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ERRATA.

P. 12. l. 4. *after* navel, *r.* on his immerſion; an inſtance, perhaps, rare, yet the fact is true.

p. 13. l. 16. *r.* threw the robuſt into *a* phrenzy, by *a* ſudden congeſtion.

p. 52. l. 4. *r.* tincture *of* guaiacum.

p. 54. l. 18. *for* unimpaired, *r.* impaired.

p. 72. l. 21. *dele* though.

OBSERVATIONS

ON THE

SUPERIOR EFFICACY

OF THE

RED PERUVIAN BARK,

IN THE

CURE of AGUES and other FEVERS.

INTERSPERSED WITH

Occasional Remarks on the Treatment of other Diseases by the same Remedy.

SECOND EDITION,

WITH CONSIDERABLE ADDITIONS.

By WILLIAM SAUNDERS, M. D.
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ÆQUE PAUPERIBUS PRODEST, LOCUPLETIBUS ÆQUE.

HORATIUS.

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MDCCLXXXII.

MEDICAL LECTURES at GUY's HOSPITAL.

IN the beginning of *October*, Dr. SAUNDERS, PHYSICIAN to GUY's HOSPITAL, will begin his LECTURES, as uſual, on the THEORY and PRACTICE of MEDICINE, in which the chief Objects of Diſcuſſion will be the *Hiſtory*, *Diagnoſticks*, *Nature*, and *Cure* of *Diſeaſes*.

At the ſame Place, and about the ſame Time, Dr. KEIR, PHYSICIAN to St. THOMAS's HOSPITAL, will begin his LECTURES on CHEMISTRY, in which, while the Principles of that Science are taught by Reaſoning and Experiment, the Practice of it may be learned from the numerous Proceſſes carried on in the Elaboratory of the Hoſpital.

DR. KEIR will alſo begin his LECTURES on the MATERIA MEDICA, about the ſame Time.

CLINICAL LECTURES are likewiſe delivered at GUY's HOSPITAL, both by Dr. SAUNDERS, and Dr. KEIR, on the Caſes of their Patients in GUY's and St. THOMAS's HOSPITALS; by Means of which the Student may enjoy every Advantage that the Practice of both Hoſpitals can afford, in the Study of his Profeſſion.

Each of theſe Courſes continue *Four Months*; they are all carried on at the ſame Time, and are repeated *Three Times* in the Year, beginning in *October*, *February*, and *June*.

To accommodate theſe Lectures to the Gentlemen who attend the Practice of the Hoſpitals, Care is taken that they ſhall not encroach on the Hours appropriated to the Tranſactions of the Hoſpital Buſineſs.

INTRODUCTION.

I AM encouraged to undertake a Second Edition of this Treatiſe on the Red Bark, from the favourable manner in which the firſt was received by the Public, and from the rapid Sale of a large impreſſion in a few weeks. This Edition contains ſtill more ample teſtimony, in favour of the doctrines and opinions I had laid down in the former. Such is now the evidence of the infallibility of the Red Bark in Intermittent Fevers, as to make it a ſubject of the firſt importance to the intereſts and happineſs of mankind.

The

The Reader will obſerve, that I have added conſiderably to this Edition, eſpecially on the ſubjects of Complicated Intermittents, and the Acute Rheumatiſm, from repeated and attentive obſervation.

I am happy in being able to aſſure my Readers, that they may be liberally ſupplied with the Red Bark, and I hope its advanced price, will not diſcourage them from its uſe. It is a cheap article, when we conſider that it need only be employed in half the quantity generally uſed of the Pale Bark.

There is ſome danger, from the avarice of Dealers, of its being adulterated, more eſpecially, however, in the form of powder, a circumſtance which may bring it into diſcredit, I have therefore taken ſome pains in collecting ſpecimens of it, and arranging them in the order of their goodneſs, chiefly for the benefit of the young Gentlemen who attend my Lectures. The many applications to me on this

this ſubject, rendered this plan neceſſary, the Red Bark being hitherto little known by Apothecaries in the country. The efficacy of this remedy is ſo well eſtabliſhed, that it is a matter of very little conſequence, if Botaniſts ſhould ſuppoſe that there are not yet Data *ſufficient to determine whether it be from the ſame ſpecies or not, with the* Cinchona Officinalis *of* Linnæus. *My friend, Dr.* Hope, *Profeſſor of Botany, in the Univerſity of Edinburgh, in a Letter to me, ſays,* "*If this Red Bark, which ſeems to be more* "*efficacious than the Common Bark, can be* "*had; that is the great point, and whe-*"*ther it be, or be not, the* Cinchona Offi-"cinalis *of* Linnæus, *is but a ſecondary,* "*and much leſs important conſideration;* "*however, I think your opinion the moſt* "*probable; your Treatiſe will, I think,* "*have the effect of making the public attend* "*to this matter, and of rendering the uſe* "*of it more general.*"

Since

Since the following pages went to the preſs, I have ſeen ſome exceeding good Red Bark, imported by a Spaniſh Merchant, a conſiderable part of which was as ſmall as the Quilled Bark in common uſe, but it ſtill preſerved its Redneſs in that form, approaching, however, more to the colour of Cinnamon; it was evidently more compact and heavy than common Quill Bark, and appeared extremely reſinous, its exterior coat, thin, whitiſh, and rough; it broke brittle, and gave evident proofs of its being the Quill of the larger Red Bark, which was in the ſame Cheſt: this, however, does not render my opinion leſs probable, that it may be only a variety of the Cinchona Officinalis, *depending on* AGE, SOIL *or* EXPOSURE.

OF THE GENERAL HISTORY OF THE RED BARK.

I HAD long ſuſpected that the Peruvian Bark in common uſe, was very inferior in power and efficacy to that recommended by the early writers on the ſubject; but more eſpecially by our countrymen, MORTON and SYDENHAM, in whoſe works the medical virtues of this drug, in Intermittent and other Fevers are extolled as little ſhort of infallibility. In their time the Quill Bark, (at leaſt ſuch as is now in uſe), was not mentioned;

 their

their cotemporary writers on the *Materia Medica*, evidently deſcribe the Peruvian Bark of that period, as of a larger kind, of more compact pieces, and of the colour of the ruſt of iron, which marks are very expreſſive of the Red Bark; the innermoſt coat of which has an ochrey appearance, and its reſinous or middle layer reſembles very much the *Lapis Hæmatitis*.* M. La Condamine expreſſed his ſurpriſe, when he was told by Mr. Thomas Blachyn-den, Director of the Engliſh South Sea Company, at Panama, that the writers on Pharmacy and *Materia Medica* in England had preferred the Small and Quill Bark, while the inhabitants of New Spain, held the

* Cortex craſſitie mediocri, foras ſcaber, paululum caneſcens, aliquando muſco obductus, intus lævis, coloris ferruginei, ſaporis acris et intenſè amari. Autumno colligitur et cortex circumcirca delibratur, tam trunci quam ramorum.

Dalei Pharmacologia, p. 201. *Anno* 1692.

the larger Bark in higher eſtimation.* I can only explain ſuch a preference from this circumſtance, that the larger pieces of Bark, which were imported into this country along with the ſmaller Bark, were either of a fibrous, ſpongy, or ligneous texture; or probably, damaged by moiſture, and taken from the decayed trees.

* They commonly reckon three ſpecies of the *Quinquina*, tho' ſome make four; the white, the yellow, and the red: I was told at *Loxa*, that theſe three kinds differ in their virtue only; the white having ſcarce any virtue, and the red excelling the yellow.

The trees from whence the firſt Bark was taken, which were very large, are all dead, having been entirely ſtripped, which infallibly kills them when they come to be old. Experience has ſhewn, that ſtripping kills ſome of the young ones alſo, but the greateſt part eſcape. For this operation they uſe a common knife, which they hold in both hands; the barker ſticks it into the Bark as high as he can reach, and ſo draws it downwards as low as he can. It does not appear that the

Druggiſts have ſometimes ſuggeſted this as an argument againſt the uſe of the Red Bark, and many probably endeavour to oppoſe its introduction, until the quantity in the markets be greater, and more equally divided among them, or until they have been able to diſpoſe of the large quantity of common Bark they have in their warehouſes.

The

the trees which grow where the old ones ſtood, have leſs virtue than they, the ſituation and ſoil being the ſame; the difference, if there be any, may ariſe, perhaps, from the different ages of the trees. Few but young ones are now to be met with: I do not remember to have ſeen any much thicker than my arm, or above 12 or 15 feet high; thoſe which are cut young, ſhoot forth new branches from the ſtumps.

I was informed at *Loxa*, that heretofore they preferred the coarſeſt Bark, and laid it by as a rarity, but now the fineſt is moſt eſteemed: The merchants may poſſibly find their account in it, as it takes up leſs room in packing. But a Director of the Engliſh South Sea Company at *Panama*, through which all the

The taſte and flavour of the Red Bark is more difficultly evolved, and is therefore at firſt not ſo obvious from the cloſeneſs of its texture, and from the reſinous coat being ſo well defended and incloſed between two other layers. It is evidently heavier than any other kind of Bark, and ſeems to have been prepared and dried with greater attention, its original appearance and form being better preſerved.

 I think

the *Quinquina* that comes to Europe muſt paſs, aſſured me, that the preference given at preſent to the fine Bark, is in conſequence of ſeveral chymical analyſes and experiments which have been made on both ſorts in England. It ſeems probable, that the difficulty of thoroughly drying the large coarſe Bark, and the humidity it is naturally apt to contract and retain, has helped to bring it into diſrepute. Vulgar prejudice will have it, that to loſe nothing of its virtue, the tree ſhould be barked in the moon's decreaſe, and on the eaſt ſide. Theſe circumſtances, as alſo its being gathered on the mountain of *Cajanuma*, were certified by a Notary in 1735, where the Marquis de *Caſtle-fuerte* procured a quantity of *Quinquina* from *Loxa*, to carry to Spain on his return.

Memoir de l' Acad. d. S. 1738.

I think it probable from a more attentive view of the ſubject, that it may be the Bark of the trunk, or larger branches of the tree, and I am the more confirmed in this opinion by the ideas of my friends Dr. WITHERING and Dr. FOTHERGILL, conveyed in their letters to me, in which they obſerve, that the eſſential and active parts of the Oak Bark are more intire, and in larger quantity in the trunk and larger branches, than in the twigs or ſmaller branches, which are comparatively of an imperfect growth; perhaps the Small and Quilled Bark may be procured from younger trees, not yet arrived at their full maturity, and therefore yielding a Bark of a weaker quality.*

I am

* Mr. ARROT, a Scotch Surgeon, who had gathered the Bark in the place where it grows, ſays, that the ſmall curled Bark ſo much eſteemed in England, is the Bark of younger trees, which frequently recover the Barking

I am juſtified very much by the analogy of other Barks, and by the influence of ſoil and expoſure, in changing the appearances, and even of affecting the virtues of the ſame ſpecies of vegetables, to conclude, that the diverſity both in ſize and colour of the Red Bark from the common Peruvian Bark, may depend either on the largeneſs of the branches, or on other circumſtances not neceſſarily implying a ſpecific difference in the tree.—On comparing the larger Bark of the Oak with its twig Bark even collected from the ſame tree, I find the former of a reddiſh colour, while the lat-

Barking, while the older trees never do. This affords a ſtrong proof, that the early Bark introduced into Europe was of the larger kind, and from the older trees, while the difficulty of procuring it, has been the means of introducing a ſmall and younger Bark. Mr. ARROT, and all other Travellers agree in preferring the Red Bark to any other.

Encyclopædia. Cortex. Vol. I.

ter is much paler, the roughneſs of the coat of the larger Oak Bark and its general appearance may be compared to that of the Quill Oak Bark, as the Red Bark is to the common Peruvian Bark; and I have not only learned from conſulting Tanners on this ſubject, that the larger Bark is ſuperior in its powers as an aſtringent; but I have found by comparing infuſions of both, and ſubmitting them to the moſt deciſive experiments regarding their aſtringency, by adding to them ſolutions of iron, that the precipitates were of a blacker colour and in greater quantity from the larger and more compact pieces of Bark, than from the ſmaller twig Bark. —I have convinced many medical gentlemen, who have ſeen my ſpecimens of the Oak Bark, that they tend very much to illuſtrate and confirm the opinion that the Red Bark is the *Cinchona Officinalis* of *Linnæus*.

The

The following deſcription of the Peruvian Bark taken from Pomet is likewiſe a farther confirmation of this doctrine: —" The *Kinquina* is the bark of a tree " that grows in *Peru*, in the province " of *Quitto*, upon the mountains near " the city of *Loxa*. This tree is almoſt " the ſize of a Cherry-tree, the leaves " round and indented; it bears a long " reddiſh flower, from whence ariſes a " kind of pod, in which is found a ker- " nel like an almond, flat and white, " cloathed with a ſlight rind; that Bark " which comes from the trees at the bot- " tom of the mountains is thicker, be- " cauſe it receives in more nouriſhment " from the earth; it is ſmooth, of a " whitiſh yellow without, and of a pale " brown within. That which comes " from trees on the top of the mountains " is abundantly more delicate; it is un- " even, browner without, and of an higher

" colour

" colour within; but the trees which
" grow on the middle of the mountains,
" have a Bark yet browner than the other
" and more rugged. All theſe Barks are
" bitter, but that from the trees at the
" bottom of the mountains, leſs than the
" others.

" It follows from hence, that the Bark
" of the leaſt virtue, is that which grows
" in the loweſt places, becauſe it abounds
" more with earthy and watry parts, than
" that which grows high, and which for
" the contrary reaſon is better; but the
" beſt of all is that which grows in the
" MIDDLE of the MOUNTAINS, becauſe
" it has not too much or too little nou-
" riſhment.—There is another kind of
" Bark which comes from the mountains
" of *Potoſi*, and is browner, more aroma-
" tic, and bitterer than the former, but
" abundantly

" abundantly ſcarcer than any of the " reſt.

" The conditions or qualities we ought " to obſerve in the Bark, are, that it be " HEAVY, of a FIRM SUBSTANCE, SOUND " and DRY. Beware of ſuch as is rotten, " and will ſink in water preſently, and " that flies into duſt in breaking, or is " dirty and unclean, as it happens to be " ſometimes; but make choice of ſuch " as is in little thin pieces, dark and " blackiſh without, with a little white " moſs, or ſome ſmall fern-leaves ſtick- " ing to it, REDDISH within, of a bitter " and diſagreeable taſte; and refuſe that " which is full of light chives when broke " and of a ruſſet colour, and take care " that there be not ſeveral pieces of wood " mixed with it, which you have more " of ſometimes than the Bark.

" This

" This was brought firſt into France in " the year 1650, by the Cardinal Lago, a " Jeſuit, who having brought this from " Peru, it was had in ſuch vogue in " France, as to be ſold weight for weight " at the price of gold."

I have ſince the publication of the firſt edition of this treatiſe, extended my enquiries into other countries, from which I am convinced that there cannot a doubt be entertained of its being the *Cinchona Officinalis*. I have a ſpecimen of the Red Bark which was given me by Mr. BABBINGTON, the Apothecary of Guy's Hoſpital—it contains in it a branch of Quill Bark, exactly as it was imported.

I have ſeen ſome ſpecimens of Red Bark ſo very large, that they contained a great proportion of woody part, and therefore leſs fit for uſe than thoſe of a more moderate

derate ſize; indeed from having made ſuch frequent experiments on this ſubject, I am able with great preciſion to aſcertain the comparative quantity of reſin in any two pieces of Bark from their external appearance.

It has been ſuggeſted by ſome, that the Red Bark reſembled much the mahogany Bark; but having examined that Bark, and having converſed with perſons to whom it is extremely familiar, I am perſuaded that there is no foundation for the opinion of its being the ſame. If future naturaliſts, by having better opportunities of inveſtigating this part of our ſubject, ſhould be perſuaded that it is the Bark of a tree of a different *genus*, or *ſpecies*, from the *Cinchona Officinalis*, ſuch a diſcovery cannot invalidate the proofs of its ſuperior efficacy; and I ſhould have been happy had it been found to be the production

production of any of our colonies, inſtead of its being as yet known in Europe only as a native of South America. Several very intelligent men, who were diſpoſed to think it the Bark of a different tree, immediately changed their opinion, from examining it in tincture, decoction, or infuſion, in which forms it conveys the genuine taſte and flavour of the common Peruvian Bark, under the appearance of a much ſtronger impregnation. I ſuſpect that we have been long in error by judging chiefly of the goodneſs of Peruvian Bark, from the colour of its external coat. I have ſeen ſome ſpecimens of Red Bark extremely rich in reſinous parts with a very white coat, but whoſe inner layers were compact, and of a dark red or ochry colour. I have examined twenty cheſts of this Red Bark in the very ſtate in which it was imported, and there is always found a very conſiderable proportion of Quill Bark amongſt it.

If

If the execution of this work was equal to its importance, it would challenge the attention of the public, in a degree far above moſt medical ſubjects. This will be unqueſtionably admitted by thoſe who have been eye witneſſes to the malignancy and fatality of intermittent and remittent Fevers, in every part of the globe, but more eſpecially in warm climates; this fatality is by no means owing to the ignorance or unſkilfulneſs of the practitioners in thoſe countries, but to the inefficacy of the common Bark in general uſe.

The numbers who fall a ſacrifice to the epidemic and ſeaſoning Fevers of warm climates, are admitted infinitely to exceed thoſe who are deſtroyed by the enemy. In almoſt all the dangerous Fevers which occur in our Eaſt and Weſt India ſettlements, the Bark is a principal remedy. I think it therefore an object of the greateſt national

national importance, that our fleets and armies ſhould be liberally ſupplied with this Bark, which will ſeldom or ever diſappoint them.

I have been told by a druggiſt, that its great activity rendered it a dangerous remedy; my anſwer was, that wine mixed with water was much ſafer in the hands of an unſkilful practitioner, than wine alone, but that did not prove that wine was not a better cordial than water. The ſame reaſoning may be applied to prove, that weak and decayed remedies, by being much milder in their operations, are therefore preferable to ſuch as are more perfect of their kind. I believe the general, and beſt founded complaint is againſt the want of power and efficacy of Bark, and not that it is too powerful and active. In proof of this, I refer my readers to the letters annexed, which demonſtrate, that ſuch

was

was the ſtubborneſs and obſtinacy of the intermittent Fevers of the preſent year, even in this country, that they reſiſted common Bark, and only gave way to the Red Bark.

Notwithſtanding I formed very early a favourable opinion of this Bark, yet it fell far ſhort of that which I am juſtified in maintaining, from the collected evidence of ſo many gentlemen in diſtant and remote parts of the country. Many letters which I have received are written with ſuch zeal in favour of its ſuperior efficacy, that they could only be dictated by the ſtrongeſt conviction, ariſing from extenſive and diligent obſervations.

I have perſuaded many of my medical friends to uſe the Red Bark in our foreign ſettlements, and I ſhall take pleaſure in communicating to the public the reſult of

 their

their obſervations as ſoon as I am favoured with them. A more powerful Bark is particularly deſirable in thoſe countries, where the violence and danger of the paroxyſm is ſo great. In the following obſervations, I have confined myſelf very much to the uſe of the Red Bark in febrile diſeaſes, but I am in poſſeſſion of many facts in proof of its ſuperior powers in other diſeaſes, in which the common Peruvian Bark has been found uſeful.

The introduction of the Red Bark into this country was the effect of chance. In the year 1779, a Spaniſh Ship from Lima, bound to Cadiz, was taken by the Huſſar frigate, and carried into Liſbon; her cargo conſiſted chiefly of this Bark, ſome part of which was immediately imported into this country, and a conſiderable quantity was bought at a very low price at Oſtend,

Oſtend, by ſome of our London Druggiſts. The Boxes in which it was brought to Europe were of the ſame kind as thoſe in which the common Peruvian Bark was contained, and all ſold by the general title of QUINQUINA. The Druggiſts in whoſe hands the Red Bark at firſt was, found it difficult to diſpoſe of it, its appearance was ſo very unlike that of common Bark; at laſt they offered it by way of trial to ſuch Apothecaries as reſide in counties where agues are frequent; the ſucceſs attending its uſe ſoon convinced them of its ſuperior efficacy. It was early introduced into the hoſpitals, and its greater powers became univerſally acknowledged. It has continued ever ſince in general uſe in the Hoſpitals of St. Bartholomew, St. Thomas, Guy, and the London. The reputation therefore of the Red Bark ſtands better eſtabliſhed, and is ſupported by the concurring teſtimony of more Phyſicians,

than that of any other article of the *Materia Medica*. I am aſſured by every Druggiſt with whom I have converſed on the ſubject, that the demand for it in this country is preſſing and general. I am likewiſe informed, that the markets may be well ſupplied with it; and as it is no longer in the hands of a few dealers, the prejudices of the Druggiſts have ſubſided, and I have lately heard nothing of its deſtructive qualities, which were ſaid to have ariſen from its ſuperior powers.

Being highly ſenſible of the difficulty of eſtabliſhing ſuch facts, either on the effects of remedies, or on any branch of medicine which regards the animal oeconomy, I have ſolicited the opinion of many ingenious and attentive practitioners, who from their ſituation have had frequent opportunities of trying the Red Bark. This caution appeared the more neceſſary, be-

cauſe

cauſe I am well perſuaded that the love of novelty, and too great a credulity in admitting facts on very doubtful authorities, have corrupted medicine more than any other ſcience, and proved more injurious than the moſt abſurd and fanciful theories, the errors of which are eaſily detected.

OF ITS SENSIBLE QUALITIES.

THE Red Bark is in much larger and thicker pieces than the common Peruvian Bark. It evidently conſiſts of three diſtinct layers. The external, thin, rugged, and frequently covered with a moſſy ſubſtance, and of a reddiſh brown colour.* The middle, thicker, more compact, and

* I have lately ſeen ſome very good Red Bark whoſe external coat had a white appearance, though its internal ſurface is of a deep red colour, extremely reſinous, compact, and heavy.

of a darker colour. In this appears chiefly to reſide its reſinous part, being extremely brittle, and evidently containing a larger quantity of inflammable matter than any other kind of Bark.

The innermoſt has a more woody and fibrous appearance, and is of a brighter red than the former.

The intire piece breaks in that brittle manner deſcribed by writers on the *Materia Medica*, as a proof of the ſuperior excellence of the Bark.

In reducing it to powder, the middle layer, which ſeems to contain the greateſt proportion of reſin, will not give way to the peſtle ſo eaſily as the other layers; this ſhould be particularly attended to when it is uſed in fine powder. Its flavour is chiefly diſcoverable either in powder or ſolution, is evidently more aromatic, and has

has a greater degree of bitterneſs than the common Bark.

OF ITS CHYMICAL AND PHARMACEUTICAL HISTORY.

EXPERIMENT I.

TO an ounce of Red Bark, reduced to a fine powder, were added ſixteen ounces of diſtilled water; and after remaining together twenty-four hours in a Florence flaſk, the liquid was carefully filtered. The ſame experiment was made with the Peruvian Bark commonly in uſe.

The colour of the two infuſions was very different, that made with the Red Bark being much deeper. The taſte and flavour of the infuſion of the Red Bark were conſiderably more powerful than of the other. In the opinion of many gen-

tlemen who taſted the infuſions, the cold infuſion of the Red Bark was more ſenſibly impregnated than even the ſtrongeſt decoction of the common Bark.

EXPERIMENT II.

TO two ounces of the cold infuſion of the Red Bark, were added *twenty* drops of the *Tinctura Florum Martialium*. It immediately became of a darker colour, ſoon loſt its tranſparency, and after a ſhort time precipitated a black powder.

EXPERIMENT III.

TO two ounces of the cold infuſion of the common Bark were added *twenty* drops of the *Tinctura Florum Martialium* in the ſame manneras to the other. It retained its tranſparency ſome time, and afterwards became of a dark colour, but there was no precipitation from it as from the laſt.

EXPE-

EXPERIMENT IV.

To an ounce of red Bark, reduced to a coarſe powder, were added *ſixteen* ounces of diſtilled water, and after boiling until one half was evaporated, the liquid while hot was ſtrained through a piece of linen. The ſame experiment, under ſimilar circumſtances, was made with the common Bark. The ſuperior taſte and flavour of the decoction of the Red Bark was equally obſervable with that of the infuſion. The decoction of the Red Bark, in cooling, precipitated a larger quantity of reſinous matter than the decoction of the common Bark. The difference of colour was likewiſe very diſtinguiſhable.

EXPERIMENT V.

To an ounce of Red Bark, reduced to a coarſe powder, were added *eight* ounces of proof

proof ſpirit, and, after ſtanding a week together, the Tincture was filtered.

The ſame experiment, under ſimilar circumſtances, was made with the common Bark. The Tincture of the Red Bark, both when taſted by itſelf and under precipitation by water, had more flavour and taſte than that of the common Bark.

The Tincture from the Red Bark is of a much deeper colour than the other.

EXPERIMENT VI.

To each *reſiduum* of the above Tinctures were added *eight* ounces of proof ſpirit, which were infuſed in a moderate ſand heat for the ſpace of *twenty-four hours*, and afterwards allowed to remain together a week, occaſionally agitating them,

them. The Tinctures were then poured off, that of the Red Bark evidently appearing to be the ſtrongeſt.

The Tinctures both of Experiments V. and VI. were by a gentle heat evaporated to the conſiſtence of a reſinous extract.

The extract from the Tincture of the Red Bark was of a ſmooth, homogeneous appearance, not unlike the Balſam of Peru, when thickened: The flavour and taſte of the original Tincture were intirely preſerved in it.

The extract from the Common Bark had a very different appearance. It ſeemed coarſe and gritty, and by no means ſo characteriſtic of its original Tincture.

The quantity of extract procured from the Red Bark was conſiderably greater than from

from the ſame quantity of common Bark; but, as the *reſiduum* of neither was rendered entirely inert, the abſolute quantity could not be aſcertained. *

EXPE-

* To 26 lb. of red Bark were added 26 gallons of proof ſpirit, after remaining together for ſome time the Tincture was poured off, and ſubmitted to a diſtillation in a water bath, the quantity of ſpirituous extract obtained was 12 lb. and a half; a quantity of water being poured on the *reſiduum* of the Tincture, the watery extract obtained was 4 lb.

In another experiment with 30 lb. of Red Bark, of an inferior quality, treated in the ſame manner as the former, only 11 lb. and a half of ſpirituous extract was procured, and 4 lb. and half of watery extract.

The ſame quantity of the beſt Peruvian Bark hitherto in uſe gives from 6 lb. and a half to 7 lb. and a half of ſpirituous extract.

It may be proper to obſerve, that the facts here mentioned are on the authority of a very eminent druggiſt, who had accurately marked the quantity of extract obtained by the uſual proceſs from a given quantity of red Bark at two different trials; the reader will likewiſe obſerve, that although the ſpirit employed for making the Tinctures may have been ſaturated with

EXPERIMENT VII.

A tea ſpoonful of each of the Tinctures, prepared by Experiment V. was added to *two* ounces of water; the reſinous precipitation from the Red Bark was not only more copious, but fell more quickly to the bottom of the glaſs than that from the other, and yet what remained ſtill diſſolved in the water, was infinitely more in the Red Bark than in the common Bark, ſo far as we could judge from the taſte and flavour of both.

with reſin, yet a freſh quantity was not poured on the reſiduum, which by extracting the whole reſin would have yielded a larger proportion of reſinous extract, and conſequently left little or nothing for the watery extract. Though theſe experiments were not made with any view to a philoſophical purpoſe, yet I am ſufficiently convinced of their accuracy; they are more concluſive than experiments conducted on a much ſmaller ſcale.

EXPE-

EXPERIMENT VIII.

In imitation of the experiments of my ingenious friend Dr. PERCIVAL, I added to *two* ounces of the watery infuſion of each Bark a few drops of the *Sp. Vitriol, ten.* The acid loſt its taſte more in the infuſion of the Red, than in the common Bark, ſo that there were more obvious appearances of its being neutralized.

EXPERIMENT IX.

A decoction of both Red and Common Peruvian Bark was prepared by taking an ounce of each and boiling them in a pint and a half of water, to *one* pint; the former had greatly the ſuperiority in ſtrength and power, as mentioned in a preceding Experiment. A pint of freſh water was added to each decoction; the boiling ſtill continued till that quantity was

was evaporated. The decoction of the common Peruvian Bark ſeemed gradually to loſe its ſenſible qualities, while that of the Red Bark ſtill retained its own.

The ſame quantity of water was added as before to each, and the decoction repeated until a gallon of water was exhauſted; at the expiration of which time, the common Peruvian Bark was rendered almoſt taſteleſs; the Red Bark ſtill retained nearly its former ſenſible qualities. This experiment proves that the common practice of boiling the Bark is hurtful to its powers.

By my deſire Mr. SKEETE, a very ingenious and attentive young gentleman from Barbadoes, and a ſtudent of medicine in Guy's Hoſpital, made ſeveral Experiments in order to aſcertain the comparative antiſeptic

tiſeptic power of Red Bark, with the common Peruvian Bark; and he found that the infuſion of Red Bark preſerved animal matter much better, and for a longer time, than the infuſion, or even decoction of the common Bark; indeed, the decoction of common Bark, after its powdery part had ſubſided, was leſs bitter, and preſerved animal matter for a ſhorter time than the infuſion of the ſame Bark. His experiments were conducted with great accuracy, and the reſult of them were ſubmitted to the examination of many gentlemen at Guy's Hoſpital.

The concluſions to which the above experiments evidently lead, are,

Firſt, That the Red Bark is more ſoluble than the Peruvian Bark, both in water and ſpirit.

Secondly,

Secondly, That it contains a much larger proportion of active and reſinous parts.

Thirdly, That its active parts, even when greatly diluted, retain their ſenſible qualities in a higher degree than the moſt ſaturated ſolutions of common Bark.

Fourthly, That it does not undergo the ſame decompoſition of its parts by boiling as the common Peruvian Bark.

Fifthly, That the Red Bark is more aſtringent than the common Peruvian Bark.

Sixthly, That its antiſeptic powers are greater; as an additional proof of this it may be proper to obſerve here, that both its cold infuſion and decoction preſerved entire their bitter and other medicated powers in the month of June, in the Ela-

boratory of Guy's Hoſpital for five weeks, and perhaps for a much longer time, while a decoction of common Bark gave evident marks of a change in a few days. In the decoction of Red Bark, the powder, which is ſeparated during the cooling of it, remains intimately diffuſed through the liquor, which therefore continues loaded and turbid when at reſt. In the decoction of common Bark, the powder quickly ſubſides to the bottom, the Red Bark therefore contains in it a large proportion of mucilaginous parts, ſuch as have been propoſed by the late Dr. FOTHERGILL, to be added to the decoction of the common Peruvian Bark, in order that it may remain turbid when at reſt, and thereby that its reſinous parts be more perfectly ſuſpended in the body of the liquor. It is obvious that this circumſtance will favour exceedingly the action of the ſtomach upon it.

The

The advantages therefore to be expected from the Red Bark cannot be obtained from any quantity of common Bark. The beſt common Bark, compared with the Red Bark, appears inert and effete.

All the above experiments were executed in the preſence of ſeveral Gentlemen.

I was led more particularly to proſecute this ſubject, from an opinion that the Red Bark might ſo impregnate cold water by infuſion, as to cure Intermittent Fevers with more certainty than could be done even by the decoction or powder of common Bark. The ſenſible qualities which appear from the above Experiments, being ſo much greater, in the cold infuſion of the one than in the decoction of the other.

It cannot I think be denied, that the Experiments above related, and which have been executed and frequently repeated with great accuracy, ſufficiently prove that the Red Peruvian Bark, exceeds the other in its ſenſible qualities, and that it contains a much larger proportion of thoſe reſinous and active parts on which the power and efficacy of Bark have been by all writers on the practice of medicine and *Materia Medica* believed to depend.

OF THE GENERAL OPERATION OF BARK ON THE HUMAN BODY.

THE following remarks are intended to apply to the Peruvian Bark, generally in uſe; but I am certain that the effects enumerated are found to be produced in a much higher degree by the Red Bark.

The

The cold infuſion of Bark ſeems evidently to promote both appetite and digeſtion, it increaſes the tone and action of the ſtomach, by which the gaſtric liquor, the great *Menſtruum* of our ſolid aliment, is more perfectly prepared.

In moſt caſes, the Bark rather promotes coſtiveneſs, the common effect of ſtrong and vigorous inteſtines. In very large doſes however it generally proves purgative, but this effect ceaſes after a ſhort time.

It renders the pulſe ſtronger and fuller in health, and in moſt diſeaſes unaccompanied with Fever.

In Low and Malignant Fevers, and more eſpecially under remiſſion, it renders the pulſe ſtronger and even ſlower.

In particular circumſtances of Fever marked with debility and a tendency to remiſſion, though of a very irregular type, it diminiſhes febrile heat.

It encreaſes the animal heat and aggravates every ſymptom, in Fevers accompanied either with much local inflammation, or a general inflammatory diatheſis, which is ſtrongly indicated by the pulſe, the manner of the original attack, the want of due freedom in the ſecretions, and the painful and oppreſſive exerciſe of every function.

It checks profuſe and colliquative diſcharges, eſpecially thoſe by the ſkin, while it does not ſeem to diminiſh inſenſible perſpiration, or other natural evacuations.

It checks every tendency to putrefaction or gangrene, occurring under circumſtances of debility, but it may promote both, if injudiciouſly employed, while the action of the ſyſtem is too violent, or the inflammatory diatheſis is too prevalent. It ſeems more reaſonable to refer its action, as an antiſeptic, to its tonic power on the moving ſyſtem, than to any primary action on the animal fluids.

Perhaps this doctrine will apply in explaining the hiſtory of remedies uſed in the Scurvy, a diſeaſe invited and favoured by every means which can induce debility, and evidently preceded by ſymptoms of a diminiſhed *vis vitæ* which neceſſarily lead to others that in a ſecondary manner only take place in the animal fluids.*

* An Enquiry into the Source from whence the Symptoms of Scurvy and of putrid Diſeaſes ariſe, by Dr. MILMAN.

It promotes under many circumſtances a favourable ſuppuration, and improves the nature of ſanious and ichorous diſcharges.

Its action here can only be explained from its general tonic power, for either general or local debility retards ſuppuration, and favours the obſtinacy of ill-conditioned ulcers.

Upon the ſame principle its power of promoting the generationof true *pus* in the Small Pox may be explained.

The period of debility is that only in which the Bark ſhould be employed.

I have ſeen patients under the moſt confluent Small Pox require Bark in the progreſs of ſuppuration, and yet, in the more advanced ſtate of the diſeaſe, the ſame

ſame perſons have been ſaved by the ſeaſonable and repeated uſe of the Lancet in the ſecondary Fever, which attacked with freſh rigors and inflammatory ſymptoms of a true Peripneumony.

In delicate and irritable habits, which ſeem more eſpecially to favour ſcrophulous affections, and which produce inflammation of a peculiar nature, that gives way ſooner to tonics than evacuants, the Bark has been found the beſt remedy: this may probably admit of the explanation already given on the ſubject of Scurvy.

OF ITS USE IN THE CURE OF INTERMITTENT FEVERS.

WHAT I have to offer on this ſubject is the reſult of careful, and diligent obſervation

tion, totally unconnected with prejudice of any kind, in favour of any particular theory, or a blind attachment to ſyſtem.

Notwithſtanding the cautious and timid practitioner has very generally forbid the uſe of Bark until evacuations ſhould have been made; I am very well perſuaded from obſervation, that in Intermittent Fevers, ſuch as rage and are endemic, particularly in low and marſhy ſituations, and ſuch as frequently occur on the banks of the Thames, and the lower parts of this metropolis, the Bark cannot be given too early; the uſe of either emetics or purgatives, as preparatory, is not only unneceſſary, but in ſome caſes productive of greater debility, and therefore to be avoided.

The doctrine of concoction, however juſt it may be in continued Fevers, and in ſome caſes of inflammation, does not apply

in

in Intermittents produced by the *Miaſmata* of low and ſwampy grounds, and which afford the principal ſource of agues in the environs of this city.

In this opinion I am confirmed by the teſtimony of Dr. CLEGHORN and others; who frequently found it neceſſary to give it on the firſt acceſſion of the diſeaſe, in order effectually to obviate, or weaken the return of a *ſecond* paroxyſm, which in many caſes would inevitably have proved fatal; and Dr. LIND has very properly obſerved that ſuch ſymptoms which have been attributed to Bark, are rather the effects of the paroxyſm being allowed to return, from the neglect of that medicine.

There are many ſymptoms which would forbid the uſe of Bark, did they occur diſtinct and independent of Intermittent Fever,

Fever, ſuch as Cough, difficulty of breathing and pain in the ſide: they are frequently brought on by the paroxyſm of the Intermittent, and only give way to the uſe of the Bark by which that paroxyſm may be prevented. Such ſymptons do not admit of a diſtinct and ſeparate treatment, but are always aggravated by the uſe of evacuants, more eſpecially bleeding, the moſt probable means of relief in common Depuratory Fevers.

I have ſometimes found a complication of Intermittent and Hectic Fever in the ſame perſon and could diſtinguiſh between the paroxyſms of each; the Bark, while it cured the Intermittent, has even moderated the Hectic; though Hectic Fever of itſelf, eſpecially as a ſymptom of *Phthiſis Pulmonalis* does not appear to give way at any time under the uſe of the Bark; I think it probable, therefore, that although

although in the treatment of intermittents, complicated with other diſeaſes, our chief attention ſhould be firſt directed to the cure of the intermittent, yet it may be neceſſary to purſue an indication that may have in view the other diſorders, not incompatible with the treatment of the Intermittent. In Dropſies, which accompany Intermittents, I have found more benefit from the uſe of Bark, joined to the neutral ſalts, and other mild diuretics, than from active purgatives, which always tend to protract the Intermittent. Every returning paroxyſm of an ague confirms more and more the cauſe of that diſeaſe which it has produced.

It is not intended to inſinuate that no caſes do occur, in which it may not be prudent to adminiſter a vomit, eſpecially to perſons ſubject to bilious accumulations in the ſtomach; but this is more with

with a view of removing an obſtacle to the operation of Bark, than as neceſſary to render it ſafe; and I have frequently ſeen *nauſea* and vomiting ſo much a ſymtom of the paroxyſm, that they gave way only to the free uſe of Bark itſelf.

A practice more abſurd than that of preceding evacuations has been adopted and recommended, *viz.* That of evacuating by purgatives after the cure had been compleated by the Bark, this ſeldom fails of bringing back the Intermittent, as one cauſe of inducing debility, the moſt favourable ſtate of the body for the attack of Intermittent Fevers.

In perſons who are rendered coſtive by the uſe of the Bark, I would recommend the common practice of giving a few grains of Rhubarb, or *Pilul. Ruſi.* If on the other hand it ſhould prove purgative;

tive, a few drops of the *Thebaic Tincture* is the uſual and beſt means of checking that operation.

Intermittent Fevers are frequently ſo very anomalous in their appearances, and aſſume ſo much the character of other diſeaſes, that an unſkilful, or inattentive practitioner may be deceived; they, however, under any form or any type, generally give way to the Bark; ſometimes aided and aſſiſted by other means.

Much experience is required to detect the paroxyſm of an Intermittent, which is frequently diſguiſed under different forms, and although the Bark is our beſt remedy, yet the violence of ſome ſymptoms which accompany the diſeaſe, and interrupt its natural and uſual form, render it neceſſary that other remedies be occaſionally employed, as adapted to the particular

particular circumſtances of the caſe; not always ſo much with a view of rendering the Bark a ſafe remedy, as of rendering it an effectual one.

Such anomalous appearances are greatly influenced by the nature of the prevailing epidemic of the ſeaſon, they more particularly interrupt the progreſs of the cold fit, and are generally much aggravated during the paroxyſm of the Intermittent.

The diſorders which I have ſeen complicated with Intermittent Fevers have been chiefly thoſe of a bilious kind, occuring in the autumnal ſeaſon, ſuch as violent and exceſſive vomiting, Diarrhæa, with pain in the bowels, Cholera Morbus, periodical Head-Achs, Pain in the Side, and frequent inflammatory diſorders, ſuch as Pleuriſy, Peripneumony, and the acute

acute Rheumatiſm, and even ſometimes ſpaſmodic diſeaſes, terminating in apoplexy and death.

Such diſeaſes have been ſuppoſed to be only varieties of the Intermittent Paroxyſm, and have been believed to give way to the ſame remedy which cures an ague.

I think, however, we have no analogy in nature to ſupport this doctrine, and it ſeems highly unreaſonable to ſuppoſe, that the ſame cauſe can produce ſuch a diverſity of appearances. Indeed the influence of the prevailing epidemic diſeaſes on ſporadic complaints evidently ſhew, that the human body is ſubject to be acted upon by more than one cauſe at a time, and that the remedies to be employed ſhould have a view to ſuch a diverſity of circumſtances. It therefore becomes

the object of the phyſician to know which of two or more diſeaſes are moſt deſerving of his early attention, which the human body may labour under at the ſame time. He will generally find, that as the paroxyſm of an Intermittent Fever excites ſuch violent action in the ſyſtem, and generally aggravates the ſymptoms of other diſeaſes, it ought to be early removed.

In ſome caſes however I have ſeen ſuch active appearances of inflammation prevailing in a perſon labouring under an Intermittent Fever, and ſo much encreaſed in the hot fit, that unleſs a quantity of blood had been taken, which was always fizy, the patient moſt probably would have died. Such ſymptoms of inflammation retard the cure of the Intermittent, and therefore are in the firſt inſtance to be removed.

This

This may probably explain the reaſon why inflammatory Fevers in their decline often aſſume the appearance of Intermittent diſeaſes.

In the ſame manner it may be neceſſary to remove Symptomatic Vomiting, Cholera Morbus, and the like, by remedies peculiarly adapted to theſe diſeaſes, before the ſtomach will ſo far favour the action of Bark as to enable it to cure the Intermittent Fever.

Peruvian Bark is chiefly adapted to the cure of genuine and idiopathic Intermittent Fevers, and not thoſe of a ſymptomatic nature, which frequently require remedies of a different kind.

It is impoſſible in a treatiſe of this nature to point out more minutely the circumſtances

cumſtances which ought to regulate and direct the conduct of practitioners in the treatment of complicated Intermittents, and the condition of the habit, which may render neceſſary the previous uſe of other remedies, or the combination of them with Bark, in order to render its operation either ſafe or effectual.

It appears to me, that the advantages at any time derived from the uſe of other remedies, depend upon their having removed ſome other diſeaſe, which may have protracted the ague, or interrupted the action of Bark in the cure of the Intermittent, and not on their obviating future effects which have been falſely attributed to Bark, while they are chiefly produced by the obſtinacy and the inperfect treatment of the Intermittent Fever.

Both

Both the Vernal and Autumnal Intermittents of Dr. SYDENHAM yield to it, the latter however ſometimes with more obſtinacy than the former.

In ſeveral caſes I have experienced the efficacy of the Red Bark in removing *Tertians* and *Quartans* which had reſiſted the common Bark, this however is not to be wondered at, when we conſider the diverſity in the power even of different kinds of the common Bark in general uſe.

I hope I ſhall be excuſed in digreſſing ſo far, as to mention the uſeful effects I have frequently experienced from the exhibition of Opium in Intermittent Fevers. We are chiefly indebted for this practice to Dr. LIND. It moderates ſo effectually the force of the paroxyſm by ſhortening the duration of the cold fit, as well as by di-

miniſhing the violence of the hot fit, that I had often flattered myſelf it was capable of curing Intermittents. In this however I was diſappointed..

From the experience of it in many hundred caſes, I conclude with Dr. LIND, "That an Opiate given ſoon after the "commencement of the hot fit, by abating the violence and leſſening the duration of the Fever, preſerves the conſtitution ſo entirely uninjured, that "ſince I uſed Opium in Agues, neither a "Dropſy nor Jaundice has attacked any of "my patients in theſe diſeaſes." The manner in which I employ it, is either by giving a grain of the *Thebaic* extract upon the acceſſion of the cold fit, or *twenty* drops of the *Thebaic* Tincture upon the acceſſion of the hot fit, the action of the former being later from its ſlower ſolubility.

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The Red Bark is ſo much warmer than the other, that it would ſeem to anſwer all the purpoſes derived from the union of Cordials, Aromatics, Serpentaria, and the like, ſo much recommended in the obſtinate *Quartan* Intermittents of elderly people.

Some difference in opinion has prevailed regarding the manner of giving the Bark. Moſt practitioners concur in thinking, that it cures Intermittents more readily when taken in ſubſtance than in any other form. In this ſtate, it is both a bulky and nauſeous doſe in the quantity neceſſary to cure an Intermittent; at any rate, it ought rather to be diffuſed in ſome liquid, than given in the form of an electuary or pills, which are ſometimes difficultly ſoluble.

I have found milk cover the taſte of Bark, and make it more acceptable to children than any other vehicle. The extract of Liquorice diſſolved in water, may be likewiſe employed to cover the taſte of Bark. Its taſte is alſo corrected by wine, eſpecially by Old Hock.

It would appear from the general preference given to Bark in ſubſtance, that its decoction, infuſion, or tincture, are found too weak in any quantity for the purpoſe of curing Intermittents, otherwiſe as they are much lighter to the ſtomach and act more quickly, they ſhould be preferred.

I hope to make it appear, that in this reſpect the Red Bark has the advantage of any other kind now in uſe, ſince either its infuſion or decoction will cure Intermittents,

mittents, and its powder in a much ſmaller doſe than that of common Bark will produce ſimilar effects.

The beſt time for giving the Bark is in the intermiſſion between the paroxyſms and when the ſtomach is empty. In *Quartan* Fevers, where there are *two* days of *Apyrexia*, we ſhould be particularly deſirous of getting down a large quantity on the day immediately preceding the approaching paroxyſm, and in other Intermittents as near the period of the returning paroxyſm as the ſtomach will bear it.

A very prevailing argument in favour of the Red Bark has been ſuggeſted to me both by apothecaries and their patients, viz. that it will cure when taken in half the quantity which has been found neceſſary of other Bark. I am lik wiſe perſuaded from a great variety of trials, that

while

while other Bark only gradually weakens the force of the Intermittent Fever, the Red Peruvian Bark will frequently obviate the return of a ſecond paroxyſm. It is ſeldom I have found it neceſſary to give more than half a dram every two hours in the interval of the fit, and in no one Intermittent, even of a *Quartan* type have I found it neceſſary to give more than ſix drams between the paroxyſms. I have frequently known double that quantity of common Bark fail to produce the deſired effect.

It is however unneceſſary to limit the doſe. One dram may be given every hour, if the ſtomach will retain it, and will perhaps in ſome caſes remove the diſeaſe more quickly than a ſmaller quantity given at longer periods.*

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* I have likewiſe frequently adopted the practice recommended by Dr. HOME, of giving the Bark as ſoon

The following facts will beſt determine how far I am juſtified in favouring the opinion of the ſuperior excellence of the Red Bark.

EDWARD VIRGOE, aged 21, had laboured under an Intermittent Fever *five* months. It was firſt a *Tertian* and afterwards became a regular *Quotidian*, accompanied with Cough, Dyſpnœa, and Hoarſeneſs, particularly in the paroxyſm. The common Peruvian Bark, given in the doſe of one dram every hour, prevented the return of the paroxyſm for a few days; the patient however relapſed notwithſtanding the Bark was continued, he was at laſt cured by taking one dram of the Red Bark every ſecond hour for the ſpace of ten days.

It

ſoon as the ſweating fit of the Fever has ſufficiently carried off the hot fit; this is particularly proper when the interval is ſhort between the paroxyſms.

It appears from the above case of *Edward Virgoe*, and several others which have occurred to me, that Intermittent Fevers which had resisted common Bark and other remedies, have yielded to the Red Bark, even under very complicated and unfavourable appearances.

In this opinion I am likewise justified by the experience and testimony of many eminent practitioners, and so decided are they in its favour, that the demand for it every day increases, especially in some of the neighbouring counties where Intermittents are not only more frequent, but more obstinate.

I began now to suspect that its powers were even sufficient in cold infusion in most cases to cure Intermittent Fevers, and in all other cases to answer every purpose which might be expected from common Peruvian

Peruvian Bark, in any form in which it had hitherto been employed.

The following facts are ſufficient to authoriſe this opinion.

JAMES YOUNGMAN, aged ſixteen, had laboured under a *Tertian* intermittent many months; it was accompanied with a ſevere cough, and his ſtrength was conſiderably impaired. He was ordered to take *four* ounces of the cold infuſion of the Red Bark every *third* hour; after taking it for *two* days the paroxyſm did not return. Its uſe was perſevered in *fourteen* days, and he continued perfectly well.

THOMAS PUGH, aged twenty-two, from *Woolwich* in *Kent*, had an Intermittent Fever of *five* weeks ſtanding of the *Tertian*

tian type, accompanied with a conſiderable degree of cough, occurring eſpecially in the cold fit; he took the cold infuſion, as recommended in the former caſe, after which time he had only one ſlight return of the paroxyſm, his cough is likewiſe totally removed.

JOHN WELDING, aged twenty-five, had an Intermittent Fever at *Sheerneſs* for near a year, he took large quantities of common Peruvian Bark, without effect. It was of the *Quotidian* type. After taking a cold infuſion of the Red Bark in the quantity of a quart in *twenty-four* hours for *three* days, the paroxyſm diſappeared and has never ſince returned. It proved at firſt purgative, but ſoon loſt that effect. His ſtrength and appetite were greatly improved under the uſe of the infuſion.

Since

Since the firſt edition of this work, I have had frequent experience of the efficacy of the cold infuſion in the cure of Intermittent Fevers, but it requires to be continued for a greater length of time than is neceſſary, when the Bark is taken in ſubſtance with wine. I have however ſeen caſes where the ſtomach had rejected the Bark in ſubſtance, which yielded readily to the cold infuſion when taken in the doſe of four ounces, every two hours in the interval of the paroxyſm. I have likewiſe met with caſes of Intermittent Fevers ſo complicated with other diſorders, as to make it neceſſary to act more gradually and cautiouſly on the conſtitution, by the uſe of the cold infuſion, than by giving the Bark in ſubſtance in the doſes neceſſary for inſtantly removing the Intermittent Fever.

As I conſider a perſeverance in the uſe of the Bark proper for ſome time after the paroxyſm has been removed, I think that it is only neceſſary to have recourſe to the cold infuſion for that purpoſe, and it will be found a much more agreeable preparation than any other. I have found great benefit from continuing its uſe in the convaleſcent ſtate of perſons after Intermittent and other Fevers.

I could here enumerate a great variety of caſes which have occurred to me, both in public and private practice, in confirmation of the general doctrines I have now laid down, but I think it better to mention the general reſult of a ſucceſsful practice.

The cold infuſion employed in the above caſes was prepared by pouring a quart

quart of cold water on two ounces of the Red Bark in fine powder, frequently agitating them for the ſpace of twenty-four hours. *

OF ITS USE IN THE CURE OF OTHER FEVERS.

Remittent Fevers are frequently equally ſteady in their periods of remiſſion and acceſſion with thoſe of the intermittent kind, but the *Apyrexia* being leſs perfect and complete has given riſe to many doubts regarding the ſafety of giving Bark. As remittent Fevers are more particularly

* Though the caſes above mentioned, evidently prove that the cold infuſion will cure Agues, yet they are not intended to divert the attention from other more effectual means of giving this medicine.

marked by appearances indicating the prevalence of bile in the ſtomach; the propriety of giving an *emetic*, prior to the uſe of the Bark, ſeems well founded, and the remiſſion is frequently rendered more complete by ſuch a practice.

In the remitting fevers, however, of warm climates, the acceſſion of the paroxyſm is ſo extremely violent, and the ſtrength of the patient ſo quickly exhauſted, that it becomes abſolutely neceſſary to catch the firſt opportunity of the moſt trifling remiſſion, and to give the Bark with the ſame freedom that you would do in common Intermittents.

In Remitting Fevers, the concomitant ſymptoms are more to be regarded than in Intermittents, becauſe they more eſpecially diſturb, interrupt, and ſhorten the periods of remiſſion; even in the warmeſt climates,

climates, and under the ſevereſt prejudices, it has been found neceſſary to take away a few ounces of blood to relieve pain in the head, oppreſſion in breathing, an intenſe dry heat on the ſkin, and other ſymptoms protracting the paroxyſm; by ſuch means the remiſſion has been brought on, and the Bark given with greater effect.

The Fevers of this country ſeldom have regular remiſſions, until they have been properly treated by evacuations; the inflammatory by bleeding, and the bilious by vomiting and purging.

When Fevers are brought into a ſtate of obvious remiſſion; that is, when the pulſe becomes from ten to twenty ſlower at ſome particular time in the twenty-four hours; when the reſtleſsneſs, anxiety, and tendency to delirium abate; when the mouth and fauces are moiſt; when the

organs of ſecretion, and eſpecially the ſkin are more open and pervious, ſuch ſymptoms of remiſſion admit the uſe of Bark with the ſame freedom as in Intermitting Fevers.

The ACUTE RHEUMATISM, notwithſtanding its inflammatory attack, and the appearance of the blood, and although the joints often continue inflamed ſeveral weeks, very early aſſumes the form of a Remitting Fever.

Under ſuch circumſtances, a perſeverance in the *Antiphlogiſtic* plan is generally found to be ineffectual. I have, in ſeveral caſes of this kind, employed a cold infuſion of the Red Bark, and the diſeaſe ſeemed to give way only to this treatment.

The ACUTE RHEUMATISM in its remiſſions aſſumes the form of a double *Tertian*, and the patient is frequently greatly

greatly exhauſted by the profuſe ſweatings which terminate the paroxyſm.

It is in ſuch caſes that I would particularly recommend the uſe of Bark. I have found this practice more ſucceſsful, and it muſt be allowed to be more rational, than the uſe of *Volatiles* and *Guaiac*.

The tedioufneſs, as well as the ineffi-cacy of the antiphlogiſtic practice in the cure of the Acute Rheumatiſm, has frequently directed my attention to that diſeaſe in a particular manner, and after being repeatedly diſappointed and diſſatisfi-ed by purſuing the uſual mode of treatment recommended by the beſt writers, either antient or modern, on the ſubject, I was determined to adopt other means, which I think have proved more ſucceſsful. The Rheumatic Fever appears to me, notwithſtanding the violence of its inflammatory ſymptoms, to be an Intermittent Fever in a ſtate of diſguiſe, and its periods

are evidently, as I have already mentioned, thoſe of a double *Tertian*. Its inflammatory ſymptoms, however, ought in a certain degree to be reduced by moderate bleeding, occaſional purging, and great dilution, before it can be treated as an Intermittent Fever; it does not however appear to me incompatible with the ideas of its being inflammatory, to have recourſe to the moderate uſe of the Bark, to obviate the weakneſs which may be induced by the neceſſary uſe of the lancet, nor does it appear repugnant to the idea of its being intermittent, that the inflammatory ſymptoms which render the Intermittent anomolous and irregular, ſhould be moderated and checked by an antiphlogiſtic treatment accompanying the uſe of Bark. I have found in many caſes by this practice, the Rheumatic Fever greatly ſhortened, and the debility and torpor in the joints, which is frequently the effect of that diſeaſe, together with the diſpoſition to the

Chronic

Chronic Rheumatiſm, generally prevented. The Acute Rheumatiſm appears from the ſtate of the pulſe, the tendency to profuſe ſweating, the depoſition in the urine, the frequent acceſſion of chilly paroxyſm to be an Intermittent Fever, which is probably prevented from aſſuming the more uſual and natural form of that diſeaſe by the inflammatory action on the joints, which I have ſometimes ſeen merely local, *(i. e.)* unaccompanied with any general Inflammatory Fever in the habit: in ſuch caſes, while leeches have been applied to the joints, and the hemorrhage from them encouraged by fomentations, I have given Bark freely, which I have never known to increaſe the inflammatory ſymptoms while the uſual means of promoting inflammation were guarded againſt. General and vague maxims, applied in reaſoning on the action of Bark, and its tendency in all caſes to promote inflammation are therefore ill found-

ed, and had they not been corrected by experience and obſervation, would have deprived us of the advantages we have derived from the uſe of this medicine in the cure of Rheumatic Fevers, Scarophulous Inflammation, and perhaps a great variety of other diſeaſes. I have ſeen in delicate and irritable habits Rheumatic Inflammation on the joints, accompanied with a low Nervous Fever, which gave way only to Bark and Sedatives.

In the Rheumatic Fever I generally begin about the ſeventh day from the attack with the cold infuſion of the Red Bark, in the doſe of three ounces every two or three hours, until the evening paroxyſm comes on; nor am I, by this practice, in any degree, diverted either from, general or local bleeding, or evacuations by ſtool, when the circumſtances occur which may render them neceſſary.

In

In that *low Fever*, which HUXHAM has ſo well deſcribed under the title of nervous, I have preſcribed the cold infuſion of the Red Bark with advantage, where the ſkin hath been ſoft, and the pulſe under one hundred and ten.

In ſuch Fevers, it chiefly acts as a Cordial in ſupporting the *Vis Vitæ*, and for which reaſon I think it may be given with advantage in the decline of all Fevers, even where the ſymptoms on the attack of the diſeaſe were evidently inflammatory.

Almoſt every Fever remits in its decline.

Fevers originally putrid and malignant, as ariſing from *Miaſmata* and putrid vapour, very ſeldom occur in this City, they are moſt generally to be found in Fleets and in Camps, and in ſituations where air

air ſtagnates or where animal bodies are confined in a cloſe place.

In ſuch Fevers, the cure is effected by vomiting and warm Cordials; of the laſt is the Red Bark in an eminent degree.

It may be infuſed in wine, which will render its operation more antiſeptic.

It intimately unites with the ſeveral acids, from which a very favourable operation in ſuch caſes may be expected.

In the Putrid Fever, attended with a gangrenous Sore Throat, I have in many inſtances experienced the efficacy of Bark, but care ſhould be taken not to confound this diſeaſe with the *Angina Mucoſa* of Dr. HUXHAM, or the *Angina Eryſipelatoſa* of Dr. GRANT, diſeaſes, though contagious, and accompanied with *Eruptions* on the ſkin, evidently of the moſt inflammatory

matory nature, and requiring the uſe of *Evacuations*.

In *Petechial Fevers*, with ſymptoms of great proſtration of ſtrength, I have frequently ſeen the pulſe not much quickened, and the animal heat very little encreaſed. In ſuch caſes I would recommend the uſe of the Red Bark infuſed in Old Hock.

I have ſeen a *Jail Fever* with no other diſtinguiſhing ſymptoms than Petechiæ and Debility; the tongue clean, the pulſe moderate though ſmall, and the ſecretions apparently not diſturbed. In that caſe, bliſters on the extremities, Bark and Wine, are the beſt remedies.

In general, we find that Fevers marked with ſymptoms of debility are chiefly found to remit, and therefore they admit of the uſe of Bark; by increaſing the tone and

and vigor of the ſyſtem, it oppoſes a returning paroxyſm.

Fevers of more violent action, ſuch as we denominate inflammatory, do not remit at leaſt ſo obviouſly, until that action is moderated by Evacuations, ſo that they chiefly remit only in their decline.

The primary attack of moſt Fevers in this country, is attended with violent action, which is beſt moderated ſometimes by the prudent uſe of the lancet, but moſt frequently, by the *Tart. Emetic* with the infuſion of *Sena* and ſome of the neutral ſalts. All Fevers beginning with a violent *Rigor*, and followed with great heat, require early evacuations, while ſuch as creep on ſlowly and imperceptibly in the beginning, with giddineſs in the head, rather than acute pain, much anxiety and watchfulneſs, tremor and debility, give way to Opiates, Bark, Serpentaria and Wine.

Bliſters applied to the arms are extremely uſeful in keeping up the pulſe, eſpecially if the ſkin be ſoft, the tongue and fauces ſufficiently moiſt; much more may be learned by attending to this laſt appearance than is generally known.

It is neceſſary, however, to diſtinguiſh between the dryneſs of the tongue and mouth, as a ſymptom of the Fever, and as ariſing from the circumſtance of a patient ſleeping with his mouth open.

I hope the obſervations here offered to the public, on the ſubject of this invaluable remedy, will remove all prejudices againſt a Peruvian Bark of a large and coarſer appearance, than is generally employed.

It is at preſent in very great demand, the difficulty of procuring it will not, I hope, inſtigate Druggiſts and Dealers in the

the article, to ſubſtitute at any time a ſpurious kind in its room.

Extract of a Letter from Mr. EDWARD JACOB, *jun. an eminent Surgeon, at Feverſham, in Kent.*

I HAVE had ſuch repeated opportunities of trying the Red Bark, that I hope to be able to give you every ſatisfaction you can wiſh, of its ſuperior efficacy over the Bark in common uſe.

Our ſituation being in a country not far diſtant from the marſhes, renders the inhabitants more expoſed to intermittent complaints than thoſe of cities and more inland counties; and I aſſure you, before the uſe of the Red Bark was known, the Ague, from its particular ſtubborneſs (as we then thought, or what we have ſince obſerved from the want of efficacy in the other Bark) might be truly called

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the *opprobrium Medicorum*; but now I think that ſtain is entirely removed, for I have not met with one ſingle caſe, where (when I could perſuade the patient to adhere ſteadily to my advice) I have ever found the Red Bark to fail.

The Peruvian Bark, with which I was formerly provided, was of the beſt kind, and always had in the quill; yet, it was even much inferior in its effects to what ought reaſonably to be expected from it.

The firſt knowledge that ever we had of the Red Bark was in March, 1781, when a fewpounds were ſent us to try its effects; our Druggiſt informed us, that it was then in uſe at St. Bartholomew's Hoſpital, and was there found effectual. It remained in our houſe till May following, when I was attacked with an Ague; I did not

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at firſt think of trying the *new* Bark, for I gueſſed, by taking of the *old* in great quantity, which would not be diſagreeable to me, that my Ague would ſoon leave me; but, to my great diſappointment, fit ſucceeded fit, without ſhewing the leaſt good effect of the remedy applied. I was then determined to try the *new* Bark; but finding my Ague ſtubborn, I emptied the *Primæ Viæ* by an emetic and carthatic, and immediately, on the Fever going off, I took one dram of the Red Bark in fine powder, mixed with three ounces of the decoction, and a ſmall quantity of the tincture, which being a draught well loaded with Bark, at firſt ſeemed to ſit uneaſy on the ſtomach (which I have ſeveral times on being firſt taken, found the caſe with ſome of my patients, but which never took from its effect) but, after reſting for ſome time, I found myſelf in a ſtate to continue its uſe. My Ague from that time kept off;

off; till, from omitting the Bark too ſoon, and finding myſelf quite well, in a few weeks after, ſlight ſymptoms appeared again; but which never formed a direct fit; the Bark being again repeated, eradicated the diſorder.

My father, now in the 70th year of his age, has ſince that time been attacked with an Ague; but, from his having been before ſeized with a chillineſs without ſubſequent Fever, ſuffered himſelf to have three fits without trying any remedy; being then convinced of the reality of the Ague, applied to this Bark in decoction, with ſome tincture made of the ſame; he found it ſo effectual, that after taking it, the fit did not once return; he omitted the Bark too ſoon, and had one ſlight fit; but, after repeating the ſame remedy a few days, it has not ſince returned, and he is now perfectly well.

The patients who have received immediate relief from the new Bark, are ſo numerous, that I cannot, with any degree of certainty, gueſs the number.

The quantity that we have uſed from July, 1781, to the preſent time, is upwards of ſixty pounds. The manner in which we have uſed it, with a view to prevent the return of an aproaching paroxyſm, is by giving half a dram or one dram of the powder, mixed with two ounces of the decoction, and a ſmall quantity of the tincture. The decoction we have uſed, has been prepared by boiling three ounces of the groſs powder boiled in two quarts of water to one quart.

When the patient has been of a more delicate frame, or when it has been uſed as a corroborant, we have given the decoction and tincture without the powder. When the Ague has been but recently contracted,

contracted, we have ſeldom truſted to any thing but the Bark, but when ſtubborn, evacuants have been firſt given; half an ounce of the powder has very frequently cured an Ague without evacuants, or more Bark, when the fit was a recent one; we have now entirely left off giving the *old* Bark in any form ſince we have found ſo good effects from the Red Bark, and we uſed the Reſin of Red Bark with good ſucceſs in many Caſes, where the patient could take it only in the form of pills. I heartily hope the above account will prove ſatisfactory to you, if not I ſhall think myſelf very happy in anſwering at any time any future inquiries.

I am,

Sir,

with great reſpect,

your moſt obedient

and humble ſervant,

EDWARD JACOB, Jun.

Feverſham, June 23, 1782.

A Letter from Mr. Boys, *an eminent Surgeon and Apothecary at Sandwich in Kent.*

SIR

I AM ſorry it is not in my power to ſend you particular caſes of the effects of the Red Bark: having made no memorandums, I can only ſay, in general, that it is a much better kind of Bark, than any I have been able to procure hitherto. Whether the Intermittents have been worſe than common, or the Grey Bark has been of inferior quality, I will not take upon me to determine; but we were unuſually foiled in our attempts to cure that complaint, till we were furniſhed with the *new* Bark.

I can have no inducement to give a higher character of this drug, than it deſerves: but I do aſſure you, that ſince I began to uſe it, it has not once failed me, when

when the patient has taken it in a proper manner. Hence, I have a firm perſuaſion of its ſuperior efficacy, and I am the more confirmed in my opinion, by knowing that my ſentiments correſpond with yours, and with thoſe of all my medical acquaintance, in this neighbourhood, who have made trial of it. My beſt wiſhes attend your publication; not only becauſe I am perſuaded it will operate to the advantage of mankind, by extending the knowledge and uſe of this valuable medicine, but, likewiſe, becauſe I am in hopes it will haſten a freſh importation of the article, of which I have very little left, and I know not where to go for a ſupply.

I have the honor to be,

Sir,

Your moſt obedient ſervant,

W. BOYS.

Sandwich, June 19, 1782.

In addition to the character given of the Red Bark, by ſeveral practitioners in the country, is a Letter I received a few days ago from Sir WILLIAM BISHOP, *an eminent Surgeon, at Maidſtone, in Kent, dated June 16th.*

IN which he ſhews, by a variety of caſes, that in the cure of Intermittents, in that part of the world, the Red Bark had not only been infinitely more effectual than the common Peruvian Bark or any other remedy uſually employed, but that it had radically cured where Cold Bathing, Emetics, Opiates, Bitters, and Friction failed, and where the beſt Pale Bark, both by itſelf, and with a variety of other medicines, was exhibited without effect, even to the quantity of ſixteen ounces. The form he gives it in, is that of an electuary, with the addition of a

ſmall

ſmall quantity of the eſſential Oil of Pepper-mint aud Carraway-ſeed; and he ſeldom has occaſion, he ſays, to uſe more than from four to ſix ounces. One caſe he mentions, where a Sphacelus had taken place in a Malignant Fever, accompanied with delirium and every other bad ſymptom, the patient was recovered by the uſe of the Red Bark, Anodynes, and Wine; the Sphacelus ſeparating kindly, the Fever and every bad ſymptom ſpeedily gave way.

I am likewiſe favoured with another Letter from Sir WILLIAM BISHOP, *dated June 23, which contains many ſenſible and judicious hints upon this ſubject.*

HE recommends the grinding Red Bark into the fineſt powder by a mill, and afterwards ſifting it through the fineſt cypreſs ſieve, in order that it may ſit lightly on the ſtomach, and that its parts

may be uniformly blended together; he obſerves, that if, after breaking the Bark, you examine the broken pieces, by means of a glaſs in the ſun-ſhine, you will ſee the reſin like ſpangles of gold between the internal woody fibres and the outward grey coat; by comparing this appearance with the beſt Pale Bark, you will diſcover that the Red Bark contains a much larger quantity of reſinous parts.

Two ſcruples of Bark, as coarſely powdered as is commonly ſold by the apothecaries, will be as diſagreeable to take, as a dram or four ſcruples finely ground. One dram is the doſe he generally gave to an adult, although he ſometimes met with patients, who would chooſe to take two or three drams at a doſe, and thoſe doſes, at longer intervals; and from experience he found that, when this laſt practice agreed with the ſtomach, it was the moſt effectual way of curing the Intermittent.

mittent. One patient took three ounces in twelve hours, and had no return of an obſtinate *Quartan*.

Many Intermittents, which could not be cured by ſmall doſes, were removed by larger doſes, more frequently employed.

He mentions that a period of *five* or *ſix* hours, before the expected return of a *Quotidian* or *Tertian* Intermittent, is all that is neceſſary for the taking a ſufficient quantity of the Red Bark, in order to obviate the approaching paroxyſm. Some have been cured by taking *two* ounces, as quick as poſſible after the fit, but ſuch as perſevered in the uſe of it, until *four* or *ſix* ounces were taken, acted moſt prudently, their health was ſooneſt and moſt perfectly reſtored. He likewiſe obſerves, that ſuch perſons ought to take the greateſt quantity of Bark, whoſe blood is in the moſt diſſolved ſtate, and where the fibres

fibres have been relaxed by the moſt profuſe ſweating, which frequently takes place in obſtinate *Quartans*.

Quotidians require but a ſmall quantity, *Tertians* will yield to fewer doſes than our *Kentiſh Quartans*.

He found it better to get down *five* or *ſix* ounces of Bark, in eight or ten days, than to allow a larger time for the ſame quantity. Labouring people, who work out of doors in cold foggy mornings, either in marſhy grounds or wet lands, from ſun-riſe till the dew of the evening, and who ſweat profuſely, and ſuffer their wet linen to dry on their backs, will not be ſafe from a return of the *Quartan* Fever, with leſs than five ounces taken after the laſt fit, as the good effects of all they had taken before, are very probably carried off and diſſipated in the enſuing paroxyſm.

He likewiſe obſerves, that the Bark in large doſes will not cure the irregular fits of an ague and fever, which ſo often afflict perſons, when matter is forming in the lungs, in the *Phthiſis Pulmonalis*.

The letters from Sir William Biſhop, which convey theſe obſervations, likewiſe contain much valuable information on other medical ſubjects, and I hope the ingenious author will, on ſome future occaſion, favour the public with them.

A Letter from Dr. WITHERING, *an eminent Phyſician, at Birmingham, June* 29, 1782.

DEAR SIR,

I AM much pleaſed that you have undertaken to give us an account of the Red Peruvian Bark. A publication upon that ſubject, cannot fail to produce good effects, by removing the prejudices of

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ſome, the ignorance of others, and ultimately by exciting our merchants to obtain liberal ſupplies of a medicine ſo truly valuable. The univerſal prevalence of Intermittent Fevers this ſpring gave us a large experience of its effects. We have not many Intermittents in the town of Birmingham; but in other parts of the county of Warwick, in Staffordſhire, Shropſhire, Worceſterſhire, and Oxfordſhire, ſo far as my rides extend, they have been more general than ever known before in the memory of the oldeſt practitioners I have converſed with.

After taking pains to recommend the Red Bark to all the Apothecaries I met with, and conſequently not leſs anxious to learn their obſervations relative to its effects, I can ſay that they unanimouſly concur in aſſerting "that they have never been diſ-"appointed in their expectations when "they exhibited it to patients labouring "under Intermittents."

Now

Now the Intermittents which I have ſeen, have pretty generally aſſumed the *Tertian* Type in light ſoils, and the *Quartan* Type in clayey countries. Of the latter, I have had the care of ſome which were from ſix to eighteen months duration, originating in Kent and Eſſex. I have known two inſtances only of *Quartans* in which the Red Bark did not prevent a recurrence of the Fits; I ſaw one of theſe patients afterwards; he laboured under hepatic and anaſarcous ſymptoms, theſe were removed in a fortnight by the uſual methods, and then the Bark effected a cure. The other caſe was at a conſiderable diſtance from this place, and I have not yet learnt its termination.

It will require ſome farther experience to aſcertain the neceſſary doſes. I know ſome practitioners who have given one or two drams every four hours betwixt the fits, but I have never had occaſion to give more

more than thirty or forty grains at ſimilar intervals of time.

As to its preparations I can ſay but little, preferring always in my own practice the ſimple powder; but, I am told, that it makes a very rich tincture, and I have ſeen decoctions of it very high coloured and turbid.

But it may be aſked—Would not the common or Quill Bark, have produced ſimilar good effects in the Intermittents of the preſent year? From the reports of other practitioners, I believe it would not. From my own experience, I can give no other anſwer to ſuch a queſtion, than, by ſaying, that after frequent and almoſt continual diſappointments, from the uſe of common Quill Bark, I have not tried to cure a ſingle Intermittent with it for more than ſeven years paſt; relying entirely upon the uſe of evacuants, opium,

and

and metallic ſalts. To render this laſt aſſertion reconcilable to the daily experience of others, it may be neceſſary to obſerve, that with us, a Phyſician is ſeldom conſulted in Fevers of the intermittent kind, unleſs ſome unuſual appearance, or ſome uncommon obſtinacy in the recurrence of the attack, alarms the patient or his friends.

Whether the medicine in queſtion be the product of the ſame tree from which the Quill Bark is derived, may be difficult to determine, but I am perſuaded it is the medicine that was uſed by MORTON and SYDENHAM, or its efficacy could never have been ſo proverbial. I know not what could firſt induce the writers upon the *Materia Medica*, to prefer the Quill Bark, but I know if you were to aſk an Engliſh Tanner, whether the Bark from the trunk, or that from the twigs of the

Oak

Oak is the ſtrongeſt, he would laugh at your ignorance.

I communicated the contents of your letter to my worthy friend and colleague Dr. Ash, together with my opinion upon the ſubject; he authoriſes me to ſay, that the reſult of his experience perfectly coincides with mine.

I remain,

with the trueſt eſteem,

Yours,

W. WITHERING.

P. S. Thus, my good friend, have I freely communicated my ſentiments and obſervations upon the ſubject you have in hand.

You are at liberty to make what uſe you pleaſe of them, and I ſhall think myſelf

myſelf happy in having contributed a little towards the extenſive uſefulneſs of your deſign. I have ſeen no bad effects from it, notwithſtanding the reports of ſome of the London Druggiſts, but their motives were too evident to need a comment.

I feel, with you, that diſtance alone has interrupted our communications; but I feel too, that diſtance can never abate the regard with which I once more ſubſcribe myſelf,

Affectionately,

Your's,

W. W.

To Dr. Saunders, Jefferies Square.

A Letter from Mr. SHERWIN, *an ingenious Surgeon at Enfield.*

SIR,

SINCE we have uſed the Red Peruvian Bark, we have had great ſucceſs in curing Agues and Intermittent Fevers. Theſe diſorders returned ſo frequently after the uſe of the beſt Peruvian Bark, which we could formerly procure, that our credit, as well as that of the medicine, began to fail very much, and numbers of our patients got into the hands of perſons unacquainted with phyſic. They ſeemed willing to truſt rather to noſtrums and charms, than to a medicine which they have ſeen ſo repeatedly fail, and to the effects of which they very ingeniouſly aſcribe every ache and pain which continue after Agues, or which are the conſequences of Agues when imperfectly cured.

I could

I could give a very ample detail of the inefficacy of the common Bark; but as the complaint is general, it would be unneceſſary. I ſhall, therefore, only take the liberty to preſent you with the more agreeable hiſtory of a few caſes that have immediately yielded to the Red Peruvian Bark, and that even when given in very moderate doſes, after having obſtinately reſiſted large quantities of the other.

RICHARD PARSLEY, a hard working young man, about twenty-eight years of age, was ſeized with an Ague laſt autumn, which continued either as a *Quotidian*, *Tertian* or *Quartan*, with very little intermiſſion, till the 20th of April laſt, when I ſaw him accidentally. He gave me the following account:

That he had taken every thing that had been recommended to him; and that

his maſter, a worthy and reſpectable gentleman in this neighbourhood, had procured him the advice of different practitioners of phyſic, who had preſcribed Bark for him in large quantities, but without benefit, as the diſorder always returned with greater violence after it had been checked a few days. He added, that the laſt medicine which he had been adviſed to take, was half an ounce of Allum boiled in a pint of Ale, to half a pint, which he was ordered to repeat three different times, as ſoon as he felt the Ague approach. He had in this way, he ſaid, taken ſeven half ounces upon the approach of as many different fits of the Ague.

I ſuſpected, that ſo large a quantity of Allum, taken at one doſe, muſt have produced ſome dangerous effects, and doubted whether he had ſwallowed the whole of it; but I found, upon more

particular

particular enquiry, that he really ſwallowed half an ounce each time, as he ſays; that he ſtirred it up from the bottom and felt it gritty in his teeth. It gave him great pain in his ſtomach. So large a quantity of Allum being taken at one doſe, without materially injuring the ſyſtem, is a fact which I am perſuaded you will think worthy of notice.

I took compaſſion upon this poor fellow, and ſent him eight papers of the Red Peruvian Bark, containing a dram in each, which he finiſhed in two intermediate days, the diſorder being then a *Quartan*. It is now ſeven weeks ſince he took this medicine, and he has had no return of the complaint, but, to uſe an expreſſion of his own, "hath felt ever ſince as if he had a new inſide."

Anne Pigot, a poor girl, fourteen years old, has been afflicted with an Ague

ſince Autumn laſt in the ſame family with PARSLEY, and has alſo tried various medicines without effect. I preſcribed ſmall doſes of the *Vitriolum Cærul.* fourteen days without gaining any advantage. I gave her alſo three or four doſes of a hot aromatic powder, conſiſting of Bay Berries and Caian Pepper, which I have frequently ſeen to cure, but ſhe found no benefit from it. I cannot ſay whether this girl had given the common Bark a fair trial. She begged to have ſome of the ſame medicine that cured her relation, and about a month ſince had three papers, containing only one ſcruple in each, and I aſſure you, ſhe has been perfectly free from the complaint ever ſince.

Mr. BARNES, a very ſtrong, hard working man, was ſeized laſt Autumn with a very violent Intermittent Fever, attended with delirium, and apparently much danger.

ger. After three or four paroxyſms, I removed the diſorder by giving him one dram of the common Peruvian Bark every hour, and continuing the ſame quantity twice a day afterwards; but at the end of fourteen days, the Fever returned with the ſame violence as before, and was again ſtopped by the ſame quantity of Bark. From Autumn, till the beginning of laſt *April*, it returned in this manner (at the end of about fourteen days from the time it was ſtopped) five or ſix times, and always with uncommon violence. The common Peruvian Bark, newly powdered, was repeatedly given.

In the beginning of *April*, I preſcribed ſix doſes of the Red Peruvian Bark, of one dram each, which he took upon the going off of the paroxyſm, and I have the pleaſure to inform you, that he has had no return ſince that time; though I no

longer uſed the precaution of continuing the daily uſe of the ſame medicine.

It is not worth while to mention common caſes, where the Red Bark hath cured without the other having had the trial. A few have occurred, and I have not yet had any inſtance of a relapſe.

I was lately called to a very ſevere caſe, like that of Mr. BARNES, where the intermiſſion was not longer than ſix or eight hours. I preſcribed, and the patient took ſix drams of the Red Bark, without interrupting the paroxyſm, which came at the expected hour; and during, the ſickneſs and horripilatio the Bark ſeemed to be entirely rejected by vomiting; however, the ſucceeding paroxyſm abated ſomething of its fury. My patient was extremely averſe to Bark in every ſhape; but my deceiving him, during the following intermiſſion, I got him to ſwallow two

drams

drams at once, which rendered him ſo entirely averſe to the medicine, that he would take no more afterwards. However, to his great joy and my ſurpriſe, the Fever left him. He aſcribes his cure to three or four draughts of Camphorated Julep, which were preſcribed as a *placebo* upon his refuſing to perſevere in the uſe of the Bark. But it may with more juſtice be aſcribed to the two drams of Red Bark, taken at one doſe; as I think the firſt ſix were in a great meaſure loſt.

I conſider the Red Peruvian Bark as a valuable acquiſition to the *Materia Medica:* or, perhaps, it may be only a reſtoration of what was uſed in the days of SYDENHAM, and ſome time after, when it was common for medical writers to ſay, that this, or that medicine would cure, with as much certainty as Bark would an Ague. An Eulogium to which the Bark

in

in this country has not been of late years entitled.

Before I became acquainted with the ſuperior efficacy of the Red Peruvian Bark, I had tried a variety of *tonics*, with very indifferent ſucceſs in general, but now and then with very happy effects, ſuch as the *Cuprum Ammoniacum*, *Vitriolum Cæruleum*, *Sal Vitrioli*, *Sal Martis*, &c.

William King, an athletic young man, applied to me laſt Autumn, on account of a tedious irregular Intermittent, complicated with acute fixed pain in the ſide, and a full ſtrong pulſe, much cough and hoarſeneſs. Under theſe circumſtances, I thought it imprudent to adminiſter the Bark in any Form, and had recourſe to a plentiful bleeding, applying bliſters to the part affected, and giving the *Decoct. Taraxac.* with *Tart. Solubile*, and Honey in large quantities. The diſ-

order

order was clearly an Ague; but attended with ſymptoms that threatened a pulmonary conſumption. His blood was remarkably ſizy, which induced me to make uſe of *veneſection* four times, which, with the above medicines, and a very ſtrict *antiphlogiſtic* regimen, removed the cough and the pain in the ſide, though the Ague ſtill continued. I ventured at laſt to give him eight doſes of common Bark, one dram in each, which removed the Ague ſeveral weeks, and mended his habit much. A continuance of the Bark, twice a day, for ſome time after the Ague ſtopped, brought on a frequent bleeding at the noſe.

The Ague returned twice during the winter, and gave way ſoon to the ſame Bark, and he kept tolerably well till the ſetting-in of cold north-eaſt winds in ſpring, when his Ague again returned, and

and brought with it the pain in the ſide, a bloated icteric countenance, much hoarſeneſs and cough. After one more bleeding, and the uſe of the *Apozem* for a month, I gave him ſix drams of the Red Peruvian Bark in April laſt, and have had the pleaſure to ſee him continue free from the Ague ſince that time, though he never repeated the doſe after it ſtopped.

I was unwilling to perſiſt in the uſe of the Bark after the Ague ſtopped, leſt it ſhould encreaſe the circulation too much, and again excite a bleeding at the noſe.

I have now indeed almoſt entirely laid aſide the cuſtom of perſevering in the uſe of the Bark, after the Intermittent is ſtopped. I have for ſome time ſuſpected that it anſwers no good purpoſe, and that it may poſſibly now and then be the

the reaſon why large quantities of good Bark have been given in vain.

It is a well known fact, that every ſpecies of intermittent complaint frequently returns in fourteen days after being interrupted by means of Bark, notwithſtanding that medicine is continued every day. May not the daily uſe of Bark ſo habituate the conſtitution to its effect, as to render it uſeleſs when the Intermittent returns?

I am now ſatisfied when I have put a ſtop to the expected paroxyſm, and preſcribe an anodyne to be in readineſs if ever the cold fit returns, adviſing my patient to have recourſe to the ſame quantity of Bark which he found neceſſary at firſt, and to take it as ſoon as the ſucceeding Fever abates. I adopted this practice a little time before I became acquainted with the

ſuperior

ſuperior efficacy of the Red Bark, and thought it an improvement, but ſince that time I have ſucceeded ſo well by giving ſix or eight drams between the paroxyſms, that I have ſeldom had occaſion to repeat a ſingle doſe.

I am,

Sir,

with great reſpect,

your obliged and

moſt obedient Servant,

JOHN SHERWIN.

Enfield, June 23, 1782.

A Letter

A Letter from Dr. FOTHERGILL, *an eminent Phyſician, in Harpur-ſtreet.*

DEAR SIR,

I N anſwer to your obliging requeſt, I ſhall now proceed to lay before you the beſt information I can concerning the New Bark, lately introduced into practice, under the name of CORTEX RUBER, or RED BARK. As it was found on board a Spaniſh prize, intermixed with a ſmall quantity of common Peruvian Bark, it would ſeem to be no other than the produce of the trunk or large branches of the ſame tree. It ſeems to be poſſeſſed of the ſame ſenſible qualities, only in a much higher degree, hence it yields a much larger proportion of reſinous extract, and gives a more ſaturated tincture and decoction than the common Bark. Hence too I have found (according to what you lately

lately obſerved) that the decoction may be expoſed a long time to the open air, without contracting the degree of acidity, which manifeſtly takes place in that of the common Bark in a few days.

It has been remarked for many years paſt, that the Peruvian Bark has often diſappointed the expectation of the public; having fallen greatly ſhort of that tranſcendent degree of efficacy, for which writers of the laſt century have ſo highly extolled it. Few Phyſicians of extenſive practice, but muſt ſometimes have had the mortification to obſerve their favourite ſpecific entirely baffled by a regular Intermittent, without being able to aſſign any probable cauſe for the defeat, except the *ungenuinenſs* of the medicine; whence it would ſeem to follow, either that the Intermittents of late years have been more *obſtinate* in their nature, or that the Bark has been of an *inferior quality*

lity to that which was uſed by Dr. SYDENHAM, and many of his reſpectable cotemporaries, of whoſe veracity we can entertain no reaſonable doubt. The latter appears to me to be the more probable, eſpecially when it is conſidered, that of late years, it has been cuſtomary (for what reaſon I cannot imagine) to ſelect the Bark of the ſmall branches, under the denomination of *Quill* Bark, in preference to that of the trunks. Should this preference hereafter be diſcovered to have been groundleſs (agreeable to what I have long ſuſpected) it may perhaps contribute to explain the principal cauſe of our diſappointments.

In the art of tanning, experience has long determined in favour of large Oak Bark, as being greatly preferable to that of the ſmaller twigs. Why the reverſe of this ſhould take place in a medicinal view, is by no means evident, eſpe-

cially if the virtue of the Peruvian Bark keeps pace in any degree with its aſtringency.

Spaniſh practitioners, as I have been lately informed, are ſo well convinced of this, that they always prefer the large Peruvian Bark; ſeparating it from the ſmaller ſort, for all important purpoſes, which the late capture indeed ſeems to render probable.* Future obſervations may probably diſcover that this was the real genuine Bark, with which our anceſtors cured all the various kinds of Intermittents, with a degree of certainty, which now aſtoniſhes their ſucceſſors.

* This muſt not however be confounded with thoſe coarſe woody flakes, which conſtitute a large proportion of the worſt kind of Bark, now in uſe. For theſe, having been already ſtripped of the outer *rind*, together with the reſinous cells, conſiſt of a mere ligneous ſubſtance, diveſted of medicinal virtue.

If Bark taken from the large branches ſhould be found to be more efficacious than that of the ſmall, is it not reaſonable to believe, that, that of the trunk or rather of the root, might ſurpaſs both in virtue? Political reaſons, however, reſpecting the preſervation of the trees, which produce ſo important an article of commerce, will, it is to be apprehended, effectually deter the inhabitants from every experiment of this nature.

A very eminent Druggiſt, who purchaſed a large ſhare of the above cargo, aſſures me, that many of the Apothecaries whom he has ſupplied with the Red Bark, and who have carefully compared its effects with thoſe of the common *cortex*, make no ſcruple of deciding in its favour. He further adds, that the demand for it has increaſed ſo rapidly

of late, that the ſtock in hand is already nearly exhauſted.

It is to be regretted, that the paſſion for interlarding this ſimple febrifuge with other bitters and aſtringents (after the uſual complex mode) ſhould ſtill too much prevail in practice. Under this falſe idea of adding to its efficacy, its virtue may often be greatly diminiſhed, and at all events, the reſult of the trial muſt be rendered extremely equivocal. In juſtice to the remedy, and to obviate this uncertainty concerning its effects, I have embraced every opportunity (which ſo ſhort a ſpace would admit) of adminiſtring it in its ſimple ſtate, without intermixing it with other medicines. The caſes in which I have chiefly tried it, have been low putrid Fevers, attended with extreme proſtration of ſtrength, delirium during the evening exacerbations, with ſhort and obſcure remiſſions in the day time.

For

For the ſake of brevity I will but mention one inſtance. WILLIAM HENTON, a Silk Weaver, laboured under a Fever of this kind, accompanied with *Petechiæ*, and a *profuſe naſal Hemorrhage*, which laſt ſymptom generally returned with the exacerbations. To theſe were added cold ſweats, muttering delirium, involuntary twitchings, &c. Before I ſaw him, common Peruvian Bark had been preſcribed, and his caſe pronounced *deſperate*. In this very critical ſituation, however, I was not deterred from recommending the *Red Bark*, in proper diluents, acidulated with *Spiritus Vitrioli*. Accordingly he took from two ſcruples to a dram every two hours, except during the midnight exacerbation, when it was ordered to be cautiouſly avoided; becauſe I have long been convinced by experience, and attentive obſervation, that the febrile ſymptoms are generally exaſperated when a Bark remedy is given at that period. The

medicine agreed, the Hemorrhage abated, and the Fever ſoon ſubſided. Some weeks have now elapſed, and I have the ſatisfaction to add that lately, on entering his room, he aſſured me with a joyful countenance, that ſince he had taken the Red Bark (or as might now, perhaps, with more propriety be ſaid, the *Real Bark)* he had ſuffered no ſymptoms of relapſe, and that he remained free from all complaints, except a little weakneſs of ſight, to which he had been formerly liable. Should this medicine be hereafter found to anſwer as completely in the other various types of Fevers, and that in ſmaller doſes than the common Bark, it will become highly intereſting to the patients, and no leſs pleaſing to the Phyſician, eſpecially when he ſhall be enabled before hand, thus to pronounce with real confidence concerning the event.

" *Hi motus, atque hæc certamina tanta,*
" *Pulveris exigui jactu compreſſa quieſcent.*"

VIRGIL.

From

From its ſucceſs in this and *ſeveral other inſtances*, which have fallen under my own obſervation, I am ſtrongly inclined to believe, that it will ſoon become an object worthy of attention, but muſt decline giving a deciſive opinion concerning its ſuperiority, till I know the reſult of a variety of caſes, in which it is now under trial, and alſo receive additional confirmation from ſuch correſpondents, as are leſs prepoſſeſſed in its favour than myſelf, becauſe they may be ſuppoſed to prove in reality more impartial judges. Therefore in the interim, I ſhall wait with impatience for your intended publication, hoping, that by thus collecting the ſentiments and obſervations of ſeveral practitioners in different parts of the kingdom, we may at length be enabled to aſcertain the true comparative merit of the

Red Bark, which cannot but afford great ſatisfaction to the public at large, as well as to,

Sir,

Your moſt obedient ſervant,

A. FOTHERGILL.

Harpur Street, July 6, 1782.

A Letter from Mr. EDWARD RIGBY, *an eminent Surgeon, at Norwich.*

DEAR SIR,

I am very much obliged to you for the honor you have done me, in ſending me your Treatiſe on the Red Peruvian Bark, and I feel myſelf particularly flattered by the manner in which you have ſolicited an anſwer to your letter.

I am

I am happy that it is in my power to bear the moſt ample teſtimony to the great and certain efficacy of this Bark; I have had the fulleſt opportunity of trying it in every ſpecies of the Intermittent, and have given it to patients under the greateſt variety of circumſtances reſpecting age, conſtitution, date of the diſeaſe, &c. and out of more than a hundred and fifty perſons, who have taken it under my direction, *it has not failed in a ſingle caſe, ſtopping the return of the paroxyſm in the very firſt inſtance of its application.*

I was fortunate enough to receive a ſmall parcel of this Bark ſo early as October, 1781, owing to the friendly communication of Mr. TALBOT, Surgeon, at Wymondham, in this county, to whom Mr. HOPKINS had ſent a few ounces as a ſpecimen for trial, half of which he immediately ſent to me; Intermittents being at that time very frequent in Norwich,

wich, and its neigbourhood, I had an opportunity of trying it the day after I received it, and I choſe the two worſt caſes, which then occurred to me, the one was a *Quartan*, of many months ſtanding, the patient, a boy about eleven years of age, very much worn down by a *Quotidian*, of nearly as long a date; the patient, a young woman of about eighteen years of age, whoſe conſtitution was alſo much ſhattered by the long continuance of the complaint:—to both of them I gave half a grain of Tartar Emetic, at the approach of the next fit, which brought off a good deal of Bile from the ſtomach, and when the Fever terminated, they began to take the Bark, an ounce of which was divided into twelve doſes, all which were taken by each of them before the times of the expected returns of the complaint; they both loſt the Fits, and though they took no more of it, for they had taken all which was ſent me,

they

they had no return of them until many weeks after, when the weather proved very wet, and then they went away without taking any more of this, or the common Bark, for they were both at this time removed to ſuch a diſtance in the country as not to be able to ſend to me.

My ſucceſs in theſe caſes, induced me to procure a conſiderable quantity of it, and as ſoon as I received it, I made uſe of it in ſeveral *Tertians*, then under my care, in all which it immediately anſwered the intended purpoſe. About this time I had a patient, a gentleman about fifty years of age, who had had a *Quartan* more than three months, he had been endeavouring to cure himſelf by a variety of popular receipts, amongſt which was one which contained a conſiderable quantity of the common Bark; when I firſt ſaw him it was the day after he had had a Fit; but he was then much indiſpoſed,

indiſpoſed, his pulſe was too quick, he had no appetite, and was much reduced, he took a ſaline Fever medicine, and an opening draught before the next fit, at the approach of which I gave him a grain of Emetic Tartar, which vomited him conſiderably, and he repeated half a grain of it every three hours, until the Fever terminated, which, though it laſted a long while, went off with a greater and more general perſpiration than was uſual with him.

I now thought it right to begin giving him the Bark, but his intermiſſion not being quite ſo perfect as I wiſhed it, and moreover my not having yet had a ſufficient number of caſes, in which I had given the Red Bark, fully to eſtabliſh its reputation with me, I thought it moſt prudent to give the common Bark, of which he took two ſcruples at ſuch intervals during the intermiſſion, that he got

got down more than an ounce and a half of it before the time when the fit was expected, but it did not ſucceed, and he had another fit fully as ſevere as his former one; I then reſolved to make the next trial with the Red Bark, an ounce of which was taken in the courſe of the ſucceeding intermiſſion, and in doſes of two ſcruples, and this ſtopped the fit; I prevailed upon him to continue its uſe in the ſame doſe three times a day for a little time, which he did till he had taken two ounces more, but he has taken none ſince; and though his employment expoſes him very much to the weather, and he was ſoon after frequently wet, yet he had not the ſlighteſt return.

From this time I confidently gave it in every caſe which came under my care, and its uſe was invariably attended with the ſame immediate ſucceſs. In the number of thoſe which were cured, were ſeveral whoſe

whoſe legs were much ſwelled, and their bodies hard, and who appeared to be very rapidly haſtening into a Dropſy; more than twenty of them were children, two were infants, not a year old; and one, whoſe caſe I ſhall relate, was a ſtriking inſtance of the truth of your remark in the Treatiſe, that the Bark given in conſiderable quantity as near as may be to the time of the approach of the fit, is particularly efficacious.

My patient was a gentleman about twenty-five years of age, robuſt, and of a full habit; he had had an irregular Intermittent about a fortnight, it began as a *Quartan*, of which he had three fits, it then became a *Quotidian*, and he had three or four more fits; I ſaw him about the time when it began to come every day, and I found the Fever was very conſiderable; the uſual treatment, which I need

need not particularize, was made uſe of, until he appeared to be in a ſtate to take Bark; the fit after which he was to begin to take it, terminated about ten o'clock at night, and its return was expected the next day between twelve and one at noon. The time of the intermiſſion being ſhort he began to take it in doſes of a dram: I had a meſſage from him in the night, that it diſagreed with him, and that he could not keep it down; I deſired him to perſevere, but to conſider what came up as if he had not taken it, and to ſupply its place with another doſe: between five and ſix o'clock in the morning he ſent to me again, and deſired me to go and ſee him, I found him much fatigued for want of ſleep, which he had been entirely hindered from getting, by his repeated endeavours to take the Bark, every doſe of which, except the firſt, had been rejected, and he ſeemed convinced that his ſtomach would not retain it. I prevailed upon

upon him; however, to take half a doſe; and this kept down; I ſtaid with him ſome time, and half an hour after taking the firſt half dram, I repeated the ſame quantity, which likewiſe kept down; I then left him, deſiring him to continue it every half hour in the half doſes. Between eight and nine o'clock I was ſent for again, and he gave me the ſame account of its coming up again as before; notwithſtanding this, I ventured to give him another doſe, which he immediately threw out of his mouth, before he had ſwallowed any of it; obſerving this, I was more particular in enquiring in what manner he had vomitted up, as it was called, the former doſes; and from the attendant's account I was convinced, that what he imagined to have been vomited up, had never been ſwallowed; by this unlucky miſmanagement of himſelf, he had taken but two drams and a half inſtead

ſtead of five drams, and there remained five drams and a half to complete the ounce, which was to be taken in little more than three hours; however, I was determined he ſhould perſevere, and I immediately gave him a dram, as I was no longer under any apprehenſion of its coming up, being fully ſatisfied that all had been retained which had been actually taken into the ſtomach; this kept down, and by ſtrictly attending him with a doſe every half hour, or at longeſt every three quarters of an hour, the whole was gotten down before the time of the expected return of the fit, which happily prevented its coming, and he has continued well ever ſince. The night having been entirely without ſleep, and the patient having been exceſſively fatigued and fretted by his many fruitleſs endeavours to take his medicine, were very unfavourable circumſtances in his ſituation, and

prevented his Fever from going off ſo perfectly as it did in the former intermiſſion, for he was much hotter, and his pulſe quicker than was to be wiſhed, when taking Bark; however, the event fully juſtified my perſeverance, and ſtrongly proved the efficacy of the medicine.

Many of my patients having been poor and ignorant people, and ſome of them living at ſome diſtance from Norwich, to whom I could only give general directions, as it was impoſſible for me to attend them, you may eaſily imagine that moſt of that claſs of them took it careleſsly; ſome of them I know did not take the quantity preſcribed; and I recollected one perſon, a ſtrong country girl, about ſeventeen years of age, who took an ounce of it at two doſes, yet all of them were immediately cured. One patient of this claſs was a child about eight years old, who had had a *Quotidian* more than

two

two months, and was directed to take half an ounce of the Cortex between the fit, which was to terminate on a Monday noon, and was expected to return on the Tueſday, about the ſame time; on the following Saturday the child's father called to inform me that he was cured. Upon enquiry how the child had taken it, I was ſurpriſed to find that he had not then finiſhed the half ounce, for when I told him that I meant the child ſhould have gotten the whole quantity down in one day, he ſaid he had underſtood before that I directed it to be taken between the Monday and the Saturday night, ſo that it was evident the child could not, the firſt day, have taken more than one dram of the medicine, which it is clear proved ſufficient to ſtop the fit.

From the foregoing, and from ſome other caſes which I have had, as alſo from thoſe communicated to you by my friend

Mr. Sherwin of Enfield, one may certainly very ſtrongly preſume, that a much leſs quantity of this Bark than what I have uſually given would anſwer the purpoſe; it would be a very eaſy matter to aſcertain this by more trials, but at preſent I am not willing to give it in a ſmaller quantity, nor would I recommend it to other practitioners to do ſo, until the reputation of the Bark has been fully and univerſally eſtabliſhed, for whilſt the prejudices of ſome practitioners, who are averſe to new medicines, and the intereſt of ſome Druggiſts, who will be probably ſufferers, by having large ſtocks of the common Bark by them, may in the leaſt degree tend to oppoſe its general uſe, it is to be wiſhed that the teſtimonies in its favour ſhould not only be ſtrong and clear, but that its ſucceſs ſhould be as uniform and invariable as the nature of the medicine admits of, and therefore I would not yet venture to preſcribe a

quantity

quantity ſo ſmall, as to run a poſſible riſque of its failure, when the quantity I have hitherto uſed, which is an ounce to an adult, and a proportionable leſs quantity to children, has not, with me, in a ſingle inſtance been fallible.

In relating the few caſes above, I did not think it neceſſary to mention the names of the patients, but as the circumſtances which tend to recommend a new medicine cannot have too great notoriety, I will, as they occur to my memory, give you a liſt of ſome of the perſons who have been cured of Intermittents by this Bark, and whoſe ſituations in this neighbourhood render them well known.

Mr. Thomas Smith—Mr. Garland—Mr. Carter, Jun. twice—Mr. Money—Maſter Money, and Miſs Money, of Trowſe—two children of Mr. Barham of Kirby—Mr. Oliver—Mrs. Taylor—Mr.

Kiddell's daughter of Colney—Mr. Howlett of Earlham—Servant of James Crowe, Eſq.—Servant of John Gay, Eſq.—Servant of Mr. Bloom, of Trowſe—Mr. and Mrs. Clift—Miſs Clift—Son of Rev. Mr. Anſdell—Mr. Dixon—Maſter Webb—Miſs Kett—Maſter Bunn—Mrs. Denny of Shottiſham—Mr. Wright of Brecondale—Mrs. Glover of Kirby—Mr. Smith of Burlingham—Servant of Sir Lambert Blackwell, Bart.

With regard to the common Peruvian Bark, notwithſtanding the complaints of its inefficacy have been great and general, my experience for a few years paſt has given me no reaſon to be ſo much diſſatisfied with it as I find many others are. I will acknowledge, indeed, that for ſome time paſt, I have found it neceſſary to give a much larger quantity of it than uſual, and that even when I have given from an ounce and a half to two ounces of

it

it in ſubſtance, it has not always ſucceeded in ſtopping the fit in the firſt inſtance of its application, but when I have been able to prevail upon my patients to perſevere in its uſe, in the ſame quantity, I have never known it fail to ſtop the fit after the ſecond intermiſſion, in which it has been taken. I ſhould imagine there is no reaſon to believe that the common Bark, which has been uſed for ſome years paſt, is not the ſame with what was formerly in uſe, or with was perhaps, originally introduced; as far as can be judged by its taſte, and its appearance, either in the lump, in powder, in decoction, or in any of the other preparations of it, it ſeems to me, at leaſt, to be preciſely the ſame as I have always ſeen it; I have, therefore, never once ſuſpected that, as a natural production, it has degenerated, much leſs have I apprehended that any artful means have been uſed by Druggiſts, to render it more ſaleable, or to increaſe their profit upon it, by which

its medical quality has been diminiſhed: Intermittents having been more general in this country for two years paſt, than, perhaps, was ever remembered by any Practitioners now living, probably the ſame cauſe which has made them ſo frequent, has made them of a worſe kind, and conſequently more difficult to remove; and to this cauſe, rather than to any change in the quality of the Bark, is, in my opinion, to be attributed the late general want of ſucceſs in the treatment of this diſeaſe. Upon the whole then, Sir, from the experience I have had in uſing the two kinds of Bark, which has not been inconſiderable, it is evident to me, that they poſſeſs the ſame medicinal quality, but that the Red Bark has it in a degree greatly ſuperior to the pale, which ſtrongly favours your ſuppoſition, that they are both the produce of the ſame tree, the Pale or Quill being the Bark of the ſmaller branches, and the

Red,

Red, that of the larger branches, or the trunk of the tree. Having myſelf found ſuch ſingular ſatisfaction in the uſe of this Bark, I ſincerely wiſh it may be univerſally introduced, and I am perſuaded that every Practitioner, who will give it a fair trial, will immediately prefer it to the Pale. Nothing can be more agreeable in the adminiſtration of a medicine, than to be able to ſpeak of and foretell its effects with confidence, as it muſt be very encouraging to the patient; this circumſtance, and its anſwering the purpoſe in a much ſmaller quantity than the Pale, are very peculiar advantages which the Red Bark poſſeſſes; for in the uſe of the Pale, though, as I before obſerved, I make no doubt, but by perſeverance, and taking it in large doſes, it will for the moſt part ſucceed, yet I have more than once been awkardly ſituated with patients, who have taken a large quantity of it without its having anſwered the intention in the firſt

inſtance,

inſtance, I mean in ſtopping the fit, after the firſt intermiſſion, in which it has been given, it not being always an eaſy matter to perſuade perſons, under ſuch a diſappointment, to perſevere taking down a large quantity of a nauſeous medicine, more eſpecially, when there ſtill remain popular prejudices againſt the Bark; and it is a notion received by ſome, that when it does not immediatey ſucceed it muſt be hurtful.

I have juſt received a letter from Mr. TALBOT, the gentleman whom I mentioned before, as having firſt ſent me a ſpecimen of the Red Bark, with an extract from which, relative to the ſubject, I ſhall conclude this already too long letter; he informs me, that from the time he firſt made trial of it, he has uſed no other in Intermittents, that he has given it to more than fifty perſons, and he has not failed removing the diſeaſe in a ſingle

inſtance

inſtance though before that time he had been very unſucceſsful in the uſe of the Pale Bark. He mentions a caſe, in which four ounces of the common Bark had been given without effect, and that an ounce and half of the Red immediately put a ſtop to the Fit:—And he further ſays, that he lately made enquiries about it amongſt ſome Practitioners in his neighbourhood, to whom he recommended it, and that Mr. SWALLOW, of Watton, Mr. BRINGLOE, of Hingham, Mr. GIBBS, of Buckenham, and one or two more, have been equally ſucceſsful in its uſe as himſelf.

I am, Sir,

With the utmoſt reſpect,

Your obliged and humble Servant,

EDWARD RIGBY.

Norwich, Sept. 8, 1782.

A Letter

A Letter from Dr. JAMES MADDOCKS,
Phyſician to the London Hoſpital.

DEAR SIR,

AGREEABLY to your requeſt, I here ſend you an anſwer to the queſtions you propoſed to me, relating to the large and Red Peruvian Bark, lately introduced into uſe in England.

Your firſt queſtion related to my opinion of the medicinal efficacy of this Bark, with that of the paler, ſmaller, and quilled Bark, which for a long ſeries of years has been conſidered in this country as ſuperior to every other ſpecies.

In anſwering this queſtion, the ſhort notice you have given me, and the little time I have at preſent to ſpare, will not admit either of my taking notice of many different

different kinds of diſeaſes, in which I have had opportunities of obſerving its ſuperior efficacy, or of deſcribing particular caſes of the few diſorders I am to mention; on which I ſhall content myſelf with giving you the general reſult of my obſervations.

The caſes which have afforded me the moſt frequent opportunities of obſerving, and of drawing the moſt ſatisfactory concluſions relative to the ſuperior efficacy of the Red Bark, are thoſe of the Intermittent Fever.

To the beſt of my recollection, it was about the month of October, 1781, when we firſt began to make uſe of the Red Bark, at the London Hoſpital. Immediately after its introduction, the difference, in point of efficacy, between this and the common Bark became very remarkable; inſomuch, that my learned

Colleague,

Colleague, Dr. DICKSON, and myſelf, recommended to the Committee of the Hoſpital, at one of their weekly meetings, to purchaſe of the Druggiſt, who had furniſhed the firſt ſpecimen, the whole of his ſtock of the medicine, however great its quantity might be: upon which meaſure the Committee, without any heſitation, immediately reſolved.

The London Hoſpital is, perhaps, never without a very conſiderable number of patients under Intermittent Fevers; to which its comparative vicinity to the county of Eſſex not a little contributes.—When, before the introduction of the Red Bark, we were in the uſe of employing the common Bark upon all occaſions, we had found it, in Intermittents, to fall exceedingly ſhort of that high character for efficacy, which is aſſigned to it by Dr. SYDENHAM, and his cotemporaries.

As

As to myſelf, I can truly aſſert, that in the caſes of patients under Intermittent Fevers in the Hoſpital, very ſeldom indeed was the return of the fit prevented, or even the violence of it much diminiſhed at the firſt attempt to ſtop it, by any quantity of the medicine given in the interval. On the contrary, portions of the Bark for a conſiderable length of time, and in very large quantities, were generally neceſſary to ſtop the progreſs of the diſorder, or even to abate its violence; and on many occaſions, from a total want of ſucceſs, I have judged it proper to deſiſt from its farther uſe, and to have recourſe to other means of cure.

On the other hand, by the uſe of the Red Bark, I have frequently ſeen the return of the fit intirely prevented upon the firſt trial of the medicine given in the interval; where this is not the caſe, the

ſubſequent

ſubſequent fit is generally leſs violent, and in almoſt every caſe the diſorder generally diſappears in a ſhort time.

Several of the caſes in which I have obſerved the abovementioned good effects of the Red Bark, were caſes in which the common Bark had previouſly been employed, and continued for a longer or ſhorter time, without ſucceſs.

With reſpect to the out-patients, or ſuch as do not reſide in, but occaſionally come to the Hoſpital for advice and medicines, theſe are much more numerous than the in-patients; among which there occur a great variety of Intermittents, in all its different types. The ſuperior efficacy of the Red, compared with the common Bark, I have found to be as remarkable in theſe caſes as in thoſe of the in-patients.

Whilſt

Whilſt I was in the practice of employing the common Bark, very large doſes of it were generally neceſſary to the cure, and the patients uſed to return to the Hoſpital again and again, for repetitions of their medicine; but ſince I have uſed the Red Bark, many of theſe patients have not returned a ſecond time. Of ſuch as have returned, ſome have informed me that the doſe preſcribed to be taken during the firſt interval had intirely prevented the return of the fit; others, that the ſubſequent fits had been very moderate. And where the caſes have been otherwiſe, and I have been informed of the event, the diſorder has given way in a ſhort time.

I ſhall trouble you with only one other tribe of diſeaſes, in which I have had occaſion to obſerve the ſuperior efficacy of the Red Bark. Theſe are pe-

riodic pains, of which diſeaſes, the periodic Head Ach is the moſt common, and moſt generally known.

But I meet pretty frequently with caſes of a ſimilar diſorder affecting various other parts of the body than the head. In ſome of theſe, the ſeat of the pain ſeems, to the feelings of the patient, to be ſome part of the parietes of the abdominal, or thoracic cavity, but more frequently of the former; in others it ſeems to be ſome or other of the contents of one of theſe cavities, but more frequently of the abdominal.

With reſpect to the caſes in which the diſorder ſeems to be ſeated in ſome of the contents of the abdominal cavity, I have met with many of them, and with ſome that, during the paroxyſm, have been accompanied with a

ſharp

ſharp pyrexia, a moſt acute pain, and moſt; or all of the eſſential, or characteriſtic ſymptoms of an inflammation of the viſcus; which, from the place of the pain, ſeemed to be the ſeat of the diſorder.

Theſe caſes, however, differ from inflammations in this, that their paroxyſms are ſucceeded by intermiſſions, and return at intervals, generally of the *Quotidian*, ſometimes of the *Tertian*, at other times of leſs regular types; and blood taken from the patient during the utmoſt violence of the fit, is without the ſmalleſt appearance of the ſize.

In many caſes of theſe diſorders, where our view is to prevent the returns of the fits, by remedies employed in their intervals, tonics, undoubtedly, are not always proper remedies; ſome of them, as in particular the periodic Head Ach,

when it occurs in young and plethoric ſubjects, may ſometimes require the uſe of evacuants; but in thoſe caſes in which I have judged tonic remedies to be indicated, and have employed the Red Bark, I have found its effects, compared with thoſe of the common Bark, to be ſimilar to thoſe I have above deſcribed, reſpecting Intermittent Fevers.

In ſupport of my opinion of the ſuperior efficacy of the Red Bark in the diſeaſes I have above ſpecified, I have been led from the nature of the ſubject, to draw my arguments principally from caſes of hoſpital patients, as theſe, on account of their ſuperior number, afford the better opportunities of compariſon; but the obſervations I have made in private practice upon theſe, not to mention other diſeaſes, correſpond with and tend to ſupport the ſame concluſion.

You

You deſire to have my opinion relating to the nature of the Red Bark, from what tree it is taken, whether from that which affords the ſmall Quilled Bark commonly in uſe, or from a different one. In my opinion there can be very little doubt, but that both are taken from the ſame tree, and that their difference in appearance depends on this circumſtance only, that the ſmall or Quilled Bark, is taken either from very young trees, of which all the parts are yet ſmall, or if ever taken from large, is the produce of their twigs or very ſmall branches; and that on the other hand the Red Bark is taken from well-grown trees, and from their trunks or larger branches.

Certain arguments which I find in your publication on the Red Bark, ſome of which are ſuggeſted by yourſelf, and others, by ſome of your correſpondents, are, I think, ſufficient to warrant our

reſting in this concluſion. The principal reaſons from which I have been led to adopt it are the following:—

Firſt, Becauſe the Red Bark agrees in its ſenſible and other qualities, with the ſmall Quilled Bark, poſſeſſing however theſe qualities in a much higher degree.

Second, Becauſe it is very well known, that the peculiar ſenſible qualities and powers of moſt vegetables, are comparatively little obſervable in the young plants, or tender ſhoots.

Third, Becauſe the Tanners know very well from experience, that the Oak Bark which is taken from the trunk or larger branches of the tree, poſſeſſes much ſtronger powers than that taken from the ſmaller branches; and therefore always prefer this in the buſineſs of tanning.

Laſtly,

Laſtly, What appeared to me upon examining the ſpecimens, you lately ſhewed me, of Oak Bark, which afforded me an opportunity of comparing the Bark of the trunk, or larger branches of the Oak, with that taken from the ſmaller branches, where the Bark of the larger kind appeared of a red hue, and expanded, that of the ſmaller, pale and quilled; a difference exactly ſimilar to that we obſerve between the two different ſpecies of Peruvian Bark,

The only other obſervation I ſhall make relating to the Red Bark, is, that when we reflect on the very extraordinary virtues aſcribed to the Peruvian Bark, by Dr. SYDENHAM and Dr. MORTON, and particularly on the degree of certainty with which it is by them affirmed to have cured Intermittent Fevers; of which virtues, the ſmall and Quilled Bark is allowed by all Practitioners, to fall ſo very

far ſhort; and conſider further, that the deſcriptions given by the *Materia Medica* writers, cotemporary with the eminent perſons now mentioned, of the Peruvian Bark then in uſe, does not apply to the ſmall and Quilled Bark, but does exactly ſo to the Red Bark; and laſtly, that the inhabitants of New Spain, and, if I am rightly informed by a gentleman lately arrived from that country, of Old Spain alſo, actually hold the Red Bark in higher eſtimation, it muſt appear highly reaſonable to conclude, that the Red Peruvian Bark is truly the ſpecies of this medicine, the virtues of which are ſo much extolled by Dr. SYDENHAM and Dr. MORTON, and which was in common uſe with them and their cotemporaries.

To conclude, Sir, I conſider the work in which you are engaged as highly commendable. I conſider it as one not only

of

greater public utility, inaſmuch as it tends to fix the reputation, and extend the uſe of a moſt efficacious and important medicine; but alſo as a neceſſary one to counteract the endeavours of prejudiced or intereſted perſons to oppoſe its deſerved reputation, and diſcourage its general uſe.

I am, Dear Sir,

Your ſincere Friend,

And humble Servant,

JAMES MADDOCKS.

London, Capel Court, Sept. 20, 1782.

DR. KEIR, Phyſician to St. THOMAS's HOSPITAL, informs me, that in that Hoſpital about 150lb. of the Red Bark have been uſed, and he thinks with more ſucceſs than is uſually experienced from the common Peruvian Bark.

The

The employment of it in his practice has not been confined to Intermittents; he has alſo uſed it in Mortifications, in Phagedænick Ulcers, in the Convaleſcence of Fevers, and in every other complaint that occurred, where the common Bark would have been deemed a proper remedy.

In oppoſition to the objection ſtated, and refuted by me, Dr. KEIR obſerves, that during the whole of this extenſive and miſcellaneous uſe of the Red Bark, no caſe occurred in which there was reaſon to believe any bad effects to have been produced by it.

Extract of a Letter from Mr. SHIREFF, *an eminent Surgeon and Apothecary at Deptford in Kent.*

After obſerving that the ſituation of Deptford, and its environs, renders the inhabitants

inhabitants of that village extremely ſubject to Intermittent Fevers of a very obſtinate nature, ſome of which he found more difficult to cure, than even ſuch as he had ſeen on the weſt coaſt of Sumatra, where they put on a more formidable appearance than in Europe. He proceeds as follows:

"From the ſeveral patients whom I "attended, I ſelected the three following "caſes to try the effects of the Red Bark; "not to enumerate every particular, I "ſhall only obſerve, that in all of them "the common Bark had failed in a ſin-"gular manner. Each of them had ſuf-"fered frequent relapſes, the firſt caſe "eſpecially; ſhe had ſcarce any reſpite "for the ſpace of nine months in Lin-"colnſhire; ſhe had removed to this "place to try the effects of a different "air; before I ſaw her ſhe had been here "for three months, without finding any "benefit.

CASE

CASE I.

A gentlewoman of a weak conſtitution, and naturally of a nervous habit of body, had been ſeized laſt autumn with a ſimple *Tertian* in Lincolnſhire; upon her removing to this place it had aſſumed the *Quartan* type, and was of three months ſtanding; having found very little relief from Bark and other remedies, ſhe had declined calling in any aſſiſtance; but her huſband, alarmed at her extreme weakneſs during a paroxyſm, ſent for me: I was informed of the above particulars, and found her with an icteric countenance, ſwelled ancles, and other marks of great debility: after ſome difficulty, I prevailed upon her to take medicines; I ſent her immediately ſeveral doſes of Red Bark, each containing only one ſcruple, on account of her nauſeating every thing that was preſented her, deſiring

ſiring her to begin after a general moiſture had come on, with an abatement of thirſt and Head Ach, and to be repeated every four or ſix hours; ſhe continued the medicine in this manner, for four or five days, and as the ſubſequent paroxyſm had been more mild than the one preceding it; I could not prevail upon her to take the Bark ſo frequently; ſhe however continued its uſe for fourteen days longer, each day taking four ſcruples, which entirely removed her complaints—ſhe is now in perfect health.

CASE II.

A young gentleman, naturally of a robuſt and healthy habit of body, had ſuffered ſeveral paroxyſms of a double *Tertian* to attack him, without uſing any method to prevent them; it was his determination to truſt to nature for a cure, rather than take ſuch large, and frequent doſes

doſes of the Bark, as he had ſome months before done, without any permanent effects. But a delirium ſeizing him in one of the paroxyſms, his relations ſent for me at midnight: I found him ſenſible, his body covered with a moſt profuſe ſweat, and loaded with bed-cloaths, the curtains drawn cloſe, and the external air carefully excluded from the room; having removed every obſtacle to the free admiſſion of air, and his body wiped with a dry cloath, and in place of hot drinks, made ſtill hotter with ſpice, I ordered toaſt and water, acidulated with lemon, and other diluting liquors, to be given him almoſt cold; I procured his conſent to make one more trial of medicine; accordingly, half a dram of Red Bark was given him immediately, and repeated every four hours; he miſſed the next period, and after continuing his medicine three days longer, only three times in the day; he left it entirely off;

—he

—he has ſuffered no relapſe, and is now in health.

CASE III.

A gentleman, after expoſing himſelf to a damp evening, was ſeized with the common ſymptoms of Fever; an emetic was given immediately, and followed by a laxative, not apprehending that he was attacked again with an Intermittent, he continued to go to London; at the expected period, however, he was again taken ill, and the paroxyſm was rendered very ſevere, by his imprudently walking home after it had commenced. When the febrile ſymptoms abated, and the ſkin became moiſt, I gave him half a dram of the Red Bark, with orders to repeat it every three hours; he ſuffered no return, and now remains well; being much expoſed to the weather,

ther, I have adviſed him to continue ſmall doſes of it twice in the day.

I am,

Dear Sir,

Your obliged and humble Servant,

Deptford, J. L. SHIRREFF.
Sept. 14, 1782.

To Dr. Saunders.

A Second Letter from Dr. FOTHERGILL *to Dr.* SAUNDERS.

DEAR SIR,

As medical attention has of late been deſervedly engaged on the ſubject of the Red Peruvian Bark, and as the public are not a little intereſted in the reſult, I take the liberty to ſubmit to your conſi-

deration

deration, a few more curſory obſervations, which have occured ſince my laſt.

The teſtimony which you have already produced from ſo many reſpectable Practitioners, who could be under no temptation, either to conceal its failures, or to exaggerate its virtues, renders it unneceſſary to add any freſh evidence of its ſuperiority; otherwiſe I might mention ſome late inſtances of its ſucceſs, in certain inveterate Agues, which had entirely baffled the ordinary Bark. Therefore, whatever doubts or difficulties may be now raiſed concerning its identity with the Bark formerly uſed by MORTON and SYDENHAM, can by no means invalidate the facts which have been advanced in ſupport of its real efficacy. That it was, however, in actual uſe about the beginning of the preſent century ſeems demonſtrable.

In the year 1702, the cargo of Bark which was captured on board a Spaniſh galleon, a parcel of which fell into the poſſeſſion of Mr. Pearſon, an eminent apothecary in the city only four years ago, appears, from every circumſtance, to have been no other than the drug now under conſideration. But what ſeems ſtill more worthy our attention, is, that after the ſpace of about 78 years, it ſhould ſtill afford a much ſtronger decoction than that of the common Bark, and alſo ſurpaſs it in the cure of fevers, and other diſeaſes: an evident proof that this Bark retains its medicinal powers much longer than could have been imagined. In further confirmation of this ſingular property, and alſo of its early uſe in this country, allow me to tranſcribe a remarkable paſſage from Dr. Liſter, who mentions ſome of its moſt characteriſtic marks: "Propria experientia teſtor, me "ante 20 annos CORTICE TRUNCI ſæpe "uſum

" uſum eſſe ad CRASSITIEM, & LATITU-
" DINEM VOLÆ MANUS, MAGNIS, &
" PROFUNDIS SULCIS, & FISSURIS CON-
" SPICUO, velut in VETUSTO ARBORE,
" imo eundem aliquando carioſum; &
" olim, & nunc, vix unquam fruſtravit
" eventu optimo, & deſiderato, maxime
" ſi ejus modus, et tempus exhibitionis
" ritè obſervantur*." Add to this, a ſtill further proof with which I have been lately favoured by Dr. Smith, a very ancient phyſician near Andover, who aſſures me, that having obtained a ſample of the Red Bark, he immediately recognized it, " both by
" the ſmell, taſte, and colour, to be the
" SAME that was COMMONLY USED FIFTY YEARS AGO." To which he ſubjoins ſome recent inſtances of its ſucceſs in Intermittents, which had reſiſted the ordinary Bark.

* De *Hydr.* p. 56.

From the year 1640, that the Peruvian Bark was firſt imported into Spain, its reputation increaſed till the old unpeeled trees becoming ſcarce, the inhabitants of Loxa, mixed other Barks with it, which being detected, it fell into ſuch diſcredit, that, in the year 1690, ſeveral cheſts of it lay in the warehouſes at Piura, and nobody to purchaſe it. From this circumſtance, and from the inſignificant doſes in which it was adminiſtered, it diſappointed the public expectation ſo much, as to be generally diſcarded, till Tabor, an adventurous Engliſh practitioner, by giving more adequate doſes of the genuine drug, revived its reputation; when its fame ſpread ſo rapidly, that the Spaniſh merchants, at length, found it difficult to ſupply the demand of their cuſtomers for full grown Bark, and therefore partly through neceſſity, and partly through political œconomy, ſubſtituted the *ſmall* Bark with which they have long furniſhed the European markets.

Hence

Hence may be explained, why they now affect to extol the Quill Bark, which is more eaſily prepared, and more readily obtained, in almoſt any quantity, and that without deſtroying the trees. M. CONDAMINE, who viſited Loxa, about fifty years ago, aſſures us, that the Red Bark was allowed to ſurpaſs the other ſorts, but was grown, even then, extremely ſcarce, on account of the reaſon already aſſigned *

Of late years Peruvian Bark has become ſuch an important article of commerce, that our merchants are glad to procure ſuch as is offered; but no candid Spaniſh Practitioner, who has tried the different ſorts, will, it is preſumed, be at a loſs in determining to which the real preference ought to be given.

* Mem. de l'Acad. des Sc. 1738.

As the preſent ſtock of genuine Red Bark cannot but be extremely diſproportionate to the demand, it only remains, that we earneſtly admoniſh younger practitioners not to be too precipitate in drawing unfavourable concluſions from the reſult of their preſent trials, but to ſuſpend their judgment, till a freſh ſupply ſhall enable them to pronounce with more certainty, concerning its comparative powers.

As it hitherto promiſes to be much ſuperior to the common Bark, in the ſpeedy cure of Intermittents, it will alſo behove them to uſe the greater circumſpection in aſcertaining the true nature, and tendency of the diſeaſe, *viz.* whether it is a primary, or only a ſecondary affection, whether certain obſtacles are not previouſly to be removed; whether the cortex is not contraindicated; and, laſtly, whether the ſudden ſuppreſſion of periodical

odical motions may not prove productive of ſome more dangerous derangement in the ſyſtem.

From the preſent indiſcriminate uſe of the Peruvian Bark, in diſeaſes ſo diametrically oppoſite in their nature, I cannot help thinking, that the inactivity of this univerſal Catholicon, ſo generally lamented of late, has been rather a fortunate circumſtance, and that the inertneſs of the remedy has often prevented a ſeries of evils, which muſt have enſued from ſuch a prepoſterous abuſe of the genuine drug.

In Intermittents which are purely idiopathic, and proceed from an epidemic conſtitution of the atmoſphere, without any concomitant diſeaſe, or internal inflammation, the Bark may generally, without heſitation, be freely exhibited; and in highly urgent caſes of this kind, which

prevail in marſhy countries, and ſultry climates, wherein the remiſſions are very ſhort, this medicine can ſcarcely be adminiſtered too ſoon, or too liberally. Under ſuch hazardous circumſtances time is too precious to admit of preparatory evacuations, and I moreover concur with you in conſidering them as frequently unneceſſary, if not injurious.

On the contrary, it muſt be allowed, that Agues are ſometimes merely ſymptomatic of ſome other more dangerous affection, and ought to be conſidered by the attentive Practitioner, as *remedies*, rather than diſeaſes. Thus in the gout, the pain, inflammation, and tumefaction of the toe, is not the principal diſeaſe, but a critical *metaſtaſis*, in order to its cure; ſo febrile paroxyſms are, in certain caſes, to be conſidered as the ſalutary efforts of nature, to ſubdue ſome morbific cauſe, or to remove ſome confirmed diſeaſe

ſeaſe, of a more fatal tendency. In ſuch caſes, nature is to be aſſiſted, not diſarmed of theſe uſeful weapons, by which ſhe ſometimes combats Palſies, Epilepſies, and other Herculean maladies, which all the artillery of medicine could otherwiſe never have ſubdued.

This being accompliſhed, the febrile paroxyſms either ſubſide ſpontaneouſly, or may be now ſafely removed by this powerful febrifuge.

On the other hand, there are not wanting inſtances, where the ſupervening Ague is ſo far from removing the former diſeaſe, that it ſerves but to exaſperate its ſymptoms, and if ſuffered to continue, to produce ſtill other dangerous affections. To determine with accuracy and preciſion in theſe different ſituations, demands a degree of medical diſcernment

diſcernment and deliberation, which but too ſeldom occur in the hurry of modern practice.

With reſpect to the general operation of the Peruvian Bark, I entirely coincide with what you have ſo ſatisfactorily advanced, and ſhall only preſume to ſubjoin the following reflections.

Phyſicians, in attacking Putrid Fevers and other obſtinate diſeaſes with the Bark, ſeem extremely ſolicitous to impregnate the whole maſs of fluids with its ſpecific virtue, yet excellent as it is, when applied to the nervous ſurface of the alimentary canal, nature ſeems to me, never to have intended that it ſhould enter the blood, and has therefore wiſely placed firm barriers to prevent its admiſſion into the interior parts of the machine. A ſubſtance which is capable of undergoing repeated macerations, and decoctions in water for many months,

months, without being wholly diveſted of its bitterneſs and aſtringency, could not eaſily be ſubdued in the blood-veſſels; but would probably prove (at leaſt in its native ſtate) utterly incompatible with the laws of the ſyſtem. Dr. FRIEND accordingly informs us, that no ſooner had he injected two ounces of a decoction of this medicine into the jugular vein of a dog, than it produced ſevere palpitations, convulſions, and death.* The Provident Guardian of the human frame, thus kindly checks the wild career of aſpiring mortals, when, through the miſts of boaſted ſcience, they blindly purſue devious paths that often lead to dangerous errors. Not that our reſearches into the laws of the œconomy, and the operation of medicines can be too deep, or proſecuted with too much ardour, ſo long as we follow the clue of accurate obſervation, and draw no concluſions but what are fairly

* Emmenalog. c. xiv.

fairly deducible from the phenomena; but unfortunately, from the little we know of theſe matters, we often preſume a great deal concerning the major part which remains unknown, and the miſconceptions which thence enſue in theory, are tranſferred into practice.

In the late German war, the French army on their return from Bohemia, were ſeized with *Tertian* Agues of the putrid kind, which at length terminated in critical abceſſes, which formed behind the ears, and in the arm-pits. When theſe abceſſes were fully matured, they were opened according to the uſual mode of practice in ſimilar caſes. But no ſooner was this unfortunate operation performed, than the ſymptoms recurred, accompanied with extreme proſtration of ſtrength, under which the patients generally ſunk in a few days. But when the ſick were left to Nature's own management, without

any

any attempt to promote, or retard ſuppuration, or to open the abceſſes, the perulent matter was ſpontaneouſly diſcharged by the inteſtinal canal, or ſome of the other emunctories. The practitioners were now led to acquieſce in the mode of cure pointed out by Nature, and from this time, almoſt all who were affected with the diſeaſe recovered.*

Thus art often boldly uſurps the province of nature, and undertakes to regulate the inordinate motions of a complicated machine, and not unfrequently by very improper, or very inadequate means. From this ſource proceed innumerable errors in the treatment of diſeaſes, and endleſs miſtakes concerning the effects of medicines. Intermittent Fevers, and the Bark, the ſubjects now under diſcuſſion, afford pregnant examples of both. Nor can any reformation be expected till more attention is

* Mem. de l'Acad. royale des Scien. de Stockholm.

is paid to that excellent maxim of the Illuſtrious VERULAM:

"*Non fingendum, aut excogitandum, ſed inveniendum quid* NATURA *faciat, aut ferat.*"

I remain, Dear Sir,

Your moſt obedient Servant,

A. FOTHERGILL.

London, Sept. 20, 1782.

I hope I ſhall not be conſidered as preſumptuous, in concluding, that the foregoing obſervations are ſufficient for determining the ſuperior efficacy of the Red Peruvian Bark. And it ſeems reaſonable to hope, that the introduction of this kind of Bark may beattended with the happieſt effects, and enable us to oppoſe more ſucceſsfully thoſe malignant and remittent fevers of warm climates, and unfavourable ſituations ſo deſtructive to our fleets and armies.

I cannot, however, finiſh, without returning my beſt thanks to the gentlemen

men who have favoured me with their correſpondence; and I think it neceſſary to expreſs my obligations to many gentlemen whoſe letters were too late for publication.

They all concur in recommending the Red Peruvian Bark, as more efficacious and powerful than any other kind.

From the numerous trials I have made with it, in Intermittent Fevers, and other diſeaſes, I am diſpoſed to conclude, that it need be employed only in half the quantity we generally recommend of other Bark.

I have likewiſe the ſatisfaction of aſſuring my readers, that it is now in general uſe in all the large Hoſpitals in London; and ſuch is the preference given to it, that the demand is difficultly ſupplied.

Be careful in the choice of it, by attending to the characters which diſtinguiſh it from the large Bark, hitherto rejected by our Druggiſts.

I ſhall continue to be diligent in my enquiries on the ſubject, and I moſt earneſtly requeſt the favour of my friends, that they will perſevere in ſupplying me with accurate obſervations, ſo as to determine, with preciſion, in what other diſeaſes this valuable remedy may be uſed with ſafety and advantage.

The operations and effects of remedies can only be aſcertained by the united induſtry and experience of intelligent men; who, by being aware of the difficulty of making obſervations, are ſufficiently guarded againſt the fallacy to which they are unavoidably expoſed.

FINIS.