of the fine sand and dust will find its way in, and be perceptible every-where. This wind is of an excessively dry nature, and all sorts of wooden furniture, though ever so well seasoned, are liable to crack and be warped in that time. I often observed in a morning that we should have south wind, even before the least of it was felt; for the sun is of a very pale colour at that time, and as long as it lasts; as soon as it begins to blow, the air

is



is full of dust and sand. Its effects are not disagreeable only upon the human body, for I also observed, that any kind of meat which would keep a week in winter, with northerly winds, will corrupt in a day or two with this, though it may be colder in that time than during the former. Hence we might be led to think, that if it blows during the time when the plague is in the country, it would (supposing it to be a sort of putrid fever) encrease, or at least feed and maintain that distemper. But I have observed that the plague, in the year 1771, was much stronger, and more lasting than that of 1781; though during the first, we had constantly a northerly wind, and exceedingly pleasant weather: and during the latter, we had often south and south-east winds which occasioned great heat, upon which it always slackened in its violence. It has also a very bad effect upon all vegetables, because it dries them up to such a degree, that they would perish if it were to last for any considerable time: nay, if this wind should prevail in Egypt, this country would scarce be inhabitable.

But, though I have said much concerning the bad effects of this wind, I think, however, it has at the same time also its advantages, and may in some respect be of great benefit to the country. I have above observed, that it seldom or never blows before the beginning of November, though I have seen instances of it in October. Now, as this is the time when the river retires from the fields into its proper channel, these fields are all soaked with water to the depth of two, three,



three, or more feet, and in some places the water is also left standing: considerable exhalations of course arise from this great humidity of the ground, to carry off which, no wind can be more proper than the excessive dry south and south-east wind; and the sands which it brings upon the fields are very beneficial for the proper mixture of the mud, which the river has just then left, to make it lighter, as I have before observed. I made several experiments with mud, and always found it unfit to produce any vegetables, in the state in which the river leaves it, without such a mixture. It is naturally so tough, that it grows as compact and hard as a stone, if not constantly supplied with a great deal of water; and thus we often find that things seemingly the most disagreeable have their great advantages, in which we may justly admire the wisdom of our kind and benevolent Creator.

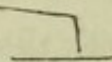
Due east and west winds are very rare in Egypt, and both of them are disagreeable. Strong tempests I have never seen there, at least not about Grand Cairo and Upper Egypt. At Alexandria, and in general on the sea coast, they occur more frequently, though neither so furiously, nor of so long a duration, as in the high north or south latitudes. It is true there is seldom a winter in which some damage is not done to the shipping in the harbour of Alexandria; and I remember one winter when upwards of thirty ships ran on shore, and many of them were wrecked in the new harbour of that town: but it cannot so much be attributed to the violence of the

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tempest,



tempest, as to the bad condition of the cables of those vessels, and the badness of the ground of this harbour, which cuts them if they are not well secured and looked after. It was very remarkable, that there were about six English ships riding in the same harbour that night, none of which suffered any harm. The ground of the old harbour, to the west of the town, is very good, and accidents of this kind scarce ever happen there; but none but the Turkish vessels, and those of their subjects, are admitted into it, on account of a superstitious tradition, that the Christians will one day enter that harbour and take the country; therefore the Europeans are all obliged to go to the new harbour on the east side, though far inferior to the other.

The inhabitants of Egypt call the northerly wind *diab*. They have a method of making it play, or pervade, through the whole of their houses: for this purpose they fix a sort of a half roof on the top of them, above some open space, which in small houses is commonly the court yard, for there is scarce any house, though ever so small, without such a yard. This half roof they always turn to the north, to which it is open, thus:  If they cannot well place it due north, then they make up one or sometimes both the ends, just as it suits best, to catch the wind, by which it is directed down; but the south wind will pass over it. This may also serve as a proof, that they have no strong tempests to fear, otherwise this kind of buildings would be carried away in an instant. They have also frequently a sort of small cupola fixed upon the top of separate apartments,



apartments, with an opening on the north side, which answers the same purpose.

It cannot absolutely be said that it does not rain at all in Egypt: but this is however true, that several years may pass, where all the rain that falls in the course of a whole year, about Grand Cairo, and further up, would collectively not be of one hour's duration. If even it rains a few drops in winter or spring, it seems always as if something obstructed its falling, and it lasts but very few minutes. But, though this is generally the case, yet it once happened, during my abode, in November 1771, that heavy showers of rain, accompanied with some thunder and lightning, followed one another for five successive nights, though it did not rain in the day time: and as the houses are not calculated for this, I could at last scarcely find a dry spot in the whole house to sleep in. Some houses fell down on that occasion, and several lives were lost; but this was very extraordinary, and can happen only in winter and spring. From the end of May to the end of October, no rain is to be expected. During that time there is also no lightning of any kind, much less a thunder storm: the latter are, upon the whole, not at all frightful in Egypt. In winter it has often all the appearance as if a dreadful thunder storm was coming, but it is never of any consequence, nor accompanied by any very loud thunder; and I remember but once to have observed a flash of lightning, which in some measure resembled those we have in England. The natives ridicule the idea of lightning setting fire



to houses, and killing men and beasts, and regard it as a fiction when told that it does so in Europe: hail-stones are never seen, and now and then only I saw some little stones like large shot mixed with rain in winter.

During the months from November till the end of spring, it rains very frequently, and often very heavy, towards the sea coast; but it scarcely ever reaches much above half a degree up the country. In this the wise regulations of God are again very visible; for, as the river cannot overflow those parts of the country so near the sea where it is divided into so many channels, the rain in that season perfectly supplies that defect. Whoever sees the ground about Alexandria in summer, will scarcely think it capable of producing a single blade of grass; and, if he goes no farther into the country, he will form a most contemptible idea of its boasted fertility: but even this ground, which looks so very poor in itself, will, by means of this rain, bring forth excellent wheat, clover for cattle, and all sorts of vegetables. But, during the summer season, it rains as little here as in any other part of Egypt.

From the month of February to the beginning of July the air is excessively dry in Egypt; and besides the few drops of rain that may fall here and there in the first of these months, there is no fog of any kind to be seen: during that time every body may sleep safely in the open air on the tops of the houses. From the beginning of  
July



July a little dew is perceptible every morning. This increases in proportion with the river, and is very strong when the river is at the highest; it also continues during the winter, except when there is a southerly wind. At that time there is also now and then a foggy day, but very seldom. As soon as the dew begins to fall in July, then it is no longer safe to sleep in the open air; it is particularly pernicious to the eyes. Though iron ware may be kept many years in Egypt, with very little precaution, without rusting, except on the sea coast, yet it must not be exposed to this dew, and the windows must at least be shut in the night where such things are kept.

During the month of June the horizon is commonly every morning covered with very thick clouds till about ten or eleven o'clock, especially when the wind is northerly. By this wind they are driven very fast to the south, and it is not altogether unlikely that these clouds may at last contribute to the rain between the tropics. The strong dew, which often falls during the winter season, is of great service to the vegetables; and though this rain is not absolutely required to make a plentiful year, yet the inhabitants like a little of it at that time, particularly for their clover, which is much refreshed by it. It is in the winter season that most vegetables are produced; for, in summer, nothing will grow in places which are not artificially watered.

Though:



Though the degree of cold is very inconsiderable in winter, measured by the thermometer, yet it is very penetrating, particularly with southerly winds. The chief reason of its being thus felt may be, that the body is all the summer accustomed to a continual strong perspiration, by which it becomes tender. Besides this, the houses are much more calculated for rendering the intense heat supportable, than to prevent the effect of cold. There is no fire-place in any apartment, and to be comfortably warm, every body that can afford it wears a fur in winter: but the same degree of heat, which would appear insupportable in our countries, is by far not so disagreeable in Egypt, because the air is commonly very clear and free from vapours, and at the same time much refreshed by the northerly winds.

In spring the sky is particularly serene and clear in the night, and I have no where seen the moon and the stars shine with such lustre. This must have been very advantageous to the ancient astronomers, and would be so now, if the present inhabitants were capable of making a proper use of it: but it seems that those ancient astronomers are at present all changed into pretended astrologers.

By all these observations, and the experience of many Europeans who have from time to time resided in Egypt, it appears to be one of the most healthy countries in the universe. It is true there is a very  
great



great number of blind people in this country, and the climate seems to be pernicious to the eyes. I also observed, that putrid and bilious fevers were common in spring among some classes of people, particularly in May and June; but I think that very good reasons may be given for both. People of a gross habit, and full of humours, are often troubled with sore eyes; and indeed the bright and powerful sun, the excessive dry air in some parts of the year, the fine sand and dust during the southerly winds, cannot but be detrimental to the eye sight; but we may, however, by a little precaution, keep quite free from such disorders. Most of the blind people are of the lower class, and from their manner of living it may be easily accounted for. The soil of Egypt is every where very much impregnated with saline particles of various kinds, such as saltpetre, common salt, and one kind peculiar to that country, called by the natives, *natron*, which is exceedingly sharp. The country being so very dry, is seldom quite free from dust. The dew that falls during the overflowing of the river is pernicious to the eyes, as mentioned before. Now the lower class of people do not use the least precaution; they are often seen asleep in the open fields or streets, mostly naked, in the burning sun, quite covered with dust; they do the same in the night in the dew. It is therefore but a natural consequence that they should be afflicted with sore eyes, and other disorders; and it is much to be wondered at that they have them not in a greater degree.

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The same may be said of the putrid and bilious fevers above-mentioned, with this difference only, that these fevers are more the lot of the higher class of people, and particularly the better sort of Christians; for which two good reasons may be given: first, They keep a very rigorous Lent of forty days before Easter, during which they allow themselves nothing else but vegetables poorly dressed with oil, by which their stomachs must of course be weakened. The moment this time is over, they begin to feast, and it is quite surprising to see how they load their weakened stomachs with all sorts of heavy food, such as hard boiled eggs, sweet heavy cakes, besides meat in great quantity.

The second reason may be as well applied to the Turks as to the better sort of Christians: they are, during the winter, clothed in furs; nay, some of them wear two furs at a time. When it begins to be warm, they not only suddenly and imprudently leave them off, but as they commonly have a large hall on the ground floor with an artificial fountain in the middle, they often go and sit there without any precaution after they are heated. This is sufficient not to give them such fevers only, but to kill them at once.

If distempers are peculiar to any country on account of a corrupt air, or other circumstances, it will commonly attack foreigners sooner than the natives who are accustomed to it. Now, as this is not the  
case



case here, I always thought that such disorders should not be attributed to the country, but to the imprudence of its inhabitants. I have always considered that part of the year to be very healthy; for, contrary to our countries, it is by far the driest season of the year. The heat encreases very gradually, except those few days when there is a southerly wind; and the different sensations in the body, occasioned by change of weather, which are so common in spring with us, are not felt there. This is more the case there in autumn, when, after a continual strong perspiration of several months, nature must all at once find other means to discharge it.

The sky is, as has been already observed, not always so clear in that country, as some people would imagine. It is often so covered with thick and heavy clouds, that if it had the same appearance in our country, we should think it would soon rain very violently; but here it is never to be feared, except sometimes in winter, as before said. All the signs which commonly prognosticate a change of weather in Europe, as a ring around the moon, &c. which are frequent in Egypt, are never followed by any particular alteration, and only shew that there must be vapours in the air.

I will not take upon me to determine why there should be so small a quantity of rain in the upper parts of Egypt, when, in the very same latitude, only about sixty or seventy miles more east, in the deserts of Arabia, it not only rains much in winter, but also snows,

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particularly



particularly in the hilly parts about Mount Sinai. The high mountains may certainly contribute greatly towards it; but there are also mountains enough in Egypt, some of which are far from inconsiderable, which might at least attract some humidity. The whole desert between the Red Sea and the Nile, and the Lybian Desert, consists of nothing else but mountains, between which there is nothing but a narrow inhabitable slip of land, with a large river running all the length of it. But the almost total want of rain, and the remarkable appearance of an obstruction to its falling, if even there should now and then be a little of it, remain a mystery to me.



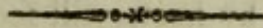
## SOME REFLECTIONS

UPON

## THE RISE OF VAPOURS,

AND

## THE FORMATION OF THEM INTO CLOUDS AND RAIN.



**V**ARIOUS theories have been formed concerning the rise of vapours, their formation into clouds and rain; but none of them has yet given me satisfaction, as too much has always been supposed.

It is very easy to say they rise, because they are rarefied, and are merely lighter than the space of air which they occupy. But how do they become lighter? What have we properly to understand by their being rarefied? How is this change wrought in the nature of water?

Water is an almost incompressible body, and by many degrees heavier than the air, and though it may be a little expanded, which



may be seen when put into an air pump, where the air is afterwards drawn out, yet this is never to such a degree as to make it equally light with the same body of air that might occupy the same space, much less to make it so much lighter, as to enable it to swim in the air, as we observe the clouds do.

Supposing also that water might be considerably expanded by the heat of fire, which occasions it to rise in vapours; can we suppose that it can rise considerably before it loses all that effect which the fire may have had upon it, and as the upper regions are always cooler, all that which was expanded by heat, will soon be condensed, and thus become incapable of swimming in the air.

A variety of observations have, therefore, inclined me to think, that all vapours must consist of small imperceptible globules or bubbles, filled either with rarefied or inflammable air, by which they are rendered lighter than the space of air which they occupy, and by which they are enabled to rise more and more, till they arrive at that height, where so much space of air, as they occupy, is of the same weight; and till at last they become so numerous, that they begin to touch and coalesce with one another, or are driven together by the wind in the upper atmosphere, by which they burst, and consequently fall: if they accidentally fall upon others below them, they will occasion them to burst, and uniting with their water, will by degrees form such large drops as we often see descend in rain.

I would



I would not pretend to maintain, nor can I well believe, that they are all filled with inflammable air, but I think some are filled only with rarefied air, according to the nature of the cause by which they ascended, and I think reasons may be given why both suppositions may be well grounded.

If we put water upon the fire in an open vessel, we shall soon perceive bubbles to rise from the bottom, which cannot be filled with any thing but the air which is contained in the water, and is now rarefied by the heat of the fire. These bubbles commonly burst as soon as they come to the surface, because they are too large to maintain the air within them, so as to occasion them to ascend: when the water begins to grow warmer, they increase more and more, and an imperceptible steam will rise, which I suppose to be nothing but such diminutive bubbles, filled with rarefied air, and consequently more capable to maintain themselves than the larger ones, by which they are enabled to swim in the air so high as the equilibrium will admit. I am, therefore, inclined to think, that all those vapours which rise out of clean water by heat, are filled with rarefied air, and all those which rise from marshy grounds, and standing pools, are probably filled with inflammable air. And who knows if this kind of air is not contained in almost all parts of the earth? In some places it is too visible, as in coal-pits, and wherever there is the least intestine motion. We are not yet sufficiently informed of all places and ways in which it is produced.

As



As we see that inflammable air is produced wherever there is any intestine motion, can we then suppose that the sea, which certainly must furnish the greatest part of all vapours, is void of it. For nobody will deny that the innumerable dead fishes, their evacuations when alive, with other animals, and various other strange substances, carried into it by rivers, must cause a great deal of intestine motion.

If a moist body, as an apple, which contains at the same time a good deal of air, be placed under the air pump, and the air drawn out of it, there will always appear little bubbles filled with air. Now, as this is so visibly the case in this instance, why should not the inflammable air confined in the earth, particularly in swamps, and marshy grounds, as also common air rarefied by heat, act in the very same manner? For it is always inclined to rise, by its being so much lighter than the common air.

Thus we see when vapours rise from the earth in a hot summer day, they often form thunder showers. This I have nowhere observed more to my satisfaction than in North-America. It often happens that there is a great thick fog in a morning in summer: as sure as this fog rises and forms itself into clouds, it is not many hours before a thunder storm succeeds. I have often observed, that meanwhile the clouds all keep moving from west to east, which is the direction almost all thunder showers take in that country. By this I guessed that these clouds which formed the shower, could



could not come from any sea, as they could not have crossed so large a continent in so short a time. This made me think, that at least most of these vapours which formed those clouds, rose from the earth. During such a thunder shower it seems to be evident, that most of those bubbles are filled with inflammable air, though I will not say all of them. We always find that the rain pours down most abundantly after a strong flash of lightning.

After the many experiments made with inflammable air, I reasoned in the following manner: Supposing the above notion true, that the thunder clouds are formed by small bubbles, some filled with rarefied, some with inflammable air, when they become so numerous as to touch and coalesce with one another, or are driven together by the wind in the upper atmosphere; (for such a wind is always observed at that time, and is even often quite contrary to that in the lower atmosphere) then if many of them burst at once, they consequently occasion a great fall of rain, and if they have been filled with inflammable air, that air must escape in great quantity, which is very liable to be set on fire by the electric matter which abounds so much in the atmosphere, and particularly in thunder clouds. Now, by the bursting of so many bubbles, it must follow, that the rain increases, and by the inflamed air mixed with, and set on fire by the electric matter, it is no wonder that the lightning is strengthened, and the flashes become so very vivid. The commotion or concussion of the air occasioned by one flash, may occasion many bubbles  
more



more to burst, and if these happen to be also filled with such air, then this air is as liable to catch fire as the first, and thus it frequently happens that one great flash is immediately followed by another. It is well known that marshy grounds, and standing pools, abound with inflammable air, which is most liable to rise in vapours in summer, or whenever it is warm; but some might ask, How can the common air be rarefied, or inflammable air be procured in winter; for we now and then see also lightning in that season? This might be answered by another question, viz. How can we know where, and at what distance from us, those vapours that form the clouds over our heads in winter, rose into the atmosphere? Certainly none will rise in a frosty day, or out of swamps and pools which are frozen up. But we shall also seldom see any lightning in winter, except there has been some mild weather before it, and besides this the sea can always furnish a sufficiency.

Since I wrote the above observations, I have been more confirmed in my ideas by the experiments of Mr. Lavoisier (See Monthly Review), by which he proves, in his Elementary Treatise on Chemistry, that common water consists of eighty-five parts of oxygen, and fifteen parts of inflammable gas. If this be the case with common spring water, it must be much more so with swamps and pools, or any water which is not perfectly pure. The rise of vapours in Egypt, which always begins to be visible after the 17th of June, which is the time the first rains fall in Abyssinia, furnished me with a large  
field



field for speculation, and the observations I then made, always seemed to favour the above-mentioned theory, though it was at that time not so clear to me as it is now, after so many new experiments have been made with inflammable gas. As the increase of the Nile is often very visible, particularly when it is come to such a height as to exceed the banks, I have always observed, that as soon as it begins to cover any ground which is dry, it always causes an intestine motion, which leaves a scum upon the water, and occasions a strong smell, which is a sure proof that vapours are carried into the air, that a good deal of inflammable gas must be procured by these means, and that these vapours must contain a great quantity of it, appears very probable to me: for I remember that I one day took an airing in a small boat upon the river Nile, with a fine north wind, at the time when it was fast increasing; I stopped at a small island covered with reeds, which the Nile had just begun to cover; I stepped out of my boat upon the island, but a nauseous smell, occasioned by the water just reaching the rotten leaves fallen from the reeds, soon obliged me to return to my boat, which I had scarcely reached, when a stupor overtook me, which made me lie down and sleep very sound till I came home. I immediately conjectured that I must have swallowed a great quantity of air unfit for breathing. I felt myself very feverish for two days after, till nature took a turn and carried it off by a violent diarrhoea, which, though it brought me exceedingly low, cured me. Now as this is a fact which has been before mentioned, that there are no vapours to be observed until the middle of June, it does



not seem to me improbable that the first rains in Abyffinia, upon a parched foil, must cause an intestine motion, which may produce vapours in the manner above described, and at the same time leave the water which it carries into the Nile and to Egypt, much more impregnated with inflammable gas than before, which may occasion the first appearance of dew after it reaches that country; for it has before been observed, that the more the river encreases, the stronger this dew will grow every morning, until it is like a misty rain when the country is quite overflown.

Yet I by no means wish to establish a theory in opposition to others, formed by men of far superior talents and experience, but have merely noted this down as crude ideas which might, perhaps, be susceptible of a better investigation, and the hint may, probably, not be unwelcome to some more enlightened and more acute philosopher, if even some parts of it only should be well grounded.



A SPECIMEN OF  
TURKISH JUSTICE,

OR, RATHER,  
OF THAT OF THE MAMELUCKS IN EGYPT.

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**D**URING my residence at Grand Cairo, I lived in rather a close and confined part of the city, not far from the canal which passes through the whole length of it, and which, from the middle of October to the June following, is very offensive, owing to a number of drains from privies which go into it, and the filth thrown in from the adjacent houses. And as my occupation there was chiefly of a sedentary nature, I soon found that frequent exercise in the open air was essentially necessary for the preservation of my health; for this purpose I often went into the fields in the neighbourhood of the city: but the heat of the climate being very enervating, I perceived, that when I had no object to exercise my activity upon, I was always inclined to sit down under the shade of a tree, by which my aim was frustrated. In order to remedy this, I sometimes took a fowling-piece with me, particularly in the winter and spring seasons, when there was commonly plenty of game, such as snipes,



wild-ducks, and geese, curlicus, quails, &c. but especially water-fowl, which the inhabitants of every denomination are at liberty to shoot for their diversion, the Turks themselves being much too indolent to fatigue themselves with shooting. As the Beys, and other men in power, have commonly a numerous train with them when they go out of town, they may on that account, and from the flatness of the country, be perceived at a considerable distance. Whenever, therefore, I observed any of them, I generally avoided coming too near them, knowing how ready they are to find some pretext or other for extorting money, from Europeans especially, whom they always suspect of being rich. In this way I had avoided falling into their snare for above nine years, when at last it happened on the 15th of November, 1779, that being out on the above-mentioned diversion, in company with the Secretary to the Venetian Consul, we were just amusing ourselves with shooting snipes on the road side while returning home: it wanted a full half-hour to sun-set when we came near the city gate. Here we were observed by some Mamelucks belonging to one Osman Bey, who, with his train, had been near us, though hid from our sight by some hills composed of rubbish, of which there are many lying all round Cairo, some of them so high as to overlook almost the whole city.\* Two of these Mamelucks came on

\* There is a certain sum of money allowed by the Sultan for carrying this rubbish, arising from old houses that have been pulled down, to the sea; but the Beys find it more for their interest to put the money into their own coffers, and to carry the rubbish no farther than is absolutely necessary.



full gallop toward us, with drawn swords in their hands, and followed by some footmen. They immediately stripped us of our fur-coats, shawls, and whatever else of any value we had about us, demanding one hundred *machbul* or Turkish *shechines*, each in value about seven shillings and six-pence, threatening to bring us before their master, unless we gave them the money immediately, and then we should see what would become of us. I told them we had no such sum about us, and taking out my purse, offered it them. They at first received it, but finding that it contained only about twenty-five shillings in small silver pieces, they threw it back with disdain, crying, *dahkab*, i. e. *gold*. Knowing that I must expect nothing but ill treatment, I told them that I had no gold with me, but if they would come with me to my house I would give them some. At this they only cursed and swore, not being at liberty to leave their master. Meanwhile ten more of these disagreeable guests joined them on horseback, and repeated the same demand of gold, enforced with the same threat of being brought before the Bey if I refused to comply with it. I again answered as before, that I had none about me, but that I would give them some if they would go with me to my house. At last the leading man among them said to me, (for the poor Venetian could not speak one word of Arabic) go you home and fetch your gold; but we will keep your companion here, and if you do not soon return we shall cut off his head. When I saw the poor man crying, and trembling all over, I could not think of leaving him in the hands of these tigers, and escaping myself: I therefore told



told him he might go and fetch the money, and I would stay with them. He had scarce advanced a few steps, when the servants fell upon him, and stripped him of the few remains of cloathing he had left, so that he was obliged to go naked into the town. By this time the sun had set, and it began to grow dusk; and as the Mamelucks durst not stay away from their master till my companion should return, one of them rode up to the Bey, and told him they had seized an European, from whom something might be got. He soon returned with an order that I should be brought before the Bey; so taking me between their horses, they dragged me to the place where he was sitting, with his train about him. When I came near him, I addressed him with the words "I am under your protection;" which phrase, if they are not maliciously inclined, they answer with "You are welcome." But instead of answering at all, he stared furiously at me, and then said "Who are you?" I answered, an Englishman. Q. What are you doing here in the night? You must be a thief! Yes, yes, probably the one who did such and such a thing the other day. To this I replied: I was entering the town-gate, half an hour before sun-set, when I was taken by your Mamelucks and detained till now, when indeed it is dark, but still not an hour after sun-set, the time for shutting the gates. Without saying any thing farther, he pointed to one of his officers, and ordered him to take me to the castle, a building at some distance out of town, at a place where most of the Beys have houses. It is an extensive sandy plain, where they exercise their Mamelucks.

Every



Every month one of the Beys in rotation takes his station here, in order to guard the town against the wandering Arabs in the night. This time it was the turn of the above-mentioned Osman Bey, to serve this office. Having given the order for my removal, I wanted to say a few words more, but was prevented by a horde of servants, who are always glad to insult an European. One gave me a kick on this side, and another on that; one spat in my face, while another put about my neck a rope made of the filaments of the date tree, which is much rougher than one made of horse hair. A fellow in rags was ordered to drag me along, and another on horseback, armed with swords and pistols to guard me. As we proceeded towards the place, there was a gentle slope, with a large garden, surrounded with a mud wall on the left. As the gardens here consist mostly of irregular plantations of orange, lemon, and other prickly trees, through which no horses can pass, it occurred to me that I might cut the rope by which I was held, and make my escape over the wall, the place being well known to me; but when I looked for my knife, I found it was gone. Soon after the fellow who dragged me said to me, give the guard money and he will let you go. The word *money* operated like an electrical shock. The guard came galloping up to me, and asked me whether I had any money left; I told him I would give him what I had if he would let me go. Accordingly I gave him the purse, which the Mamelucks had refused. Having looked at it, he put it into his pocket without saying a word, dragging me on till we came to the place. Here I was put into a  
room



room half under ground; a large iron chain, with links like a waggon chain, was fastened to my neck with a padlock, and the other end wrapped round a piece of timber. I was much heated with walking, and very thirsty, yet the servants, hoping to be rewarded, freely furnished me with water. But no offers could prevail upon them either to let me have pen and ink, or to take a letter for me to my friends in town, to inform them of my situation; nor indeed could they have gratified me without danger to themselves. Just then being cold, and stripped of my clothes, I was more afraid of taking cold than of any thing else. In about half an hour the Bey arrived with all his men, and lighted flambeaus before him; he alighted, went up stairs into a room, sat down in a corner, and all his people placed themselves in a circle round him. This done, I was sent for, my chain was taken off, and I led up by two fellows. On the way up, I heard the instrument used for the bastinado rattle, and knew from that what I had to expect. Upon entering, I found a small neat Persian carpet spread for me, which was in fact a piece of civility, for the common people, when about to receive the bastinado, are thrown on the ground. The Bey again asked me, who I was? *Answ.* An Englishman. *Q.* What is your business? *Answ.* I live by what God sends (an usual Arabian phrase). He then said, throw him down: when I asked what I had done. How, you dog, answered he, dare you ask what you have done? Throw him down. The servant then threw me upon my belly, the usual position upon such occasions, that when the legs are raised up, the soles of the feet may



may be horizontal. They then brought a strong staff about six feet long, with a piece of an iron chain fixed to it with both ends: this chain they throw round both feet above the ancles, and then twist them together, and two fellows on each side, provided with what they call a corbage, hold up the soles of the feet by means of the stick, and so wait for their master's orders. When they had placed me in this position, an officer came and whispered into my ear, do not suffer yourself to be beaten, give him a thousand dollars and he will let you go. I reflected, that should I now offer any thing, he would probably send one of his men with me to receive it; that then I should be obliged to open my strong chest, in which I kept not only my own, but a great deal of money belonging to others, which I had in trust, having received it in payment for goods sold for other merchants. The whole of this would in all probability have been taken away at the same time; and as I could not think of involving others in my misfortunes, I said, *mafsh!* that is, *no money!* upon which he immediately ordered them to begin, which they did, at first however moderately. But I at once gave myself up for lost, well knowing that my life only depended upon the caprice of a brute in human shape; and having heard and seen so many examples of unrelenting cruelty, I could not expect to fare better than others had done before me. I had, therefore, nothing left but to cast myself upon the mercy of God, commending my soul to him; and indeed I must in gratitude confess, that I experienced his support most powerfully; so that all fear of death was taken from me, and if I could have

Q

bought



bought my life for one half-penny, I should, I believe, have hesitated to accept the offer. After they had continued beating me for some time, the officer thinking, probably, I might by this time have become more tractable, again whispered into my ear the word *money*; but now the sum was doubled. I presently answered *mafsh!* They then laid on more roughly, and every stroke felt like the application of a red-hot poker. At last the same officer, thinking that though I had no money, I might have some fine goods, whispered again something to that effect. As I knew that elegant English fire-arms will often take their fancy, even more than money, and happened to have a neat blunderbuss, richly mounted in silver, value about 20l., I offered him that, as I could have got at it without opening my strong chest. When the Bey observed me talking with the officer, he asked him what I had said; the officer lifting up his finger, answered with a sneer, *Bir Corabina!* that is, one blunderbuss. Upon which the Bey said, *Ettrup il kelp!* that is, beat the dog. Now they began to lay on with all their might. At first the pain was excruciating, but after some time my feeling grew numb, and it was like beating a bag of wool: when at last he saw that no money was offered, he began to think that I might be poor; and as I had, however, done nothing to deserve punishment, he at last said, *Saibu!* that is, let him go. Upon which they loosened my feet; I was obliged to walk down again into my prison, and the chain was again put about my neck. Upon my asking the servants why I must be chained, since in the present condition of my feet, there was little  
danger



danger of my running away; they said, the Bey will have it so: and I was obliged to submit. In about half an hour a messenger came with orders to bring me up again; the servants then took off the chain, and carried me till I was near the door, when they bid me walk, or else the Bey would beat me again. At first I was apprehensive, lest this might prove true, thinking some one might have told him, that with a little more beating, money might still be had. This has really sometimes happened; and there are instances of the bastinado having been repeated for three days successively, to the number of two thousand strokes, after which the feet are generally left useless for life. Such severe beating may be borne by a very strong constitution, but in those who do not enjoy that blessing, it often happens, that before they have received six hundred strokes, the blood gushes from their mouth and nose, and they die either under or soon after the operation. When I came within the door, I soon perceived that it was a mere farce contrived to get rid of me. The Bey asked one of his officers, "Is this the man you told me of?" He then drew near, and stared in my face, as if narrowly inspecting me; then lifting up his hands, he cried out, By God it *is*! Why, this is the best man in all Cairo, and my particular friend; though by the way I had never seen his face before. He went on: "I am exceedingly sorry I was not here, I should else have told you," with many other such like expressions: upon which the Bey said, there take him, I give him to you, and if he has lost any thing, see to get it him again. Once more I was obliged to walk till out of his

Q 2

fight,



sight, when the servants of my new friend took me up, and carried me a great way to his lodgings, where he offered me something to eat; but it may be guessed in what state my appetite was. He then made me a tolerable bed, which was the more acceptable, as it secured me from taking cold, having been stripped of the greater part of my clothes, of which I got back nothing but an old Cashimere shawl. I could not help asking him whether it was in this way that strangers were honoured by his countrymen? But I got for answer, *Min Allah, Maktub, Mukkader!* that is, it is from God: it is so written in the book of fate, which cannot be altered. I gave him to understand, that I rather suspected it was from the devil. This liberty of mine he did not take amiss. He then anointed my feet, and tied some rags about them; and so I passed a very uncomfortable night. In the morning he asked me whether I knew the Master of the Customs: I answered, yes; he is my very good friend. Well, said he, I will bring you to him; then setting me upon an ass, he himself mounted a horse, and, accompanied by one of his fellow-soldiers, conducted me towards the city. When we came near the gate he said, take away those rags, it is a shame to ride in such a trim into the town. How a shame? said I, certainly not for me, but for him who did it. He again said, *Mukkader!* When we arrived at the house of the Master of the Customs, he seemed much struck, and wished to know how the affair had happened. I only begged him to settle for me with my new friend; for I well knew that the whole farce was meant to play a little money into the hands of this  
officer,



officer, as the Bey could get no sum worth his own acceptance from me. This office the Master of the Customs willingly undertook, and when I summed up all, I found it had cost me about 20l. in presents to the servants, and my *foi-disant* deliverer. They then conducted me to my house, where his servant carried me up stairs, and put me to bed, where I was confined for about six weeks, before I could walk with crutches; and for full three years my feet and ankles were very much swelled, the latter having been severely hurt by the twisting chain, so that even now, after twenty years, they are apt to swell upon strong exertion.

I have sometimes been asked, whether it were not possible to have such a villain chastised by the hand of justice? Whoever knows any thing of the Beys and Mamelucks, will readily conclude, that it cannot be done, and that it would even be dangerous to attempt it. At that time Ibrahim and Murat Bey were the most powerful among the Beys. Had I complained to them, and accompanied my complaint with a present of from twenty to fifty thousand dollars, (for a smaller sum would not have answered) they might perhaps have gone so far as to have banished Osman Bey from Cairo; but they would, probably, in a few months have recalled him, especially had they found it necessary to strengthen their party against others: had this Bey afterwards met me in the street my head might not have been safe. Both Ibrahim and Murat Bey knew something of me; but when they heard the whole affair, they only said



faid of Ofman Bey, God blacken his face. Many real friends whom I had among the Mamelucks and Turks, visited me during my confinement, and were very compassionate: but their chief comfort always was, *Mukkader! min Allah*, &c.

As a proof of the truth of my representation, I may relate the following which happened soon afterwards, and in which the very same Ofman Bey and Ibrahim Bey were concerned. The former had imprisoned two Arabs for some slight offence: their wives applied to Ibrahim Bey, as the superior, in behalf of their husbands, that they might be set at liberty. Upon which he sent a messenger to Ofman Bey, asking of him as a favour to let him have these two Arabs, as they were his; which latter is a common expression when they mean to protect any one. Ofman Bey bid the messenger return, telling him the men should soon follow. The Beys were then both out of town at their houses, on the above-mentioned sandy plain. When the messenger was gone, Ofman Bey sent for the two men from prison, and immediately cut off both their heads with his own hand, and then ordered his servants to tie ropes to their legs and drag them to the house of Ibrahim Bey. When the latter, who happened just to be drinking coffee, perceived what was coming, he immediately threw his cup to the ground, and ordered all his Mamelucks to arm and mount in order to fight Ofman. In an instant all was bustle and uproar, and every body expected that a battle would ensue, when the wives of both Beys interfered, and  
for



for their sake peace was made, and no farther notice taken of the whole affair.

But though there are such villains among the Beys and Mamelucks, and one may even safely say that the major part is of that description; yet, during my long stay among them, I found several, both Mamelucks and Turks, of strictly honest principles, and of benevolent dispositions, who were not only good-natured, but faithful to their conviction in regard to right and wrong. Some of these became my sincere friends; but I have almost invariably observed, that those who came to me with the most friendly faces, had commonly some design to cheat or to make some advantage of me.\* Those, on the other hand, who looked stern and suspicious at the first interview, when they found I was not that designing villain which prejudice had taught them to think me, very often became my best friends, and some of them I would have entrusted with any thing of value without the least fear of being imposed upon.

Upon the whole, I am not so blinded by the ill-treatment I have received from some of them as to condemn them indiscriminately. I am fully persuaded, that many of them would naturally be bene-

\* I recollect but one solitary instance in which I found myself mistaken, in regard to a man who addressed me, for the first time, with what I thought an over-friendly countenance.

volent



volent and well-disposed, if superstition in some, and prejudice chiefly arising from thence in others, did not give them a different bias.

It is impossible to give any general character of the Turks; since what we Europeans comprehend under that denomination is a mixture of many different nations. There is a difference between a Bosniac, an Albanian, a Dalmatian, a Romelian, a Candiot, an Anatolian, a Tartar, a Curd, and between many other divisions and subdivisions. Some of these seem naturally inclined to wickedness, being very irascible; others, and I may say the greatest part of those with whom I became acquainted, are slow and not easily irritated; and when they are, it is easy to calm and pacify them by fair words and gentle means. They smile at an European when they see him fly into a passion at every trifle. Their religion makes them look upon us as many degrees below them; and as the few Europeans who live among them do not always set them such examples as to inspire them with better ideas of Christianity, superstition, with want of education and of better knowledge, makes most of them believe that there is no harm, and some may even go so far as to think there is a merit in treating a *Gaur* or *Caffer*, i. e. Unbeliever, ill, though in the Koran it is forbidden. In this particular they are no way different from some denominations of Christians, who, in former times, still more than at present, treated such as did not think exactly like themselves, not only no better, but really worse than the Turks  
treat



treat us, and that often for the sake of principles, which, had the matter been candidly investigated, the persecutors as little believed as those whom they persecuted. Every body knows to what extent such persecutions have been carried, in spite of the injunctions of Scripture, not only to love each other, and to bear with the weaknesses of our friends, but even to love and serve our enemies. And though I have found free-thinkers among the native Mahometans, as well as disguised Christians among the Mamelucks, such I mean as wore the mask of Mahometanism from necessity, but remained secretly attached to their former tenets, being born of Christian parents; yet, if we take them altogether, these two descriptions are very scarce, in comparison of those among us who believe little or nothing of what they profess, the major part being really strict Mahometans. They are taught from their infancy to despise those whom they consider as Caffers, or Unbelievers: and as their education is not favourable to the cultivation of their minds, we have no reason to wonder when we see all kinds of wickedness practised among them without restraint. The difference between them and us, in this particular, is indeed not so great in reality as it is in appearance. Were all the clokes and masks, with which our education has taught us to cover our natural inclinations, at once removed, I am afraid that all those among us who have not found better means to subdue their innate evil propensities than the dictates of their own fancy and reason, would make but a poor appearance, as bad, if not worse, than the Turks: yet I am thankful for the restraints laid upon men's cha-



ractions among us both by education and law; these are certainly a national benefit, though of no ultimate advantage to the individual.

Let us, therefore, not condemn, but have compassion with the Turks. Their whole government, their manners, their laws, or rather the execution of them,\* are corrupt in the highest degree. In all these particulars there is indeed sufficient room for reformation; but it is greatly to be wished, that should what they now possess be taken from them, they may receive something intrinsically better in place of it, and this I am afraid is not likely to be the case, should some late pretended reformers be permitted to new-model their government.

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**THERE** are two methods of giving the bastinado among the Mamelucks in Egypt, which I will endeavour to describe; both are grating to tender feelings: but ladies need not to be too much frightened at the narrative, as their sex is totally exempted from such treatment, as well amongst the Turks as Mamelucks.

\* I might easily, from my own experience, give some specimens of law-suits, which would prove, that not the laws themselves, but the execution of them, is chiefly in fault; and that it is in this respect that the difference appears most striking between their government and that which prevails in our own country.

The



The one is given upon the soles of the feet, with the so called corbage, which instrument I have described in my dissertation on the Nile, page 121. Each of the men, who has hold of the stick with the chain, by means of which the feet are held up, so as to be horizontal, has one of them, with it they beat alternately, like two threshers, at the command of their masters. The operation is called receiving, sometimes eating the corbage.

The other method is, to beat a man across his back, chiefly the small part of it, except when they are mercifully inclined; in that case they lay on a little lower. This is done with a stick about six feet long, and about an inch or three-fourths of an inch thick; the man is thrown flat upon his belly, and held down by his arms and legs by servants. As those who are ordered to do it usually use all their strength, no man can easily bear more than between thirty and forty strokes: it too often hurts the spine. More strokes than the above are likewise seldom given, except they mean to beat a man to death, which sometimes is the case. This operation is called receiving, or vulgarly, eating the nabute, which signifies a stick. Bad as it is, it is looked upon as the genteel bastinado; and any man in a superior station would think himself highly insulted by receiving the corbage, but from the nabute, no Officers, Cashiers, or Governors of districts, and in some cases not even Beys are exempted. No one thinks himself dishonoured by it, nor does this or the corbage leave any stain upon a person's character; they talk freely, yea even sometimes boast of it



in conversation. During my abode in Cairo, the second Police Master, a man of considerable consequence, received it by the order of Ali Bey, for insulting a Venetian merchant, whom the latter esteemed; and some time afterwards, Murat Bey ordered it to one of his Cashefs, who not six weeks after that, was made Bey by the former's own recommendation. This new created Bey was for ever after, for distinction sake, from others of the name of Osman, which they pronounce rather Ofwan, called Osman Bey Abu Nabute, i. e. Father of the Stick; and he commonly signed his name so himself. However, though it be properly the genteel bastinado, it sometimes happens, when the corbage is not at hand, which is seldom the case, that a peasant, or one of the rabble is honoured with it. I once accidentally was present at such a scene, and as it may serve as a specimen how the Mamelucks treat the common people, whom they regard no more than as many dogs, I will here relate the story. There was a market day, chiefly for butter and other provisions, at a village across the river opposite to Boulac, the harbour of Cairo, called Embawbe. On such an occasion there is commonly a great crowd of people who wish to be ferried over and back again, which is an inducement for boatmen to come from a considerable distance, in order to earn a few paras (a bad silver coin worth about three farthings a piece). It so happened, that a Mameluck wanted to go to a village belonging to him, or rather to the house to which he belonged, which village was a good distance down the river; when he came to the side of it where the boats lay, he espied a  
boatman



boatman from that very place, and immediately ordered him to take him there. The poor fellow, who thereby lost all his prospect of earning something for that day, made some excuse, and was not at first willing to obey his orders. The Mameluck instantly ordered him to be thrown down and beaten, which was as quickly executed, close before my eyes, with the above described nabute; when they had given him the usual number of strokes, he seemed unable to stir, but they likewise did not let him, for they afterwards tied him up all in a lump with ropes, his knees to his breast, and the feet where they naturally fall in that posture, so they rolled him into his own boat, placed him next to the poop, and immediately went off, down the river; what became afterwards of the poor man I know not, but I am afraid it did not end there. My whole frame was shook, and revolted at such flagrant injustice and brutal cruelty; and I could not enough wonder, that there were men so debased, as to bear it from one day to the other, and still to think themselves happier than all the world besides, particularly than the Europeans; for I have often heard them say, when they were quarrelling together, "Are we in Malta, that we are treated thus?" But Mahomedanism teaches them to believe all comes from God; it is so decreed, and it cannot be altered. According to present appearances, it will be a long time before other principles can be instilled into them, except there should once be a man amongst them possessed with the necessary power and influence; with a more elevated genius and sense, such as Peter the Great was amongst the Russians, to make a thorough reformation; and



and still he would have to struggle with more difficulties, on account of the difference of the Mahomedan and Greek establishment. Otherwise it must be brought about by subjecting them to some more civilized nation, that by their examples, at least, the rising generation may imbibe a new set of ideas.\*

\* The French, when they invaded Egypt, might have been instrumental to infuse better ideas into the people, had they not begun their career at Alexandria with worse cruelties, by murdering the poor inhabitants after they entered the town. Whatever they might afterwards advance or publish in their manifestoes and proclamations, will never persuade the already very suspicious Turks and Arabs of their sincerity, and they are not so stupid as not to see through their artful insinuations. They told us much of taking the fortrefs of Alexandria by storm, and how Rosetta opened its gates; and of other fortresses in the deserts, such as El Arish, Salchiah, &c. But be it known, that all the fortrefs of Alexandria consisted of part of the ruined walls of old Alexandria on the land side, in much worse condition than any garden wall in England. Rosetta is an open place, without a shadow of a gate; and El Arish and Salchiah are mere caravanferas, i. e. a square, badly walled in, with either stones or a mud wall, much inferior to any of our garden walls. Cairo has a wall, but bad likewise; and here and there the back of the houses constitute it. Aboukir Castle is a square building, more resembling a house, and no place of any strength whatsoever; nor any of the other places except what the French made them afterwards. The castle at Cairo resembles more a fortress, and a number of cannons, badly mounted, are kept there; but it is entirely commanded by a much higher hill close behind it

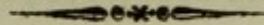


## OBSERVATIONS

ON THE

## SITUATION OF EGYPT

RELATIVE TO COMMERCIAL ADVANTAGES.



I DO not intend to repeat what the commerce of Egypt has been in former times: this is sufficiently known, for a great number of volumes have been written about it. I will only mention a few thoughts what it might be at present, if it was in the hands of a powerful and civilized nation. A flight glance upon the map will immediately make it appear that the situation of Cairo is such, as to make it capable of being the center of commerce between the most populous countries of the globe. Since, by the Red Sea, it would be connected by a very short cut with India, Arabia, and Abyffinia; by the Mediterranean with all the south of Europe, and great part of Turkey; and through the Streight of Gibraltar with the rest, and even with America; by the Black Sea with the remainder of the Turkish dominions and Ruffia: this navigation might also be extended by means of the rivers which fall into the Black Sea in the very heart of Ruffia, Germany, Poland, &c..

It



It has often been doubted if the Red Sea was a safe navigation; however I can, from very good authority, declare it to be so: for, being at Cairo during the years 1776, 1777, &c. at which time a number of English vessels, some in the mercantile line, and others with dispatches for Government, or the East India Company, came to Suez, the Captains of some of them took particular care to explore the navigable part of it. They all assured me, that there was plenty of deep water and sea room during its whole extent; and though there might be shoals near the shore, and between the islands where the country vessels commonly navigate, the middle was as good a navigation as any they had been in. Some of them have shewn me maps, marked with the soundings, which they made according to their observations. The time for ships to come and to go to India is, however, regulated by the monsoons. The season when I said before that southerly winds are most common in Egypt, is likewise the time to come to Suez; and when the northerly winds set in, it is time to depart for India. I remember a ship of war, commanded by a Captain Connor, which waited at Suez for dispatches from England, and immediately upon receiving them, set sail from the above-mentioned place for Bengal, where he arrived in twenty-one days. The passage to Bombay may be made in much less time, and sixteen days might be sufficient. I likewise remember a company of gentlemen who made the voyage by way of Cairo and Suez, from London to Madras in two months and ten days. By such repeated trials, it is evident that it is by far the shortest and  
quickest



quickest passage to India; and a regular post established there, at least to forward dispatches, may often be of the greatest benefit. How much more so would it be if a safe commerce could be established?

To have a communication with the Red Sea and the Mediterranean by water, a canal either directly from the one sea to the other, or by the former and the Nile, would be the only practicable way. There would be one inconvenience as to the first proposal, namely, that there is no harbour, nor any place for shelter for vessels upon the whole coast, where such a canal could join the Mediterranean, nor any fresh water to be found any where near to it: as to the latter I cannot see any great difficulty, except the labour and expence. Much greater undertakings have been accomplished in England in that way. Some writers have asserted, and others have repeated it after them, that there was a danger in spoiling the water of the Nile, by cutting a canal from the Red Sea to the Nile, as they supposed, or believed, the level of the Red Sea to be higher. A late traveller, whom I saw in Cairo, in a pamphlet which he wrote on it, even supposed this might be the case, if a canal was cut from Cossier to Kerma in Upper Egypt. Without convincing arguments I could not so easily give credit to such a supposition; for I should imagine, that the laws of gravity are the same all over the globe, and that therefore such seas, which have a connection with each other, as the Western and Indian Ocean, the Mediterranean, the Red Sea, the Baltic, &c. &c. would naturally all find the same level. There is only one circum-



stance which might raise the Red Sea at certain times a few feet higher than the Mediterranean, which is this, that there is not the least tide observable in the latter on the coast of Egypt, though at Leghorn there is still some small rise; but, in the former, the tide rises even at its extremity a few feet: I do not exactly recollect how many. But considering that at Cairo, where such a canal from Suez would most naturally meet the river, the bed of it must be considerably higher than the Mediterranean, to enable it to flow into the latter for the space of about one hundred miles with considerable velocity, I cannot think that the difference one way or the other can be great, much less could I, for the same reason, conceive the Red Sea to be higher at Kerma and Cossier, which is still more than three hundred miles further up.

It would certainly be attended with convenience if there were two canals; one between Suez and Cairo, and another between Cossier and Kerma: for, by all the information which I could gather from the English Captain who navigated this sea, ships may easily come as far as Cossier, but are often obliged to spend several weeks to work from thence up to Suez, and if they come a little too late in the season they cannot reach the latter place at all. I am not sufficiently acquainted with that part of the country through which this latter canal must pass, and there might be hills to cut through; but this can be no insurmountable obstruction, as it has been often practised in England. This upper canal would be the most convenient



nient for goods coming from India, as there is no difficulty in the navigation down the river even from Assuan. On the contrary, goods coming from the Mediterranean would be more conveniently shipped at Suez, they would not have to go so far against the current up the river, and there is scarce ever any difficulty of sailing from Suez.

Should this country ever fall into the hands of a civilized nation, able to maintain itself there, and to improve the advantages of its situation for commerce, what is mentioned above would not be the only probable improvement; but the adjoining parts of Africa, such as the Nubians, Abyssinians, and others more to the westward, might by degrees be brought to see the advantages of a trading connexion with a people, amongst whom they would be assured of the protection of that property which they might gain thereby. It certainly would require time to obliterate old prejudices, but nothing would sooner convince them of the benefit of a friendly intercourse than repeated proofs of the strict justice done to them in their trading concerns. With an increasing trade civilization would spread, and Africa, till now so little known, as to the interior parts, might become a source of immense wealth.

FINIS.

MR.



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