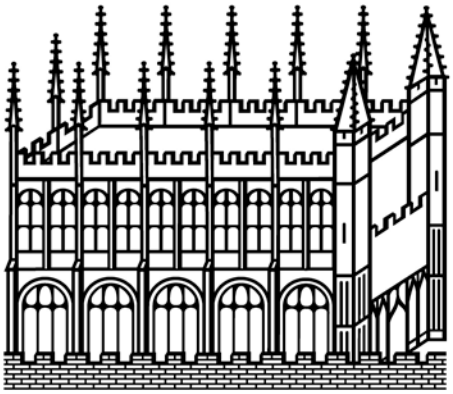

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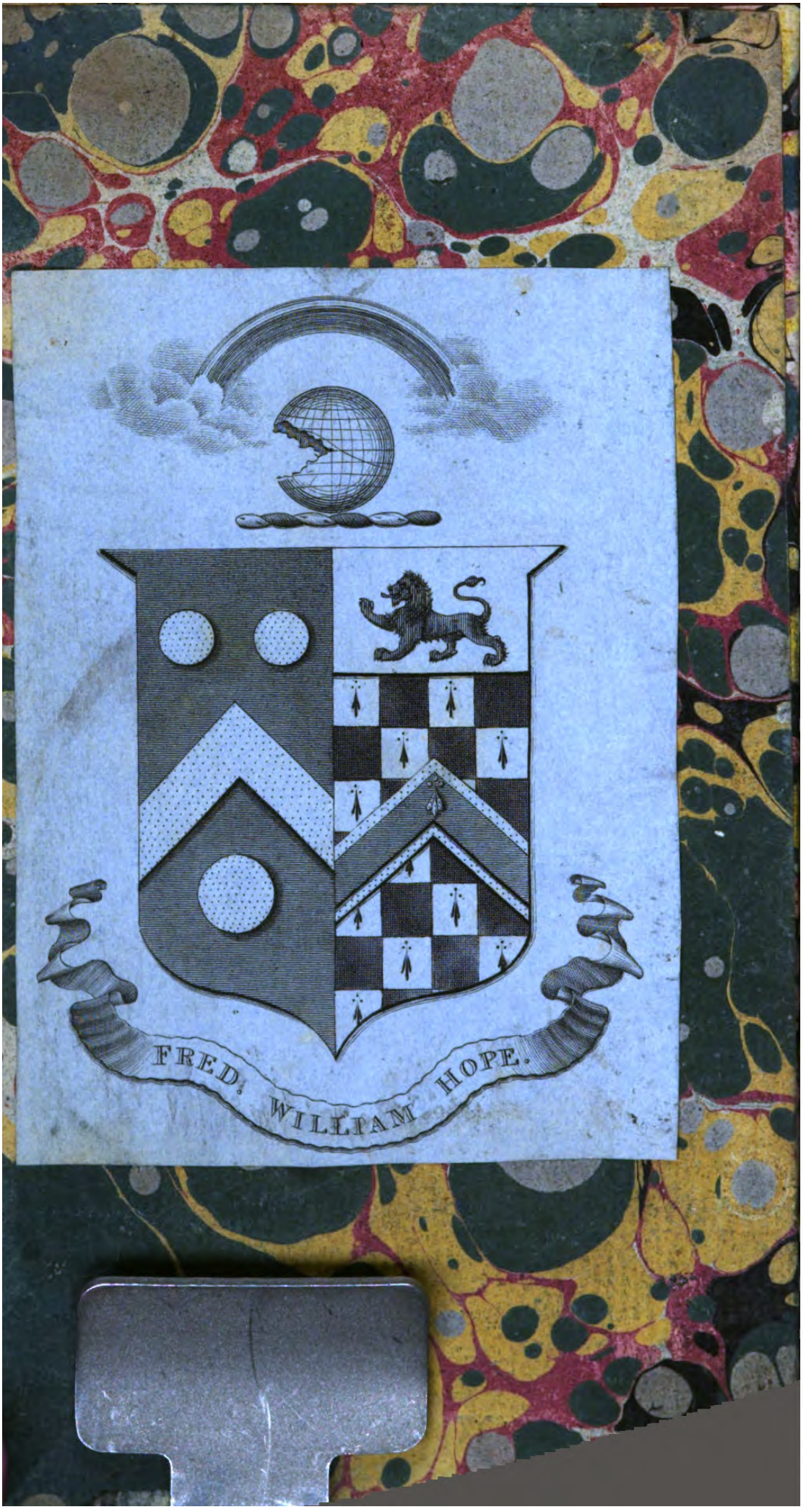
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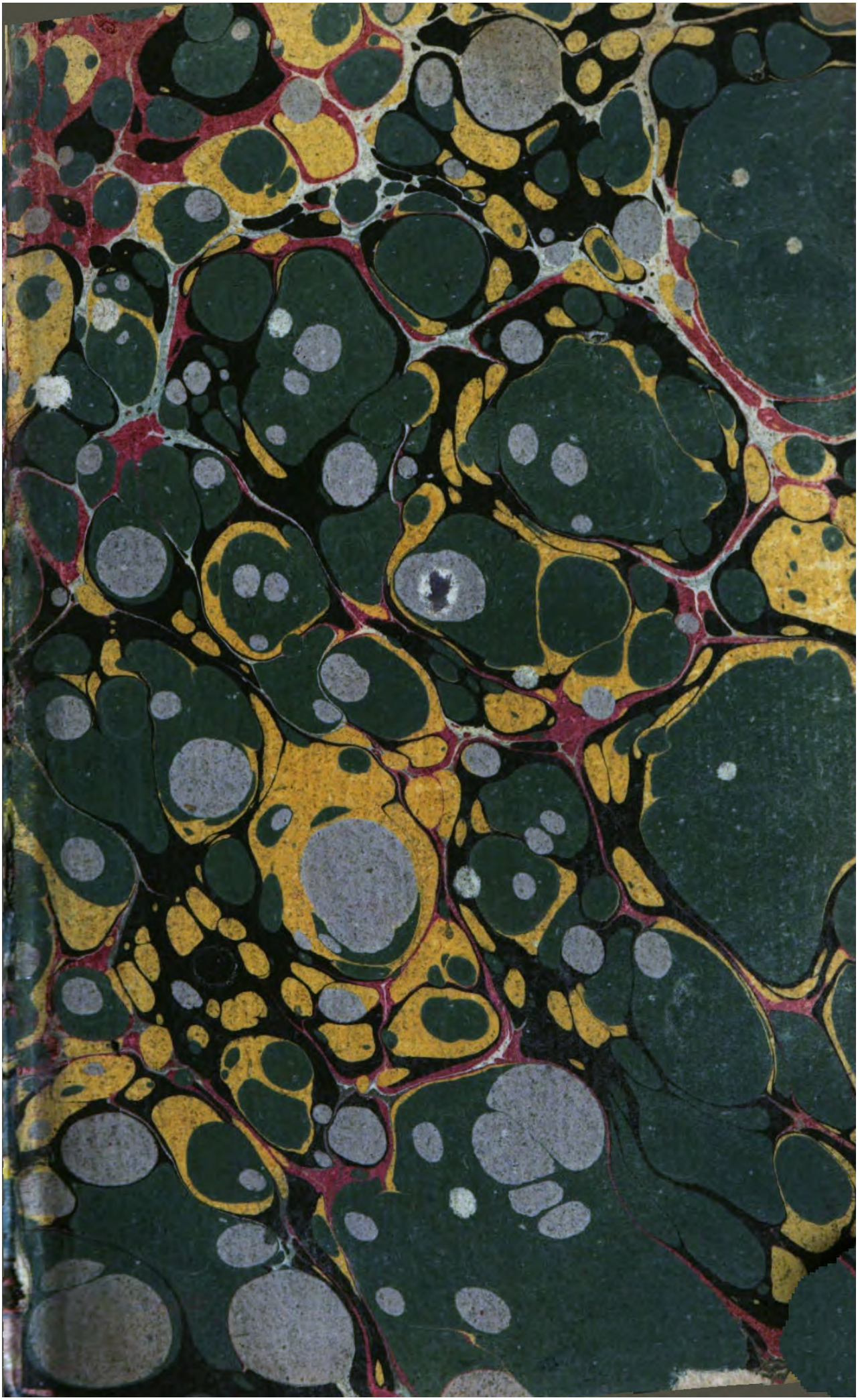

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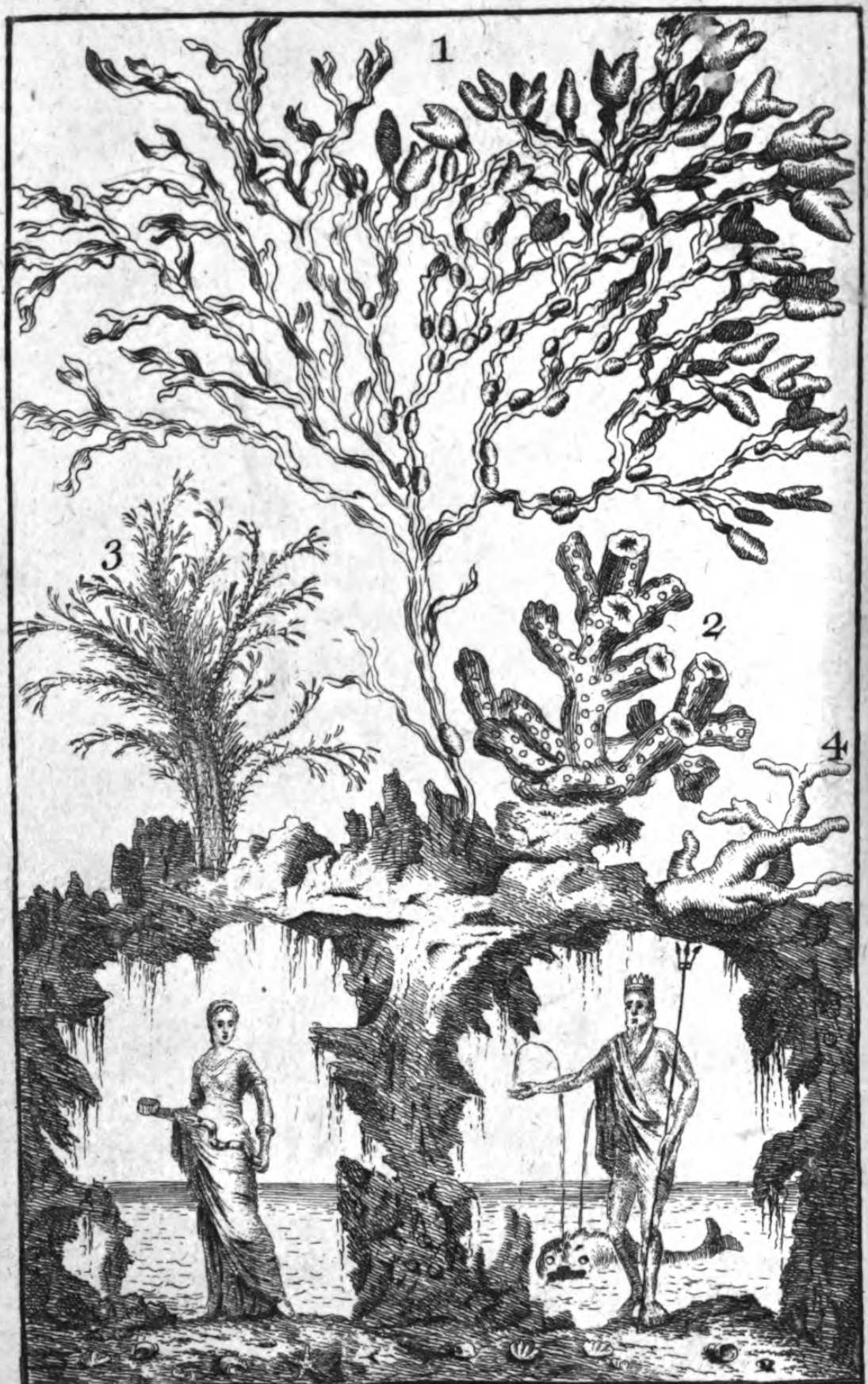

1. Quercus Marina or Sea Wreck, one Side with Pods the other Side without.

2. Madrepore. — 3. Coralline. — 4. Coral.

A

DISSERTATION

On the USE of

SEA WATER

IN THE

DISEASES of the GLANDS.

PARTICULARLY

The *Scurvy*, *Jaundice*, *King's-Evil*, *Leproſy*, and the *Glandular Conſumption*.

Tranſlated from the *Latin* of

RICHARD RUSSEL, M. D.

To which is added a Tranſlation of

Dr. *Speed's* Commentary on SEA WATER.

AS ALSO

An ACCOUNT of the Nature, Properties, and Uſes of all the remarkable MINERAL WATERS in *Great Britain*.

By an EMINENT PHYSICIAN.

Θάλασσα κλύζει πάντα τ' ἀνθρώπων κακά.
The Sea waſhes away all the Evils of Mankind.
Eurip. Iphig. in Taur. V. 1193.

The FOURTH EDITION, Reviſed and Corrected.

LONDON:
Printed for W. OWEN, at *Homer's* Head, *Temple-Bar*.
M DCC LX.

M. 48.

ADVERTISEMENT

TO THE

READER.

IN the laſt Edition of this Treatiſe, there was added to *Ruſſel*'s Account of Sea Water Dr. *Speed*'s Commentary on the ſame Subject; and to render this more compleat and more generally uſeful, there is now ſubjoined a Relation of the Nature, Properties, Contents, Virtues, Doſes, and Uſes of all the noted mineral Waters in *Great Britain*. Here then every Patient may ſoon learn what medical Spring is beſt adapted to his particular Ailment, and where he is moſt likely to meet with a Cure. And perhaps it may ſave many an irkſome Journey, and prevent unneceſſary Expences, as well as hinder the Diſtemper from taking deeper Root by a tedious Delay. It muſt be owned that at all the greatly frequented Places, ſuch as *Bath*, *Briſtol*, *Tunbridge*, and *Scarborough*, there are Phyſicians to be conſulted, and conſequently there will be no Danger of uſing any of thoſe Waters incongruouſly; but then there are many others where no ſuch Advice can be readily had; and if there could, it muſt certainly be moſt expedient to have ſome Knowledge beforehand of what Water is moſt likely to yield

Relief, Add to this, that there are ſome who are not able to make long and chargeable Excurſions for ſeveral ſucceſſive Seaſons, who, if they were acquainted with the Nature of the Wells nearer Home, might meet with a certain Remedy, without ruining themſelves or Families.

We have conſulted the Writings of ſeveral Phyſicians and natural Hiſtorians, to gain the beſt Information we were able, taking as much Care as poſſible not to miſlead the Reader in any ſingle Inſtance. We are greatly obliged to Dr. *Short*, whoſe Inquiries into this Part of Philoſophy have received the Approbation of the Learned; as alſo to Dr. *Rutty*, who has not only given us a regular Synopſis of Mineral Waters, but has added a great Number of Experiments of his own. Upon theſe Accounts therefore it is believed theſe few Sheets will not be unacceptable to the Public in general, nor even to the young Practitioners in the Art of Medicine in particular, becauſe they will hereby be aſſiſted in forming their Judgment upon this Subject, even after they have read much larger Volumes: At leaſt, it is hoped that theſe Obſervations will be thought no improper Addition to the two Diſcourſes upon Sea Water, becauſe they all coincide with the ſame Deſign, which is the curing of tedious chronic Diſeaſes, and the reſtoring of loſt Health.

THE

THE

PREFACE.

IN the following Treatiſe I offer to the READER's Conſideration, a few Caſes relating to ſuch Maladies as have yielded to the Efficacy of SEA WATER: and have attempted to explain the Manner of its Operation in vanquiſhing the Diſeaſes of the Glands. However, as ſo powerful a Medicine, in my Opinion, cannot fail of being of far more extenſive Uſe, I promiſe myſelf the moſt accurate Enquiries will be made into its Nature; and that future Experiments will determine how much farther it will be beneficial to Mankind.

However, I think it proper to introduce this Work, by a few Obſervations that I and others have already made upon the Nature, conſtituent Parts, and Qualities of SEA WATER, for from hence, perhaps, a

juſt Judgment may be formed of what farther may be expected from its Aſſiſtance.

And as I have been aſſiſted in theſe Enquiries by the ingenious and curious Experiments of ſeveral very learned Men, as *Hales*, *Boerhaave*, *Sepius*, *Marſilinus*, *Guidot*, and others, I thankfully acknowledge the Benefit I received from their Obſervations; and I ſhould be ungrateful if I ſhould not mention with due Regard, my very learned Friends, and eminent Phyſicians, *R. Frewin*, *M. Lee*, *E. Wilmot*, and *W. Lewis*, at whoſe Requeſts, and by whoſe Advice and Aſſiſtance, I undertook and compleated this Work: But to come to the Purpoſe.

Water is of itſelf without Taſte or Smell, and being ſprinkled in the Eye, gives no Pain; but is ſmooth and flexible, and cannot offend the Nerves, in any Senſe: Beſides, it is a Kind of common Menſtruum or Diſſolvent of all Salts, and ſeems by Nature deſigned for that Purpoſe; for though the Cryſtals of Sea Salt are of a pyramidical Shape, of Sal Gem cubical, of Nitre priſmatic, and Vitriol and Alum of different Forms, yet Water diſſolves all their Particles, and receives them all in a Kind of common Menſtruum. Hence it is ſo remarkably ready to diſſolve the ſoapy and

and gummous Particles of Bodies, and by the Influence of the Sun's Heat, it is made the chief Inſtrument in all chemical Extractions, both Natural and Artificial. But SEA WATER abounds chiefly with Salt, as may be obſerved by thoſe who, in making Salt, boil it up to ſuch a Conſiſtence as will bear the Weight of an Egg.

That vaſt Collection of Waters which we call the Sea, ſurrounds the whole Earth, and conſequently waſhes whatever is contained between its oppoſite Shores, as Submarine Plants, Salts, Fiſhes, Minerals, &c. and is therefore enriched with the Particles it receives from theſe Bodies, either being waſhed off, or paſſing into the Water by their Tranſpiration; for their fine and ſubtle Particles, continually thrown off by Tranſpiration, and endeavouring to eſcape into the Air, are intercepted by the Water, and mingled with it. But Salts chiefly beſtow their Particles on the Water, and thereby preſerve it from Putrefaction; from this Cauſe alſo, this Fluid acquires a more oily and ſoapy Quality than Spring Water: And further, this whole Body of Waters is penetrated by certain ſulphureous Steams or Effluvia.

All theſe Cauſes ſeem jointly to conſtitute this Fluid which we call the Sea, and

which the omniſcient Creator of all Things ſeems to have deſigned to be a Kind of common Defence againſt the Corruption and Putrefaction of Bodies. Therefore, in thoſe Regions where the Heat of the Sun is greateſt, and conſequently more apt to corrupt Fluids, the Sea is ſalteſt, according to the Obſervations of thoſe who ſail under the Equator. But this wondrous Collection of Waters preſerved from Corruption by the Aid of Salts, *&c.* performs the Will of the Omnipotent, by various Means; for the Sun ſeparating the freſh Water from the Salt, and gently attracting it upwards, cauſes alſo many ſulphureous and nitrous Particles to aſcend in the ſame Vapours, which being driven through the Air, over all the immenſe Spaces of the Earth and Seas, are probably the Cauſe of all the various Phænomena and Changes of the Air. And when they have performed their deſtined Taſk in the Air, falling down in the Shape of Dew, Rain, Hail, or Snow, they ſupply the Earth with Moiſture, afford Water to all Kinds of Animals, augment the Springs deſtined to the Uſe of Men with the pureſt Streams; whence the ſuperfluous Liquid runs into the Rivers, and back into the Sea, the common Parent of them all. And thus the Order of Things ſeems to be preſerved.

Theſe Things being premiſed, let us ſee what the moſt accurate Enquirers into Nature, what Phyſicians and Chemiſts have obſerved of the SEA WATER and its principal Qualities, which are Four; the Firſt is, *Saltneſs*; the Second, *Bitterneſs*; the Third, *Nitroſity*, or a nitrous Quality; and the Fourth, *Unctuoſity*.

The Firſt is ſo apparent, that none can be ignorant of it. The ingenious Dr. *Hales* computes, there are five Ounces and an half in a Gallon of SEA WATER; ſo that a Pint of SEA WATER contains almoſt five Drams and an half, beſides that bitter oleous Bitumen, and other Parts beforementioned; and that Doſe is commonly ſufficient in grown Perſons, to give three or four ſmart Stools. The Chemiſts remark, that this Salt conſiſts of a certain peculiar Acid and a mineral Alcali, but the acid Part is ſo intangled and reſtrained by the other Part, that it can ſcarcely exert its Power in a concrete Form. And Salt is of ſuch a fixed Nature, that it never yields to Putrefaction: Whence it preſerves other Bodies ſo remarkably; for, according to Dr. *Hales*, Spirit of Salt ſo powerfully reſiſts Putrefaction, that three Drops thereof, in an Ounce of Water, will preſerve Fleſh a long Time. And in another Experiment he ſays, that putting raw Beef

into SEA WATER not well diſtilled, the aſtringent Power of the Water was ſo great, that contracting the minute Blood-Veſſels, no Blood would flow therefrom.

The next Quality is *Bitterneſs*, which it is ſuppoſed to acquire from the bituminous Parts of the ſubjacent Earth: for it is probable, that ſulphureous Exhalations are expelled thro' innumerable Paſſages by ſubterranean Fires, which impregnate the SEA WATER, as the Fume of Sulphur penetrates Wine: Wherefore, it is very probable that SEA WATER is the more bitter the deeper it is taken; and this ſulphureous Bitumen aſcends ſo plentifully in Diſtillation, that *Marſilinus* affirms, that the diſtilled SEA WATER cannot be drank, for its Quantity of Bitumen which is more nauſeous than its Saltneſs; and he alſo ſays, that there is ſo great a Quantity of Bitumen in the *Mediterranean* and *Thracian* Seas, and more eſpecially in the *Pacific Ocean*, as alſo that which waſhes the *Eaſt-Indian* Shores, that it ſometimes appears floating upon the Surface of the Water; and he judges it proceeds partly from the Veins of Coals, and partly from a Kind of Petroleum, which is found in various Parts of the Earth. The ſame *Author* diſtilled ſome Pit-Coal and found, that forty Grains of the volatile oleous Spirit of Coals, put into two Pints

of

of Spring Water, that was made as ſalt as Sea Water, cauſed it to be as bitter as the Water at the Surface of the Sea; and fifty Grains made it as bitter as the deeper Sea Water. And perhaps theſe bituminous and ſulphureous Particles, do conſiderably aſſiſt the Salt in diſperſing Tumours; for Phyſicians have always eſteemed Bitumen to be a diſſolving Medicine, conſiſting of volatile Salt, Sulphur, and a little Earth. "For all bituminous Bodies have a Power "of heating and diſcuſſing, whence hot "Baths and medicinal Springs that contain "Sulphur and Bitumen, are uſed with "Succeſs to diſperſe cold Humours in the "Palſy, Epilepſy, and the like Diſtem-"pers." *See Epitom. Phyſicæ Sannert. p. 52.*

Therefore, from theſe Reaſons we may judge, that the Bitterneſs of Sea Water proceeds from a certain volatile oleous Spirit, with which it is remarkably impregnated, the Quality of which can only be diſcovered by the Effects.

The third Quality is *Nitroſity*. *Hales* found by ſeveral Experiments, that the bitter Salt, of which there is ſuch a large Quantity in Sea Water, was partly nitrous; and does not think it ſtrange that ſuch a nitrous Salt ſhould be formed in the bitter Salt, and in the oleous Bitumen of the Sea.

He

He alſo thinks, that this bitter Salt abounds in Plants and Animals; and that the Sea Water does not only contain a perfect Sea Salt, but alſo an imperfect bitter Salt, and a Kind of ſulphureous Bitumen. And alſo is of Opinion, that the ſubtle Sulphur which abounds in the Air, Dew, and Rain, *&c.* is extracted from that ſulphureous Bitumen, by the Heat of the Sun; which promotes the Vegetation of the Fruits of the Earth. It has alſo been obſerved, that Sea Water does not extinguiſh Fire ſo readily as Spring or freſh Water; and this is ſuppoſed to proceed from the nitrous Particles abounding in Sea Water; for Nitre conſiſts of a ſaline, volatile, oleous Matter; add to this, that the Sea Water abounds with many bituminous and ſulphureous Particles, if it be true, which ſome affirm, that it will not readily extinguiſh Fire, and therefore, *Lamps burn better with Salt in the Oil*, Macrob. Saturnal. Lib. 7. Whence alſo *Plutarch*, in the Beginning of his Book of *Natural Queſtions*, cites a Proverb uſed by the Antients, *Do not throw Sea Water upon the Fire*, on Account of its Oilyneſs; as he writes in the ſame Place.

Its laſt Quality is *Oilyneſs*; for beſides other Things, *Marſilinus* obſerves, that there is an Oilyneſs or ſoapy Quality in diſtilled Sea Water, and he ſays, that two Pounds of

of diſtilled Sea Water will not diſſolve ſo much Salt as the ſame Quantity of Spring Water by half a Dram, although their ſpecific Gravities are equal, and attributes this to its Oilyneſs. The Antients alſo obſerved this Oilyneſs of Sea Water, "*There* "*is a ſurprizing Oilyneſs in Sea Water,*" Pliny *lib.* xxxi. *cap.* 7. and Father *Bourzes* affirms, that he obſerved in ſome Parts of the Ocean ſuch a remarkable Oilyneſs, that if a Cloth was dipped in it, it acquired a Viſcidity; and where the Way of the Ship made a brighter Track in the Water, there it was more greaſy and viſcid, and the Cloth being ſhook with a quick Motion, gave a great Light. *See the 9th Vol. of the Lettres de R. P. Miſſionaries, Edit. Paris, Octavo.* And indeed, that Viſcidity or Oilyneſs is ſo evident, that Dr. *Hales*, by ſeveral accurate Diſtillations, found that Sea Water, though deprived of its Salt, did yet retain a certain viſcid Matter, which ſtuck to the Sides of the Veſſel if the Water was diſturbed, but ſunk to the Bottom if it remained without Motion. This Oilyneſs is not found in Spring Water. This Quality appears alſo in Salt, for if the cleaneſt common Salt is liquified in a moiſt Air, it lets fall its Earth with a certain oily, acrid, and auſtere Liquor.

It is certain, that Salts contribute greatly to all Cures that are performed by Medicinal Waters. They are found in *Bath* Waters, as we learn from the Experiments of *Guidot*; and *Sepius* found a large Quantity of a certain white and bitter Salt in the *Pyrmont* Waters.

All theſe Qualities, and ſome others which plainly appear in Sea Water, gives us great Hopes, that the *Materia Medica* may ſoon receive ſome extraordinary Addition from this Part of Nature.

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A DIS-

A DISSERTATION ON A GLANDULAR CONSUMPTION, &c.

THE *Conſumption* which greatly afflicts our Iſland, and in the Cure of which, our Phyſicians find the greateſt Difficulty, generally proceeds from a long continued Fluxion on the Glands of the Wind-Pipe, and its Branches, of the Lungs and other internal Parts. And this Diſtemper frequently arrives to ſuch a State, before a Phyſician is conſulted, that it is incurable: For it is in vain to expect a Phyſician ſhould preſerve the ſmall Veſſels from Ruptures, and keep the Fluids in a healthy State, when they are already burſt and often eroded, not without the Diminution or Injury of ſome noble Part which Nature requires for the Continuance of Life, and which Art cannot reſtore; and when the Texture of the Fluids is already altered and vitiated by the purulent Matter reſorbed by the Blood, and circulates with it in a mingled Stream.

When this is the State of the Diſeaſe, we are not to ſeek for a Cure, but rather a new and miraculous Reſtoration of the Parts deſtroyed; and this is the Reaſon, that this Diſeaſe is eſteem-

ed mortal by common Conſent; becauſe it generally has made too great a Progreſs, before a Cure is attempted. So that upon my enquiring the Opinion of an eminent Phyſician, concerning a very dear Friend of mine, he told me, *He was in a Glandular Conſumption, of which none ever did recover, nor ever would recover*; which is true of thoſe who have the Glands of the Meſentery or of the Lungs, or other internal Parts, filled or vitiated by the Retention of *Pus* or purulent Matter.

This being the Caſe, I hope my Studies will prove acceptable to my Country, if by the Aſſiſtance of *Sea Water*, I can relieve the Diſorder of the internal Glands, and ſeaſonably procure a Remedy in the *Beginning* of this moſt dangerous Diſeaſe; and preſerve the Lungs, that noble Part, from an Impoſtume. I ſay in the *Beginning*, becauſe, if the *Pus* or Matter is already generated, there is then no Help to be expected from this Remedy. This ought to be well conſidered, becauſe where a Cure is attempted in vain, though the Caſe is incurable by all the Power of Phyſick, it often happens that the Medicine is blamed and rejected, as uſeleſs and of no Merit; and is thought incapable of doing what is really in its Power to perform. And this is the common Misfortune of all new Medicines; for I have myſelf ſeen ſome Patients ſeeking Relief from *Sea Water*, when the purulent Matter was already formed both in the external and internal Glands.

But what Applauſe can a Remedy receive from ſuch Circumſtances, or rather what Diſgrace is it not like to meet with? For in thoſe I have ſeen, who died of a Conſumption where the external Glands emitted *Pus*, and whoſe Bodies were allowed

lowed to be opened, I never met with any in which the Glands of the Meſentery remained entire; on the Contrary, they were generally impoſtumated; and further, the Bronchia and the Glands of the Lungs, were ſo univerſally overſpread with *Pus*, that wherever I made Uſe of the Knife, I could not help cutting the purulent Glands, which, before they were opened, looked like Grains of Corn full of purulent Matter, pretty nearly reſembling the miliary Glands found in a meazled Hog. *See* Figure I. *which repreſents the Liver and Lungs of a Hog, wherein the Glands of thoſe Parts are ſtrangely morbid.*

And indeed the Diſeaſes of the Glands are more common, and riſe to a greater Height in theſe than in moſt other Animals. Wherefore the Inhabitants of the Eaſtern Countries avoid eating Swines Fleſh as much as they can; and becauſe theſe Countries ſeem to be more afflicted than others with the Leproſy, Foulneſſes of the Skin, and all Glandular Diſeaſes; therefore I judge, *Moſes* ordained ſo many Ablutions, and Abſtinence from Swines Fleſh.

The internal Tumors of the Glands before deſcribed, undergo the ſame changes as the external; therefore they are to be reſtrained by the ſame Methods; likewiſe, every State of the Tumor has its peculiar Indication.

I believe, nobody doubts that this Diſeaſe is often cauſed by the Fault of the Nurſe, or the too great Indulgence of the Parents. For it is ſcarcely to be told, how often the Foundation of this Diſeaſe is laid in the Cradle; for at that Time of Life when the Child ought by Degrees to be uſed to the Changes of the Seaſons, which Nature ſeems to require; then you ſhall find it

ſmothered in Blankets, its Health impaired with Sweating, and the Heat of the Chamber, and by continuing at the breaſt too long.

In the mean Time the Bowels of the Infant are conſtantly fretted with an acrid, ſour Milk, that produces frequent, and green acid Stools; till ſometimes, neglecting proper Remedies, it brings on Convulſions and Epileptic Symptoms. In this Caſe, the Nurſe perhaps gives the Child a little Syrup of white Poppies, or ſomething more powerful, to procure them both a little Repoſe.

When thoſe Evacuations ceaſe which proceed from the Glands behind the Ears, then the infant falls into the Gripes, accompanied with a ſlight Diarrhœa; which if you ſtop with them Diaſcordium, or any other Medicine, either the Diſeaſe is tranſferr'd to the Skin, or the Evacuation is renew'd by the Glands behind the Ears, or by the inguinal Glands, or ſome of the larger Emunctories.

Thus while the Child by a too long continued Uſe of Opiates, is lulled to ſleep, Chylification is perpetually injured; the Habit of Body which Nature perhaps intended to be ſtrong and healthy, by theſe means is rendered lax and weak; the Blood becomes ſerous, pale and morbid; the Bulk of the Glands, which Nature deſign'd to moiſten the Joints, daily increaſes, and the Heads of the Bones grow large; then the Glands of the Meſentery, of the Breaſt, and the Neck are obſtructed; and at Length the Glands of the Lungs are infected with the common Taint.

And in all theſe Diſorders, though the ſuperfluous Humours may be carried off, in Women, by the Help of the Menſes, and by other Means in Men, while young; yet when they advance

in

in Years, commonly after forty-five ; or whenever theſe helps fail, then the Glands before vitiated and relaxed, are attacked with new obſtructions, incline to inflammatory Diſeaſes and ſuppurate, inſomuch that the Patient dies of a purulent Pthiſis, unleſs the Diſeaſe is ſtopt in its Progreſs ; for when once the Pus is fixt in the Glands it requires the hand of the Surgeon, and not the Art of the Phyſician.

Some Time ago, I viſited a Gentleman after a Fit, as he thought of an intermitting Fever, for which he had taken the Bark ; but finding his Pulſe quick, accompanied with a certain hectic Heat, I judged the Shiverings were ſymptomatical, and that Pus was form'd in the Liver; for his Eyes were tinged with a yellowiſh Colour. His Habit of Body was full and inclining to Fat; and till that Time he had not been troubled with any violent Diſeaſe ; having tried all Manner of febrifuge Medicines, I perſuaded him to go to *London*; from thence he went to *Bath*, and returned again to *London*; at laſt he came back into the Country, where he died of a purulent Dropſy. After his Death, I found a vaſt Abſceſs in the convex Part of the Liver ; ſome other Glands were burſt, which had emitted a little Pus and Water into the Abdomen. But in the Lungs, where an Obſtruction began to be formed, there appeared only ſome crude Tubercles, without any Pus.

I think this is a plain Demonſtration that ſome Glands vitiate others, and arrive at a State of Suppuration by ſlow Degrees, and not by a ſudden Progreſs.

I have alſo ſeen a large Tumor, to which ſeveral Cluſters of morbid and ſchirrous Glands adhered;

hered; the Tumor was diſtended by a Matter like Bran, weighing eight Ounces, the Coat of the Glands was like the Membrane in the Gizzard of Turkey-Cocks, and other granivorous Fowls; it was burſt, and emitted Water conſtantly from the broken lymphatic Veſſels thro' a ſmall Paſſage under the Nipple; and was attended with no bad Symptoms for thirty Years. And although the Glands that adhered to the Tumor had at Length turned perfectly ſchirrous, yet the Tenſion being removed by the Emiſſion of the Humour before deſcribed, the Tumour was free from Pain, and no Suppuration aroſe in all that Time in any adventitious Tumors. *See* Fig. II. *which repreſents one half of the cyſtic Tumor with its ſchirrous Glands.*

I am now to conſider the Diſeaſes of the Glands, in doing which it will ſufficiently anſwer my Deſign to give a general Idea of diſtempered Glands. I judge the Diſeaſes of diſtempered Glands, to ariſe commonly from certain Obſtructions proceeding from ſome Fluxion flowing faſter upon the Glands than can be tranſmitted through their Tubes: Hence the Glands ſwell, their Coats are diſtended, and yield by Degrees to the growing Tumor, till the ſmall Veſſels burſt, and *Pus* is formed: or from the Tumors confined in a Membrance, either a * *Steatoma*, † *Atheroma*,

* *Steatoma* is a hard indolent encyſted Swelling, which contains a Matter like Suet, of the ſame Colour throughout.

† *Atheroma* is an encyſted Tumor, which is a little ſoft, without Redneſs, Heat, or Pain. It contains a whitiſh Matter like thin Paſte.

or

Plate I.

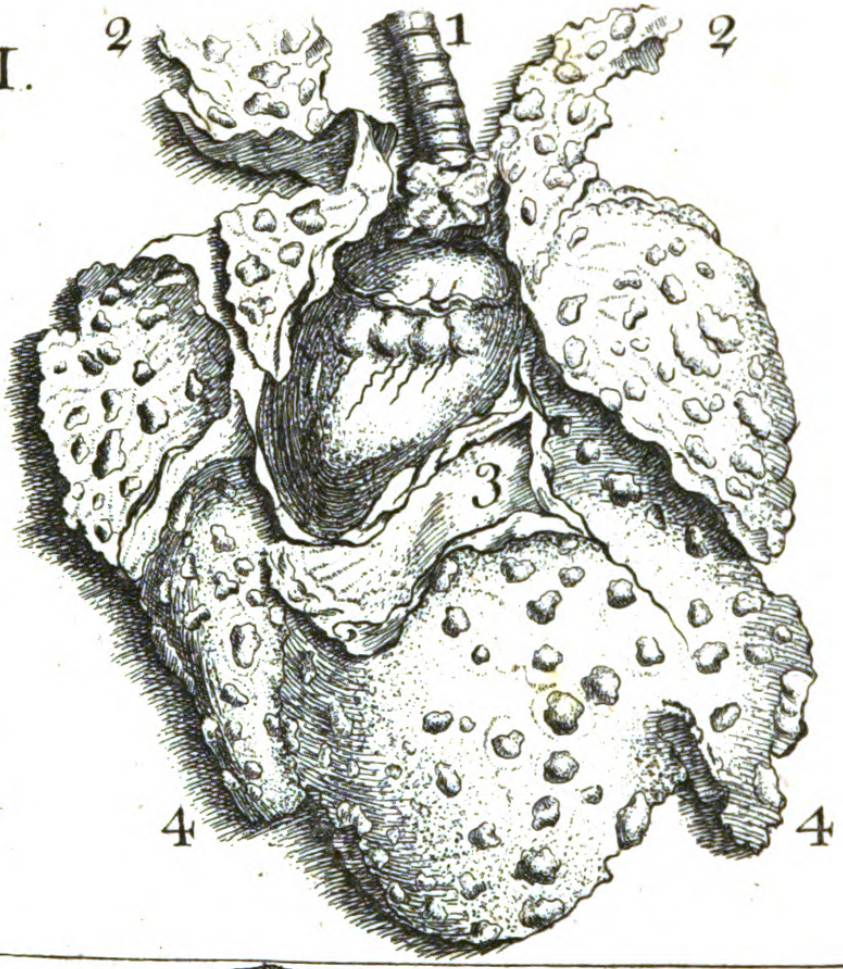

Plate II.

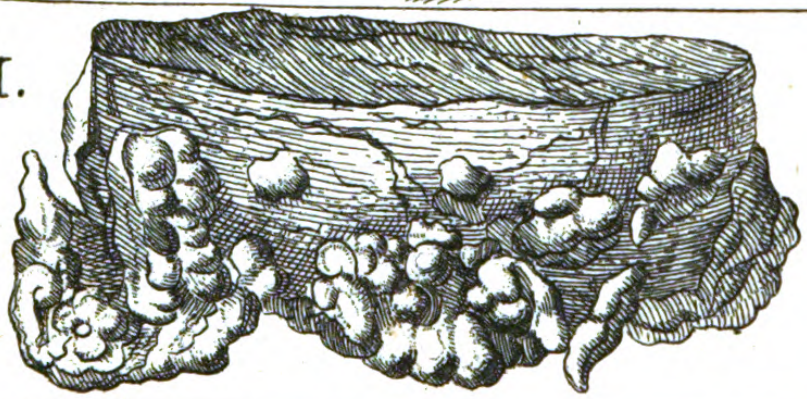

Fig.1. Part of the Windpipe.

Fig.2.2. Lobes of the Lungs.

Fig.3. The Heart, & part of the Diaphrag

Fig.4.4. The Liver full of Tumors, partly distended with Pus, and part with Water.

or ‖ *Meliceris*, or ſomething of this Kind is produced.

The Remedies of the Ancients for a lax and infirm Habit of Body, ſuggeſt to me theſe two Obſervations; one, that by giving thoſe Medicines which deſtroy the ſharp Humours, and correct the Acidities collected in the Stomach and Inteſtines, a ſweeter and more healthful Chyle is produced; Flatulencies are repreſſed in the Bowels; and hence the Liver, Spleen, Pancreas, and Meſenteric Glands, are leſs obnoxious to Obſtructions; the *other*, that by *Sea Water* joined with other Medicines, the Glands may be ſucceſsfully purged, and freed from Obſtructions; after which, it will be neceſſary to ſtrengthen the whole Habit by cold Bathing in the Sea, and ſo fortify the Conſtitution againſt new Fluxion.

Hitherto I have treated of the Nature of diſtemper'd Glands in General; but now I proceed to their different States; of which a recent Fluxion on the Glands is firſt to be conſidered; then the State of Augmentation; then the State of Inflammation; and laſtly, the Termination of the Diſeaſe, either from diſperſing the Tumor, or its turning into *Pus*, a *Schirrus*, or a *Cancer*. And as my Deſign is principally to point out a Method of Cure in theſe Diſorders, I think it proper to begin with the morbid State of the tracheal and pulmonary Glands.

When the concatenated Glands of the Neck, which are as it were linked together, and proceed from the Ears to the Collar-Bones accord-

‖ *Meliceris* is a round ſwelling, void of Pain, eaſily yielding to the Fingers, and contains a yellow Matter like Honey in its proper Bag.

ing to the Courſe of the Veſſels of the Neck, appear ſwelled, and the Tonſils ſeem larger than uſual, then there is reaſon to ſuſpect, that the internal Glands of the Meſentery and the Lungs, are affected by a recent Fluxion. But while there is no Fever, aperient Medicines, with *Sea Water*, having firſt taken away ſome Blood, will effect a Cure; and theſe Steps are to be taken, though at the firſt Onſet you find the Diſorder is in the ſecond Degree, or the State of Augmentation; for as the Glands are diſtended ſo they ſubſide by Degrees; and a ſufficient Time muſt be allowed, not only to deterge and cleanſe the ſmall obſtructed Tubes, but alſo to procure a ſafer and fitter Vent, by which the Humours that create Obſtructions may be expelled.

And this is to be effected by the eaſieſt and moſt gentle Methods, we are therefore upon no Account to make Uſe of violent ſtimulating Mercurial Medicines, for nothing is more hurtful in Obſtructions of the Glands, than a ſudden and violent efflux of the Humours attracted towards the affected Parts by large Doſes of *Mercurius Dulcis*; which Medicine, if it is ever uſed, ſhould be given cautiouſly and in ſmall Doſes, and ſoon after purged off with *Sea Water*.

All the Glandular Secretions, in a healthful State, are perform'd ſlowly, and with Eaſe; therefore all Medicines that are of a Cauſtic Nature, ſtimulate and wound the tender Parts, and excite Pain. Hence either a Tubercle or a morbid Gland, which perhaps might otherwiſe be eaſily cured, if it is haſtened to an inflammatory State, ſuppurates, and the Cure becomes far more difficult. On the Contrary, the Patient will bear the Stimulus of the *Sea Water*,

ſix

ſix Months without any Inconvenience, and in an obſtinate Diſeaſe of the Skin, I have known a Patient bear it tolerably well for a whole Year.

I inſiſt more ſtrongly upon theſe Matters, becauſe I have known many Patients receive Damage by too large Doſes of *Mercurius Dulcis*, who, perhaps, might have received Benefit from this Medicine ſparingly given, and joined with *Sea Water*. But *Sea Water* will heal many Diſeaſes were Mercury is of no Service, and this puts me in Mind of the Caſe of a certain Patient which I ſhew'd to Dr. *Johnſon* and Mr. *Craddock* the Surgeon about the Year 1731.

The Patient was almoſt covered over with a Scorbutic Leproſy, and having thrown off all other Cloaths, lay only in a Gown; almoſt every Part of his Body was excoriated, he had been twice ſalivated, under the Care of Dr. *Tanner*, of *London*, without any Benefit: Yet this violent Diſeaſe was ſubdued by *Sea Water*; but ſome other Diſorders which afflicted the unhappy Patient, remained much in the ſame State.

Another Patient came to me from St. *Thomas's* Hoſpital, whoſe Caſe was not quite ſo bad; he had likewiſe been ſalivated to no Purpoſe, for he was hereby become lean and hectical, and the cuticular Eruptions were ranker and moiſter after Salivation. At firſt, he took Eryngiated Milk, and Vipers Fleſh; by theſe Medicines the hectic Heat abated; and at Length, by the Uſe of *Sea Water*, the Diſeaſe of the Skin diſappeared.

And indeed, where the Diſeaſe is exaſperated by a great Acrimony, and when mineral Medicines do not agree with the Conſtitution, then Water and Aſſes Milk are moſt ſucceſsfully uſed againſt the Scurvy.

I have hitherto treated of Tumors in the States of *Fluxion* and *Augmentation*. I ſhall now proceed to conſider the State of *Inflammation*, that is, when the Diſeaſe is attended with a Fever, and then indeed the Tumors are to be eſteemed true *Phlegmons* [inflamed Tumors] and are to be treated as ſuch.

When a Fluxion, from any Cauſe, falls upon the tracheal and pulmonary Glands, they likewiſe grow diſeaſed, and tumify in the ſame Manner as the external Glands; then the Irritation of the Fluxion produces a Fever, there ariſes a hard and dry Cough: the Face and Eyes are overſpread with a Redneſs, a ſhooting Pain of the Head accompanies the Cough. This Cough proceeds from the frequent Struggles of Nature to burſt the morbid Glands, and thereby to expel the hidden Cauſe of the Tumor, that by this Means the tumified Part might be reduced and reſtored to a healthful State. But in theſe Caſes, I think the *Sea Water* too much irritates the Diſeaſe, for the greateſt Care ought to be taken that *Pus* ſhould not be generated, which is never thrown out of the Lungs without the greateſt Difficulty, becauſe their looſe Texture is ſo apt to retain it. But the minute and tender Veſſels are broken by the continued Coughing; this produces an Hemoptoe, or Spitting of Blood, and afterwards larger Abſceſſes, and the Diſeaſe is terminated by a purulent hectic Fever.

But in this Caſe a new Method of Cure is to be purſued; for Bleeding muſt be uſed at proper Intervals, until the gelatinous or Buff Coat of the Blood, that reſembles melted Suet, diſappears; which, though it does not appear at the firſt Bleeding, yet is ſcarce ever concealed after the

the ſecond or third Time. Then Purgatives of Manna, Caſſia, Cream of Tartar-Tartar, Vitriolate, or the like, are to be given; and the Patient is to be cooled with Emulſions of Nitre; and ſhould uſe Water for Drink, abſtaining from Fleſh, Wine, and all Sorts of Malt-Liquors; by theſe Means generally, all the Signs of Inflammation are removed, the Cough and the Pain of the Head no longer afflict the Patient, the Tumors ſubſide, and tho' they are not entirely diſperſed, yet by theſe Methods, like the external Glands, when they are in the ſame State, they are free from Pain, and are no great trouble to the Patient. But if this Method is either neglected, or too ſparingly, or too late purſued, then *Pus* is generated in the Glands, and the Patient, as I ſaid before, is taken off by a hectic Fever.

Although in theſe Caſes we perceive many Glands burſt, and the *Pus* thrown out, yet we muſt not terrify the Mind of the Patient, we are rather to give Hopes that the Lungs may be cleanſed by proper Medicines, by the Nitre of the Air, and by riding; for the Stiffneſs of the Fibres being leſſened, either becauſe the Inflammation is removed by Evacuations, or becauſe the Parts affected have expelled the Burthen that oppreſſed them, and as their Tone is laxer, they are commonly better defended by their own Mucus, and therefore Exerciſe is then ſafer. A Change of Air ought alſo to be preſcribed, and the Mouth and Noſtrils defended from the extreme Chilneſs of the Air, and it is proper to breathe through ſome Covering, while the Parts are weak and tender; for it appears to the celebrated

brated *Boerhaave*, that hard riding againſt a cold Wind, hath often been the Cauſe of a Quinſey or a Pleuriſy.

Therefore, it is evident, from what has been ſaid, that in the inflammatory State of the pulmonary Glands, both the Mind and Body are to be kept very quiet, until, by Venæſection, Lenitives, and nitrous Medicines, the Tenſion of the minute Veſſels is relaxed, and the Fluids freed from the Danger of Extravaſation For in the State of Tenſion, the Contractions of the Heart are too frequent, the Arteries are irritated, and the Blood circulates too quick. Whence the Inflammation increaſes, the Blood being driven with a great Force, into the ſmall obſtructed Tubes, which can neither bear its Impetus, nor afford it a Paſſage in this State of Obſtruction; therefore the Tenſion of the Veſſels is neceſſarily augmented, and, without Help, an Extravaſation muſt follow; therefore, all Irritation is to be avoided as much as poſſible, that we may preſerve the Veſſels of the Glands ſound and entire; becauſe upon this Circumſtance, the Cure of the Patient entirely depends.

Sometimes alſo the Coat of the Gland grows thick, and the *Pus* is confined as in a ſtrong Bag, from whence it cannot break out a long while. But, in this State of the Diſeaſe, neither *Sea Water*, nor any other Medicines can do any Good. The Cure muſt now be performed, by the Art of Surgery only.

But I ſhould be unjuſt not to give *Sea Water* its due Praiſe; for it is certain, that I have ſeen few Tumors of the morbid Glands, which, if the *Pus* was not formed, I could not preſerve from them and afterwards diſperſe; and alſo reſtore the

the firſt Form and Magnitude of the Glands, by a due Treatment of the glandular Secretions.

For theſe Reaſons, in the inflammatory State of the Glands, all aloetic, roſinous, and mineral Medicines, are carefully to be avoided; the unſkilful or leſs cautious Uſe of which is always attended with the worſt conſequences, which will appear plain by what follows in the Section concerning the Uſe of *Sea Water* in bilious Colics. The ancient Phyſicians ſhunned theſe Medicines, for they never uſed to preſcribe ſtrong Emetics or Cathartics, 'till the Stiffneſs or *Criſpitude* of the Fibres was ſuppreſſed; therefore before the Uſe of Hellebore, they judged the Body was to be moiſtened and relaxed by warm Baths, and a diluting and cooling Regimen, abſtaining from Exerciſe, Fleſh, and Wine; and indeed, through the whole inflammatory State, where there was the leaſt Fear of Suppuration, they uſed theſe Medicines with the greateſt Caution, or entirely rejected them. And this Practice of the Antients ſeems to be deduced from hence, becauſe they found that a Suppuration was generally the Conſequence of this Method of Cure; which ſeems to be confirmed by *Geſner*; for when the Plague raged at *Zurich*, he obſerved that Hellebore forwarded the Suppuration of the peſtilential Buboes.

Therefore in the firſt Days of the inflammatory State, they uſed to abſtain from the ſtronger Cathartics, that is, 'till the Veſſels were relieved, and, either by Venæſection, by Sweating, or by ſome other Aſſiſtance, were delivered from the great fear of Tenſion; which otherwiſe the Stimulus of a Cathartic might occaſion. Therefore where a Cathartic is given, not to expel any prevailing Humour, but to diminiſh a Plenitude,

and

and diſcharge the Superfluities of the firſt Paſſages, which burthen the Tone of the Solids, and in a manner oppreſs them, there this Method is always to be uſed, which proceeds moſt ſucceſsfully by Lenitives.

And this ſhall ſuffice, concerning the Glands in an inflammatory State. Let us now conſider the *Termination* of the Diſeaſe: And in the firſt Place, that *Termination* obtained, by *diſſipating the Tumors*, at the Time that the Fever is abated; ſo that the violent Montion of the Heart is appeaſed, and the frequent Contractions of the Arteries are reſtrained: The Fluids more attenuated and apter for Circulation: And the Glands before obſtructed, are partly reſtored to their proper Functions, and then a perfect Eaſe enſues: The Veſſels are preſerved intire, and their Fluids are confined within their common bounds of Circulation; but the Tone of the Solids remains weak and relaxed from the late Fluxion; and though the Magnitude of the tumified Glands is diminiſhed, yet there ſtill remains a little Swelling, but without Pain; and this Eaſe continues as long as no new Fluxion happens; for if that returns, the Glands are preſently diſtended again.

Hence it happens, that moſt Patients ſay the Tumors increaſe, and grow painful, in the Beginning of every Month; and frequently imagine that they increaſe and diminiſh by the Influence of the Tides, and of the Moon; whereas about that Time the weak Parts are only loaded with a certain Periodical Plenitude, which is afterwards expelled by the Strength of Nature, in the ſame manner as the Sex is relieved by the Eruption of the Menſes: For at that Seaſon, not only Tumors, but the Breaſts alſo, and the whole

Syſtem

Syſtem of the Glands are diſtended from the ſame Cauſe.

In this State of Diſſipation, when the Glands of the Neck are grown ſofter, and the internal Glands continue weak and relaxed, by the Removal of the late Fluxion, I preſcribe the *Sea Water* with Succeſs, and join to its Aſſiſtance the Aſhes of Submarine Plants, Sal-Ammoniac, Æthiops Mineral, Antimony, Cuttle-fiſh Bone, burnt Pumice Stone, Coral, Coralline, burnt Sponge, and the like Medicines; which I have found uſeful, either from the Practice of the Antients, or my own Obſervations. Whatever helps I uſed to ſeek from external Applications, I ſhall freely declare, either when I come to explain the Method of Cure, or in relating the ſeveral Caſes of the Patients hereafter deſcribed. In the mean Time, it is to be obſerved, that every Cure ought to be terminated by cold bathing in the Sea; which, when it is not ordered before the proper Time, that is, before the Glands are mollified by the internal Uſe of *Sea Water*, it greatly conduces to a perfect Cure. And laſtly, to prevent a Relapſe, as the Antients made uſe of Gall-nuts, and other ſtyptic Medicines, ſo I uſe to join the Bark to cold bathing, and chiefly in Diſeaſes of the Ciliary Glands, when the Eyes are ſubject to frequent Inflammations; but then the Eyes alſo are to be waſhed every morning, with cold *Sea Water*.

I have now gone through that State of the Tumor, *viz.* of *Diſſipation*; which is the firſt Species of the Termination of the Diſeaſe, wherein the Glands are reſtored in Part to their Functions, and a healthy State, without the Rupture of any Veſſels. But as every kind of theſe Tumors do ſometimes terminate in a *Scirrhus*, which

which was the third Species of the Termination of the Diſeaſe; for concerning the ſecond, which was from the *Pus*, I have treated of it before, and ſhall mention it again; it is therefore neceſſary I ſhould explain what I call a *Scirrhus*.

I call that State of the Tumor a *Scirrhus*, when from any Cauſe the Parts cohere a long Time, and from thence are ſo ſtrongly joined and hardened, that they can never be diſunited, nor reſtored to their former healthful State, nor can their obſtructed Veſſels be opened by any Power of the Arteries; but oftentimes the Hardneſs encreaſes to that Degree, that the Tumors in ſome ſevere Caſes are like a Stone, and ſuch I call a perfect *Scirrhus*; and this admits no Cure by *Sea Water*, or any other Means, but by manual Operation. But the ſlighter Scirrhoſities, if I may be allowed to call them ſo, without excepting any, are curable, if the glandular Secretions are ſkilfully treated; for I have cured many by this Method, that ſo nearly reſembled a perfect Scirrhus, that there appeared but little Hopes of a Cure, and yet the Patient was perfectly cured.

But ſometimes the *Scirrhus* produces a *Cancer*, when the hardneſs encreaſes to that Degree, that the Circulation is ſtopped through the whole Tumor, and the Veſſels are ſomewhere burſt; then they are a little diſtended by a livid Ichor that diſcolours the Skin, from whence the Phyſician or Surgeon has reaſon to foretel a Rupture of the Tumor. Theſe are like Cancers, of a livid Colour, and like a Kind of *Echymoſis*, or rather, as I think, like thoſe lymphatic livid Veſicles, or little Bliſters, that uſe to riſe in the Parts of the Body, at the Beginning of a Sphacelus.

But

But when after the burſting of the Tumor, the Ichor remains a long while out of the Laws of Circulation, and has acquired great Acrimony, which ſoon happens in the extravaſated Fluids of all Animals, then the Contagion of this Acrimony is communicated from one Gland to another, and by Degrees the whole Syſtem of the Glands is ſeized with a Cancer; and this Acrimony is ſo virulent, that ſome Writers think it partakes of the Nature of Arſenic, and this is the Cauſe that it produces ſuch large Eſcars in one Night's Time. Indeed, in this irritated State, the Uſe of *Sea Water* ſeems to cauſe too much Irritation, but I have not yet made Experiments enough to determine this perfectly.

And thus I have conſidered the *four* different States of the morbid Glands; and from what has been ſaid, it will appear, that there is little to be expected from *Sea Water* in a true and perfect *Scirrhus*, nor in any Tumors contained in a Bag, or in an Atheroma, Steatoma, or Meliceris, or where the Matter extravaſated is contained in the Middle of the Gland, like a Kernel in its Shell, before the Uſe of *Sea Water* is begun, which nevertheleſs very ſeldom happens after the Cure is begun by this Method: Nor in a true Cancer, nor in Ulcers with a Caries, where an Exfoliation is required. And yet I have ſeen ſome of theſe Caſes cured, though the Glands were diſtempered at the ſame Time.

This is the Courſe of a Cure attempted without Succeſs; let us now take a View of the Succeſsful Cures, and ſee what Aſſiſtance we may expect from *Sea Water*; the Diſeaſes therefore that are curable by this Method are as follow:

1. All

1. All recent Obſtructions of the Glands of the Inteſtines and Meſentery; for by this Method Tumors are diſperſed, and the baſtard Iliac Paſſion is often prevented.

2. All recent Obſtructions of the Glands of the Lungs, and other Bowels, which often cauſe a Conſumption; for by this Method a certain continual and daily Secretion is performed by the inteſtinal Glans, and thus the Fluxion is drawn off from the Lungs, whereby the Cough ceaſes before an Abſceſs is formed, and the impending Danger of a Conſumption is removed; which, as *Sydenham* rightly obſerves, often proceeds from the Violence of frequent coughing; for this weakens the Lungs, and excites Tumors: They grow inflamed, maturate and erode the lax and tender Parts, ſo that in a ſhort Time the Diſeaſe is got beyond the Power of Medicine.

3. Recent Tumors in the Glands of the Neck, or in other Parts of the Body.

4. Recent Tumours of the Joints, if they are not ſuppurated, and are neither turned to a *Scirrhus* nor Cancer, and do not proceed from a Caries of the Bones.

5. Recent Fluxions on the Glands of the Eyelids, from whence proceed Lippitudes.

6. All Foulneſſes of the Skin, from an Eryſipelas to a Leproſy.

7. Alſo Diſtempers in the Glands of the Noſtrils, with a Swelling of the upper Lip: And theſe are eſteemed very difficult Caſes; but even theſe are conquered by this Method.

8. Obſtructions of the Kidneys, where there is no Inflammation, nor any Stones too big to paſs through the urinary Paſſages.

9. Recent Obſtructions of the Liver; for by *Sea Water* the Body is kept open, and thoſe Medicines that are given in the Jaundice receive hereby more Power to exert their Virtues.

Now if I were more minutely to explain the Nature of recent Fluxions upon the inteſtinal Glands, it would be proper to deſcribe thoſe Glands; but this is unneceſſary, and therefore I ſhall only add this Remark, that the whole alimentary Tube is in a manner overſpread with Glands, and is therefore liable to the ſame Diſorders as the Glands of the Lungs; but with this Difference, that in the Tumors of one the *Sea Water* cannot be applied to the Part affected, as it may be in the other, and therefore the Benefit appears the ſooner.

Therefore where Fluxions have a long Time oppreſſed the Glands of the Inteſtines, they become hard and ſcirrhous: Then the *Rectum* is moſt grievouſly obſtructed with Tumors; the Stools are accompanied with a vehement Pain, and the Excretions often contain only a Matter like Ichor, which injures the Neck of the Bladder by the nearneſs of the Part, and at the ſame Time excites a Strangury, and a moſt painful Teneſmus. In theſe moſt ſevere Caſes, if the Parts are not inflamed, or if they are only injured by the Compreſſion, or if they only ſwell, then the *Sea Water* chiefly produces two good Effects: One is, that hereby the Belly is moſt ſafely preſerved from the Danger of Conſtipation; the other, that it is a better Diſcutient than all other Medicines. And indeed, the Antients uſed the *Sea Water* in theſe Diſeaſes; for *Pliny* ſays, *the Phyſicians think* Sea Water *alone more effectual in diſperſing Tumors.* And in the ſame Author we find this

this Remark, *Some Phyſicians preſcribe the* Sea Water *in a Quartan Ague, and in a Teneſmus.* Lib. 36. cap. 6.

But when theſe Diſtempers are neglected, or unſkilfully treated, they ſometimes turn into Cancers; where if there is too much Acrimony, this Method of Cure is ineffectual. Sometimes they turn into the baſtard Iliac Paſſion; that is, when Tumors are ſeated in Part of the Inteſtines. I ſhall here inſert a Caſe of this Nature, which, while I am writing, occurs to my Mind.

There came to me a Gentleman of a good Family, about forty Years old; he had a Tumor of the Kind before deſcribed, which adhered to the inteſtinal Tube, below the Region of the Spleen. When the Patient was entirely free from vomiting, I could feel the Tumor with my Hands, which was round, and as big as a large Tennis-ball. He had no Fever. After a copious Evacuation of the Excrements, by vomiting, the Patient remained eaſy for ſome Days, 'till the Stomach and Inteſtines were again ſtuffed with Fæces, and then they were again ejected by the Mouth. All means were tried in vain, for nothing would paſs by Stool: but the Iliac Symptoms were renewed at ſtated Times, that is, between every ſeventh and tenth Day. He languiſhed in this Diſtreſs ſeveral Months; firſt at *London*, under the Care of Dr. *Pellet*, my very learned Friend, for whoſe Memory I ſhall always have the greateſt Veneration; then at *Bath*, under the Care of Dr. *Bave*. At laſt, he returned to me, in the ſame Condition as at his Departure: And becauſe he was ſurprizingly waſted, I had the faireſt Opportunity of inſpecting the Tumor; but

but there was no Hope of Relief; he died ſoon after.

But if I had known at that Time, as well as I do now, the Uſe of *Sea Water*, perhaps there might have been ſome Hope in this Caſe; for I am not acquainted with any Medicine that is ſo powerful a Diſcutient as *Sea Water* taken inwardly, or that ſeems ſo well adapted to the Cure of the forementioned Diſeaſe: But in this Caſe it ought to be given alone, to keep the Body open, and this ſhould be done before the Obſtruction was quite confirmed in the Inteſtines. There is alſo this Benefit attending this Method, that *Sea Water* promotes Digeſtion and Chylification.

And this is well known to thoſe who cure Cattle and Sheep: for when a Beaſt ceaſes to chew the Cud, and it appears from thence the Digeſtion is injured, and there is danger of loſing the Animal; they preſently reſtore Digeſtion, by repeated Drenches of ſalt Water, or by large Boluſes of Sea-Salt mixed with Honey. This Courſe is continued 'till the Paſſage of the Inteſtines is opened.

When I found theſe Things were ſo, it was plain to me, that the Uſe of *Sea Water* would be very beneficial to Sailors in bilious Colics, both to prevent the Invaſion of the Diſeaſe, and its Return after the Cure. This laſt is to be effected by a *Semicupium*, or half Bath, and purging Salts, after the Inflammation has been removed by Bleeding. And I am informed by my Friends, that this Method is ſucceſsfully practiſed. Many of theſe Diſtempers are produced in the following Manner: many Seamen, eſpecially freſh ones, not uſed to the Sea, are commonly ſeized with

with a Nauſea, and Vomiting, which commonly attacks Paſſengers, when the Ship firſt gets under ſail, and this affects ſome longer than others. While he continues in this Condition the Belly is bound, and the Sailor ſeldom recovers 'till it is opened. At the ſame Time very little Food is taken, and recourſe is had to ſpirituous Liquors for Aſſiſtance. Then, if they ſail to a warmer Climate, there is a more copious Evacuation by the Skin, and therefore leſs by the Glands of the Inteſtines. A great Quantity of Bile is thrown up by vomiting, the Fæces become whitiſh and dry, as in the Jaundice, the Bowels are obſtructed, and the Foundation is laid of a future Inflammation; for the Fibres, in theſe Circumſtances, are dry, and deprived of that ſoapy Bile, which ought to give an eaſy and ſlippery Paſſage to the Fæces. This, among many others, is one Cauſe of the inflammatory Colics that happen to Sailors.

Being willing to get a true Knowledge of this Matter, I inquired of ſeveral Maſters and Surgeons of Ships, and by their Deſcriptions I found this Diſeaſe had the Symptoms of a Bilious Colic; and underſtood that the Cure was commonly attempted by Aloetics, Scammony with Calomel, which tho' joined to an Opiate, the Stomach of the Patient would often throw up; then followed a black Vomiting, and there being no Evacuation downwards, the Inteſtines mortified, and death ſoon enſued; therefore I thought it would be a uſeful Undertaking, and acceptable to Sailors, who ſeem by Nature deſigned for the Defence of this Iſland, if I could diſcover a ſafer Method of Cure in theſe Caſes. For this Purpoſe, when the

the Colic proceeds from the Body's being coſtive, and the Patient has no Fever, then a Pint at leaſt of *Sea Water* is to be given every Morning. If this is taken in the firſt Stage of the Diſtemper it will preſerve the Patient from any great Danger. But if it is neglected in the Beginning of the Diſeaſe, and an Inflammation appears, with a Fever, Vomiting, and difficult Stools, or none at all, then there is Danger of the Iliac Paſſion, which is attended with a black Vomiting, and the Fæces are thrown up at the Mouth, the Pulſe is quick, but weak, followed with cold Sweats, and the Patient dies of a *Sphacelus*, or Mortification.

Sometimes indeed, after Shivering, Pus appears in ſome Part, which prevents immediate Death: But for the moſt Part, a purulent Teneſmus afflicts the unhappy Sufferer.

I have had an Opportunity of converſing with many Perſons, Practitioners at Sea, as well as others, from whoſe Accounts I have deſcribed this Diſeaſe. And that the common Method, which is ſo dangerous, might be laid aſide, I perſuaded Mr. *Leith*, a Surgeon in the Royal Navy, to take a new Courſe, which was as ſoon as the Symptoms of Inflammation appeared, to bleed freely, and repeat it as Circumſtances required, if neither the Pain nor the Fever abated: That no purging Medicine ſhould be given, not even *Sea Water*, 'till a ſufficient Revulſion was made by Bleeding, and emollient Clyſters. Inſtead of Aloetics and Scammony with Calomel, I deſired him to give the following Bolus.

℞ *Of Tartar Vitriolate two Scruples, or a Dram,*
Salt of Tartar eight Grains, or half a Scruple,
chemical

chemical Oil of Nutmegs one Drop, Lenitive Electuary enough to make it into a Bolus.

To be taken every four Hours 'till a free Evacuation by Stool is obtained.

He uſed theſe Means with great Succeſs in theſe Diſtempers, for at his return he thanked me for this Preſcription; and though during his Voyage the Sailors were attacked with Colics more frequently than uſual, from their Intemperance and a Plenty of bad Wine, yet almoſt all recovered by this Method. After proper Bleeding, two or three Doſes in the moſt obſtinate Caſes, generally open'd the Body, and then the Danger was over. When the Inflammation was removed, the Patient was eaſily preſerved from the Danger of a new Attack by taking *Sea Water* every Day, or every other Day.

I have ſeen many violent Colics cured by this Method, where, if the Caſe required it, I uſed to order a Half Bath before Purging; for though I have ſometimes ſeen Dr. *Fuller*'s Colic Pills and ſimilar Medicines, given with Succeſs, yet while the Inflammation continues they are attended with Danger. But that which ſhould chiefly deter us from the common Method, is, that if thoſe Particles, whether roſinous or gummous, do not open the Body, they muſt enter into the Blood, and thereby encreaſe both the Fever and the Inflammation. On the contrary, if the ſaline Medicines are not evacuated, but are received into the Blood, they are cooling and reſtrain Inflammations and Abſceſſes. And further, bitter and roſinous Pills are often rejected by the Stomach, though guarded with Opium; but a ſaline Bolus ſeldom diſagrees with the Stomach, or rather has

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the effect of Salt of Wormwood and Juice of Lemons, and take off the Inclination to vomit. Therefore I am of Opinion that Aloetics, Scammony and roſinous Subſtances with Calomel are to be entirely rejected in the inflammatory State of the Colic, and for the great Benefit of Seamen the other Method is to be followed; for it is plain they never want *Sea Water*, and unleſs my Judgment and Obſervations deceive me, more are cured by that, of inflammatory Colics, than by roſinous Purges, which ſtrongly adhere to the Inteſtines, and alſo increaſe the Diſtemper.

I believe what I have propoſed will be ſufficient to confirm the cooling Method for the future, which, I think, many Phyſicians do already approve. It is not new, and deſerves to be conſidered with the utmoſt Attention; and becauſe ſaline Purges were uſed ſo ſucceſsfully in theſe Caſes, therefore *Angelus Sala* beſtowed ſuch high Encomiums on *crude Tartar*. The Doſe is from ſix Drams to an Ounce, in Chicken-Broth. *Sal Gem* has likewiſe met with Approbation; becauſe it has been found by Experience to lubricate the Inteſtines, promote Secretion from their Glands; as alſo to ſoften and reſolve the Fæces. There are Inſtances of this Kind to be met with in *Foreſtus*, Lib. 21. Therefore, againſt Coſtiveneſs, a Pint of *Sea Water* is to be drank faſting every Morning, as often as the Caſe requires; which, though perhaps it is not entirely of the Nature of *Sal Gem*, yet it is contained under the ſame Claſs.

And as the Glands of the Inteſtines ſeem to be formed by Nature to draw off and emit whatever is unprofitable to the Body, ſo I believe moſt glandular Diſeaſes proceed from Diſorders of

the Glands; that is, when neither the Glands themſelves, nor the Mouths of their Ducts for want of cleanſing, will allow a free Paſſage for whatever may be thrown upon them. I am certain alſo, there are many Diſeaſes of the Skin which owe their Riſe to the Diſorders of the Alimentary Tube. And likewiſe, that when other Secretions are deficient, the Glands of the Alimentary Tube are drawn into Conſent, and are affected at the ſame Time. And hence, very probably, proceed all Obſtructions of the Meſentery and other internal Glands. And this commonly happens to Women when the menſtrual Purgations are ſuppreſſed for many Years, and the Glands of various Parts are diſeaſed, they labour under a continual Diarrhœa, though without any violent Symptoms, which though it continues ſo long, ſeldom excites a *Teneſmus* or any Signs of Acrimony; for in this Caſe thoſe Humours paſs off by the Glands of the Inteſtines, which in a healthy State ſhould be carried off by other Evacuations.

Having thus premiſed the Effects of *Sea Water* in the Diſeaſes of the internal Glands, let us now ſee what Power it has upon the external Glands; in which as they are more open to the Eye of the Phyſician, ſo the Declenſion of the Diſeaſe and the Effect of the Medicine appears the ſooner; for it is worth obſerving, that the ciliary Glands, when red and excoriated, with ſwelled Eyelids, ſoon grow pale and dry with the Uſe of *Sea Water*, and tend towards a ſound State. The concatenated Glands of the Neck may be alſo ſeen to decreaſe daily, by the ſame Method, and return to their natural Shape when they are not ſuppurated, nor turned to a *Scirrhus*.

By which means the elegant Ornament of the Neck is reſtored, which the great Author of all Things ſeems to have formed with ſuch Beauty and Dignity, that he might place the Head, being the laſt and moſt perfect Work, upon it as upon a moſt beautiful Column.

From the foregoing Conſideration of the morbid Glands, I think the Reader is prepared and inſtructed to receive and comprehend the following Method of Cure that is levelled againſt tumified Glands by Helps timely interpoſed: Therefore I ſhall proceed to that Part of my Deſign in which I propoſed to explain the Similitude and Agreement of this Method with the Laws of Nature, that it may appear from hence, that Nature generally employs the ſame Aſſiſtances when ſhe alone oppoſes any Diſeaſe with her own Powers. Then we muſt review the Medicines of the Antients, and their Method of curing morbid Glands; from whence it will appear how rational and convenient it is to join their Medicines with *Sea Water*, that by their united Aſſiſtance we may diſperſe internal Obſtructions which are always attended with the utmoſt Danger.

And for this Reaſon, when I am ſent for to cure an obſtructed Gland, I always endeavour to penetrate into the remote and hidden internal Cauſes within; for if the Obſtructions of the Glands of the Meſentery and Lungs cannot be conquered, what Benefit can there be in diſperſing external Tumors? Therefore, I ſeldom apply any outward Medicines before the Glands are mollified and altered by internal Remedies. But as it often happens in theſe Caſes, the Buſineſs is beyond the Reach of Phyſic, and for the Reaſons aforeſaid, requires manual Operation; then, that

is, in all external Tumors: I leave them to the Surgeon whoſe proper Work they are, who, I hope, will diſcover more accurately thoſe Things which I have ſlightly touched, as being inconſiſtent with my little Leiſure and the Deſign of this Work; for my Intention is only to explain the Cure of morbid Glands in that State where the Veſſels remain whole and free from Ruptures: Alſo where the Fluids, though ſomething accelerated, do ſtill obey the Laws of Circulation, and ſo the Diſorder is a proper Subject of the Medical Art.

But there is no other Medicine, that I could ever diſcover, which may be ſafely continued ſo long Time, nor that cleanſes and corroborates the obſtructed Tubes ſo well as *Sea Water*; for it has a certain ſoapy Quality as powerful as the ſaline, which cleanſes and diſperſes thoſe viſcid Humours which ſtop and obſtruct the Mouths of the Lacteal Veſſels, and ſucceſsfully ſtimulates their Sphincters, whence they perform their proper Offices, and promote Chylification as well as in a healthy State. Thus, whatever conduces to the Nouriſhment of the Body is ſeparated, and circulates with the Blood, and nothing is thus ſeparated but what has been well prepared by the Alimentary Tube. But when an Obſtruction ariſes in the Lacteal Veſſels, and hence the Chyle is not well ſecreted, or is ſucked out by the Inteſtines, then follows a Loſs of Appetite, and the Chyle itſelf, as in the *Cœliac Affection*, paſſes off by the *Anus*, and this produces an Atrophy, or a general Waſting of the whole Body.

That theſe meſenterical Tumors proceed from the Obſtructions of theſe Veſſels, and the Circulation thereby prevented, will appear from that Expe-

Experiment of our Countryman *Wharton. Wherefore* (ſays he) *the Lacteal Tumors are exceeding ſmall, and perhaps not yet diſcovered by any Perſon; for in diſſecting ſeveral live Animals, having made a Ligature on the Lacteal Veins, between their common Receptacle and the Glands of the Meſentery, and the Paſſage of the Chyle being ſtopt, I have obſerved thoſe Glands to ſwell a little that belonged to the Veins that were tied.* See *Wharton de Glandulis*, p. 47.

I could cite many ſuch Caſes from various Authors, but I chuſe to omit them for Brevity ſake, therefore ſhall only add, that when theſe Caſes are attended with a Hectic Fever, there is a *Pus* ſubſiſting every where; but if it is otherwiſe, and the Diſorder ſeems to be mild, gives Hopes of a perfect Cure. Nevertheleſs, as in theſe better Circumſtances the more lax Parts of the Body are affected, therefore there is Reaſon to be apprehenſive of Danger; for unleſs the Patient has Reſolution to continue this Method a long Time, and will finiſh the Cure by cold bathing in the Sea, it is very probable that upon a Return of a new Plenitude of Humours the Diſorder may be renewed, for the Glands, being weakened by the former Diſeaſe, have little Strength to reſiſt a new Fluxion. I muſt acknowledge there is required great Conſtancy and Reſolution to ſupport the Tedioufneſs of the Cure; but I think it is better to bear this than to ſuffer a languiſhing Death by a Conſumption, or a Rottenneſs of the Bones, which is a common and well known Diſtemper.

I ſuppoſe, now, it is plain that there are chiefly two Cauſes of morbid Glands; one is a Fluxion of redundant Humours upon the Glands; the

other is a Weakneſs of the Parts affected, whereby they cannot reſiſt the Fluxion; and where neither of theſe Cauſes exiſts, no notable Diſorder of this kind can ariſe; for if there is no Redundance there can be no Oppreſſion; and if there is no Weakneſs or Laxity, it follows that the elaſtic Force of the Veſſels will reſiſt the Diſeaſe; but if both theſe Cauſes are abſent no Tumor will ariſe.

But I muſt proceed to explain, as I propoſed, by what Means this Alteration of the Habit is to be effected, and how chiefly ſome Secretions may be directed by the Skill of the Phyſician, and alſo which of them ſeem principally to be formed by Nature to give Aſſiſtance to the weak Parts, and to lighten that Burden, with which they are oppreſſed; and laſtly, Experience ſhews that in thoſe Caſes which properly belong to the Medical Art, the Phyſician ſeldom wants Succeſs but where the Patient wants Conſtancy.

But in conſidering the Changes of the Animal Secretions, I ſhall only ſubjoin thoſe Laws that are apparent and unchangeable; therefore, I reject the obſcure Terms of Coagulations, Concretions, and hereditary Diſorders; and think I can aſcribe thoſe Diſtempers to more certain and leſs intricate Principles; for whatever Cauſe it may be that throws a Fluxion upon thoſe lax Parts, ſo that the Humour flows too faſt to obtain a Paſſage, muſt neceſſarily occaſion Tumors there. I have ſeen Tumors in the Glands of the Neck, that were occaſioned only by the Irritation of Bliſters behind the Ears. And *Wiſeman* mentions the Caſe of a Perſon who lay a Summer's Night upon a Form, but his Head hanging down, while he ſlept, one Side of his

his Neck lay upon the Edge of the Form. When he awoke he found ſeveral ſwellings in the Glands of his Neck, ſome of which were as big as Walnuts.* The ſame Author obſerved, that the ſame happened to Children when the Tonſils were compreſſed by being bound too tight. A Pain in the Breaſt brings a Fluxion on the axillary Glands, and Diſeaſes of the Legs and Thighs cauſe Swellings in the inguinal Glands. Numberleſs Examples of this Nature might be produced.

Therefore theſe evident Cauſes direct us to the beſt Way, and point out a Method of Cure; but if the Cauſes mentioned by other Authors ſhould pleaſe ſome Perſons better, ſuch as cancerous, ſcrophulous, and ſcorbutic Humours, I ſhall not enter into a Debate, nor add any thing more to make them change their Opinion; but this I will affirm, that there is no better Method of Cure in theſe Diſtempers than that performed by *Sea Water*.

* *This Paſſage in Wiſeman's own Words is as follows*, Page 392.

I ſhall give you one remarkable Inſtance of a Cook's Servant in the *Old Baily*, who ſleeping one Summer's Night on a Form, his Head ſlipping off, the one Side of his Neck preſſed upon the End of it; when he wakened his Neck was full of *Strumæ* on both Sides, ſome as big as Walnuts, other leſs; they were of different Figures, and diſtinct from one another. The *Strumæ* continued, and after a few Days apoſtemated and mattered, and became virulent Ulcers; he died tabid within half a Year.

A *ſtrait Stay*, as ſome Women and Children wear them, hath too often had the ſame Effect. Pain in the Breaſts makes them under the Arms; and in all Habits of Body, a ſore Leg hath often cauſed as much in the Groins.

SECT. II.

HAVING thus revived whatever belongs to the general Hiſtory of the morbid Glands, I think it will plainly appear to every Phyſician, and even to any one unſkilled in Anatomy, that he has the Care of a Body fitted with Organs, the Health of which depends upon almoſt innumerable Secretions regularly performed.

For as the Author of human Nature foreſaw that ſome of theſe would be obſtructed by various Accidents, and leſs fit for the Laws of Circulation, he formed the Body with plenty of Secretions for the Purpoſe of mutual Aſſiſtance; that when one of theſe are impeded, the Body might be relieved by the Help of the others. And indeed Nature cures many Diſeaſes by her own Power after this manner, and for this Reaſon ſhe is properly ſtiled the *Healer* of *Diſeaſes*.

For where this or that Secretion is impeded ſhe commands another to perform its Office more copiouſly, although, perhaps, not ſo conveniently. And unleſs Nature performed this by her own Strength, a little too much Meat or Drink, or the Changes of the Air, or the Seaſons would deſtroy this moſt beautiful Structure, Man.

Upon theſe Conſiderations I always thought it a Matter of the higheſt Conſequence for a Phyſician to imitate, as near as may be, the Proceſs of Nature; and where any Secretion is obſtructed or diminiſhed, to take care to faciliate and encreaſe another.

And

And indeed Nature takes this Method for expelling Diſeaſes, which otherwiſe uſe to ariſe from obſtructed Glands; and this is effected upon going into a colder Air, the Perſpiration by the Pores of the Skin is ſuppreſſed, when a ſudden Fluxion diſtils from the Eyes and Noſtrils, and the Glands of the Mouth and Throat are affected, ſo as to produce the Diſtemper which Phyſicians call a *Catarrh*.

But all theſe are the Endeavours of Nature to throw of the Redundances that proceed from the obſtructed Perſpiration: And indeed whoever obſerves this Rule of Nature may check the Violence of the Diſtemper. For tho' the larger Emunctories of the axillary and inguinal Glands, *&c.* afford great Aſſiſtance, yet they are not ſo ſubſervient to the Will of the Phyſician as the Evacuation of the alimentary Tube, which ſeems deſigned by Nature for the ready Diſcharge of any Redundances. And where the Redundance of ſuperfluous Humours cauſes any Complaint, this affords the quickeſt and eaſieſt Diſcharge: Nor is it, perhaps, neceſſary that the Fluids ſhould undergo ſuch a fine Trituration as when they are carried off by Perſpiration.

He that knows how to make a right Uſe of theſe Helps, will direct the glandular Secretions with the greateſt Judgment; and if he does not make a perfect Cure, he muſt certainly procure ſome Relief; becauſe he can turn the Current of the Diſeaſe into another Channel, perhaps, deſign'd for that very Purpoſe. Nor is it a ſmall matter if a Phyſician can change a dangerous Diſtemper into one leſs dangerous; ſo that the Patient, who would otherwiſe die of ſome acute Diſeaſe, may ſtill carry on thoſe morbific Seeds to a more ad-

vanced Age, which, perhaps are ſown purpoſely in us, as fit for the Diſſolution of the Body.

I wiſh this divine Method of Healing, which conſiſts in the Mutation of Diſeaſes, was better known to us all; for I believe it would be much better for the Health of the Patient and the Credit of the Phyſician.

Another remarkable Inſtance of this Method is found in the Cure of Dropſies by the Help of the abſorbing Veſſels. When for a Seaſon the Diſeaſe is thrown upon the Kidneys, and the Secretion being turn'd off from the Glands of the Peritonæum, the included Water is abſorbed and drained off by the Kidneys; which is often performed by the help of ſoapy Medicines, and the Uſe of lixivious Salts; and I ſtill remember that the celebrated Profeſſor, Dr. *Boerhaave* told me, he had cured many Dropſies by this Method. But I ſhall ſubjoin a Caſe which I think the moſt remarkable.

I was ſent for to a Countryman's Wife, and aſked if it was proper to draw off the Water by the Paracenteſis, or Tapping. The Surgeon thought there was a vaſt Quantity of Water in the Abdomen; but becauſe the Woman was weak, and at that Time unfit to bear the Operation, we firſt tried the Aſſiſtance of Medicines; and becauſe this Dropſy was cauſed by obſtructed Kidneys, I gave the following things.

℞ *Of prepared Woodlice two Drams, of Venice Soap half an Ounce, of Gum Ammoniac two Drams, Balſam of Sulphur with Oil of Turpentine enough to make ten Pills of every Dram.*

Of

Of which ſix or eight are to be taken every Day, drinking after them a Draught of the following Wine:

℞ *Salt of Wormwod one Dram, Loaf-ſugar three Drams, Chemical Oil of Nutmegs ſix Drops, White-wine a Pint; mix them, and make a medicated Wine.*

After taking theſe Medicines ſhe voided ſixteen Stones of an irregular Shape of about the Size of common Marbles that Boys play with.

When I was ſent for again after ſhe had taken theſe Medicines, the Woman was ſeized with ſuch a great and continual Flux of Urine, that the Sphincter of the Bladder was overpowered, and the Water flowed out involuntarily, and went through the Bed and the Floor of the Chamber. The Patient was then reſtored by proper Cordials, and bound with proper Bandages, and thus the Dropſy almoſt in a Moment of Time was abſorbed and drained off by the Kidneys.

The Women lived fifteen Years after without any Relapſe. This proves what I mentioned before, that the Secretions may ſometimes be governed by the Will of the Phyſician, and that the Glands will readily ſecrete their Fluids when they are urged by a Stimulus either of Pain or Vellication; which will appear by the following Example. I had a Sheep which, tho' ſhe had no Milk, took a Lamb which had loſt its Dam; upon the Lamb's pulling the Teat it drew ſuch a Quantity of Milk, that the Lamb grew fat and ſtrong. The Shepherd poſitively affirming this to be true, I ordered him to bring me the Sheep; (for he mentioned this about Shearing-time) the Dug was very full of Milk, though it was nine Months

Months ſince ſhe had ſuckled a Lamb before. And ſeveral other Shepherds aſſured me the thing was true and not uncommon.

The following Story from *Regner de Graaf* is to the ſame Purpoſe. *Mr.* Vandeveld, *in whoſe Houſe I lodged at* Delft, *had long ſince a Bitch that was very fat, out of whoſe Dugs a Cat ſucked ſo much Milk for ſeveral Years that it was almoſt its whole Nouriſhment, and that for many Years, tho' ſhe never had any Puppies, nor was ever pregnant. For the whole Time ſhe was proud they watched her carefully; however, at laſt ſhe happened to grow big with Pup, and from that Time the Cat would ſuck no more.* See *De Graaf* de Vir. Organ. p. 126.

I think it needleſs to illuſtrate this any farther; and upon this Foundation I attempt to cure all recent Tumors and Fluxions upon the tracheal and pulmonary Glands; from whence, very often, *Hippocrates* affirms, Conſumptions ariſe: For, (ſays he) *Others are ſeized with a great Fluxion upon the Throat, from whence there commonly follows a Conſumption; for the Lungs are ſtuffed with Phlegm, which becomes a Pus that corrodes the Lungs, and the Patients do not eaſily recover.* See *Hippocrat.* de Glandul. Sect. 10.

Theſe recent Fluxions are ſucceſsfully cured by this Method, and it ſeldom fails but in Caſes that are grown deſperate by long Continuance.

By the ſame Method alſo I treat recent Tumors of the Glands in the Joints and other Parts, and have ſeldom found the inteſtinal Glands deceive the Hopes of the Phyſician or the Patient. But I do not expect every thing from theſe Means; for I have ſeen ſome cuticular Eruptions ſo obſtinate as to elude all the Force of this Method: But I have conquered many of theſe, (rejecting firſt all Medicines

Medicines of a ſtimulating Quality, and confining the Patient to Water and a Milk Diet) by thoſe very Medicines which before had no Effect. But when the Veſſels are contracted by ſtimulating Medicines, which allow no Way to carry off the Diſeaſe, there the Patient is moſt conveniently prepared for this Method by warm Baths, drinking Water, and the Uſe of lenient Alteratives, with a Milk Diet.

The larger Glands of the Neck, of the Arm-Pits, and the like, are more eaſily evacuated than the reſt; but the Glands of the Skin are more troubleſome, and require a longer Time before they can be cleanſed; but thoſe Diſeaſes that are any Species of the Herpes are the moſt obſtinate.

Sometimes I have ſeen the Patient affected with a *Nauſea*, from the Topical Remedies uſed in a Relapſe; but ſeldom where purging with *Sea Water* was joined to the other Means; for here this Diſorder is prevented by opening the inteſtinal Glands. And when the Current of the Diſeaſe has been turned this way for a little while, the Evacuation becomes as it were natural, and that Secretion by the Glands of the Skin is not found neceſſary to preſerve the Health of the Patient: But if a Relapſe happens, we muſt have Recourſe to the ſame Helps which ſeem appointed to carry off the Diſeaſe; for unleſs the Paſſages are obſtructed, they are, doubtleſs, deſigned for that Purpoſe. But how well the Glands of the Inteſtines are fitted to receive the Humours transferred from the Skin may be eaſily perceived by the ceaſing of the Colic upon cutaneous Eruptions; and if theſe Eruptions are repelled, the Colic (and often with a Diarrhœa) returns; for here the Glands of the Inteſtines are affected inſtead

ſtead of thoſe of the Skin, and the morbific Matter is thrown upon the Bowels, which elſe would break out in Puſtules, or paſs off by Perſpiration. Something like this is found in *Hippocrates*. *But if the Fluxion retreats, and the Phlegm ſhall paſs by the Palate and fall into the Belly, ſuch have a Flux of the Belly, but no Sickneſs.* See *de Gland.* Sect. 9.

Therefore this way of Cure, which ſeems to follow the Example of Nature, is commonly ſucceſsful if ſkilfully uſed. Moreover I have obſerved, that ſometimes when the Glands have been ſwelled a long Time, and oppreſſed with Humours, and when their Texture hath been weakened by frequent Fluxions, that it is neceſſary not only to procure a more plentiful Evacuation by the inteſtinal Glands, but that there ſhould be alſo a greater Revulſion than can be ſafely made by the Help of Purgatives. And here I found Emetics very uſeful; and when the Glands of the Womb are weaker than the reſt, purging with *Sea Water*, with repeated Emetics, and bathing in the *Sea Water*, often ſucceeded to my Wiſh.

But as I think Turpeth Mineral, and other Mineral Emetics, too ſtrong for the tender Conſtitution of theſe Patients; I make uſe of Ipecacuanha or Squills; and how uſeful Squills are as an Aperient may be eaſily perceived by their excellent Uſe in Dropſies, and in Diſorders of the Breaſt; and in Diſeaſes of the Glands I eſteem them to be the beſt Emetic among Vegetables; for they make a ſafe and effectual Revulſion; they open the Kidneys, and augment all the Secretions; and the Patient runs no Riſque of a colliquative Diarrhœa, which very often produces a Conſumption. *Gerard* obſerves, that

of

of Squills roaſted with eight Parts of Salt, one Spoonful taken faſting looſens the Belly. And if the Infuſion of Squills is given with ſtrong Cinnamon Water, it ſeldom excites a Vomiting, but ſometimes paſſes off by Stool, and ſometimes by the Kidneys in a copious Stream. And hence its Uſe is ſo juſtly applauded in the Dropſy.

Having taken this Notice of the Virtues of Squills, it will not be improper to obſerve, that the Ancients had almoſt all their Remedies for Diſeaſes of the Glands from the Sea; which I think deſerves Notice, for we muſt naturally ſuppoſe, that their known Virtues were the Cauſe of their being almoſt univerſally uſed; eſpecially as the Practice of the Ancients was not founded upon any particular Hypotheſis, but rather derived from Experience, that Miſtreſs of all Arts.

As I have mentioned Squills, I hope to be eaſily excuſed if I take a ſlight View of the Remedies of the Ancients; but I would have this firſt taken Notice of, that it would, in my Opinion, be very wrong to deprive this Method of mine of the Aſſiſtance of other Medicines, which all other Methods of Cure claim as their common Right.

For though the *Sea Water* can do many and very great Things by its own Virtues; yet it is ſometimes aſſiſted by the mutual Operation of other Medicines. But to return: The Medicines moſtly uſed by the Ancients in Diſeaſes of the Glands were prepared from a Calx, or a lixivial Salt. *Pliny* obſerves, that *the Aſhes of Oyſter-ſhells relieve the Inflammation of the* Uvula, *the Swellings of the Glands behind the Ears, Carbuncles, and Hardneſs of the Breaſts.* And indeed the Ancients uſed all Sorts of Sea-ſhells calcined; alſo in the ſame Caſes *burnt Pumice-ſtone, calcined Sponge,*

Sponge, *burnt Cuttle-fiſh Bone*, &c. And at preſent we find every Sort of Calx uſeful to diſſolve Concretions, and correct the ſcorbutic Taint of the Blood. The Reader will perhaps excuſe me if I relate the Caſe of a certain Patient who was long afflicted with a Cough and Spitting of Blood; but upon taking the *Aqua Benedicta* of Dr. *Bates*, he ſpit up two Stones that were rough and ſoftiſh like Chalk. I imagined this proceeded from the Stones not being intirely diſſolved by that Medicine, which was taken with Milk. But however that might be, he was cured.

There is a Species of *Madrepora*, which the *Americans* burn to Lime, and, with this Remedy, cure the Natives of Swellings of the Glands, if we may believe their own Accounts. And the *Siameſe* have ſuch a great Eſteem for a certain Lime made of Sea ſhells, that they curiouſly temper their famous *Areca* with it, which they are almoſt always chewing. This Mixture is made of a certain Fruit about the Bigneſs of an Acorn, cut in ſmall Pieces, being firſt mixed with the Lime of Sea ſhells. This is wrapt up in the Leaves of Betel. *Bontius* mentions this Medicine in his Book *De Medendi Methodo Indica*. *Beſides this, we have here* (ſays he) *a peculiar and noble Medicine, which is made of Areca, Betel, and Lime made of burnt Oyſter-ſhells, which being chewed draws Phlegm from the Head, and conſumes the ſame in the Stomach, and prevents its filling the Head with Vapours, from whence thoſe Catarrhs proceed.* See Chap 12. And afterwards ſays, *For the Deſcription hereof, and the other extraordinary Virtues with which it is certainly endowed,* ſee in *Garcia*'s Hiſtory of Spices, Cap. *De Betel. & Arec.* Then alſo writing in the 18th Chapter of

of an obſtinate Herpes, or Ring-worm. called by the *Indians Courap*, he ſays the following Liniment is uſed ſucceſsful.

℞ *Of Opium half a Dram, Calx or Quick-Lime, made of burnt Shells two Scruples* [*ſo* Bontius] *rub them on a Marble Stone with the Juice of Love-Apples. When the Patient uſes it, let him ſcrape off the Cruſt of the Herpes, then wiping off the Ichor, anoint the Part.*

I recite theſe Paſſages to confirm the Uſe of a Lime with *Sea Water* in Diſeaſes of the Glands.

Moreover, all the Kinds of *Alga*, or Sea-Wreck, deterge powerfully, whence they had the Name of Fucus. The beſt for this Purpoſe is the *Quercus Marina*, newly taken out of the Sea. But as I ſhall hereafter ſhew the Uſe of this Plant, with a Deſcription thereof, I ſhall ſay no more of it here. The Ancients mention ſeveral Sorts of *Alga* or Sea-Wreck, as the *Palea Marina*, *Alga Lactucea*, and *Alga Fæniculata Tinctoria*, of which the latter was eſteemed good againſt the Sting of the Scorpion, and was therefore uſed in the Theriaca, as *Nicander* affirms; and even at this Time our Fiſhermen, when they are ſtung by the *Paſtinaca marina*, or *Sea-Dragon*, and cannot get the Liver of the Fiſh, which they reckon a certain Remedy, in this Extremity have preſently Recourſe to Sea-Wreck, and apply it to the Swelling, which aſſwages the Pain of the Wound, and diſperſes the Tumor. We are alſo told by *Garidelius*, that the Inhabitants of *Provence* apply the Sea-Wreck, to bruiſed Parts of the Body, which, by its Virtue, diſperſes the Contuſions: And afterwards cites theſe remarkable Words of *Pliny*: *I myſelf knew a Man cured by*

by the Sea-Wreck, who fell from a high Tree as he was lopping it, and broke almoſt all his Bones. He was wrapt all over with it, which was kept conſtantly moiſt with its own Water, and was never removed, but when for Neceſſity of Change freſh was applied; and by this Means he recovered perfectly in ſo ſmall a Time that it is almoſt incredible. See *Pliny*'s Natural Hiſtory, L. 27. Cap. 8.

And tho' I know that *Pliny*'s Authority has very little Weight among the Learned, yet a Diſtinction is to be made between thoſe Things which he relates upon the Teſtimony of others, and what he declares he ſaw with his own Eyes.

But it is ſufficient to my Purpoſe to draw this Inference from hence, that the Alga, or Sea Wreck, was uſed by the Ancients to diſſolve Tumors, to which Teſtimonies concerning Sea-Wreck we may add the Authority of *Dioſcorides*. He takes Notice that Sea-Wrecks of every Species are cooling, and particularly uſeful in the Gout and Inflammations, if newly taken out of the Sea.

The Ancients alſo uſed *Alcyonium*, or, as it is called, the *Froth of the Sea*, in the ſame Caſes, of which they deſcribe many Kinds; but *Dioſcorides* affirms that to be the beſt Sort, which is of a red Colour. He ſays it was compoſed of a certain Matter reſembling little Worms, and brought from *Miletus*. The Ancients uſed to calcine this with Salt, and made hereof a certain abſterging Medicine. *Matthiolus* teſtifies he ſaw this at *Venice*. I confeſs, indeed, that I could never find any. Out of theſe Materials various Forms of Preſcriptions are eaſily compoſed: But, after the Example of *Cælius Aurelianus*, I have moſt frequently

frequently uſed the following Powder with Succeſs.

℞ *Cuttle fiſh Bone burnt, Pumice-ſtone burnt, Saltpetre and Coralline, of each equal Quantities.*

For Patients that are Children I uſe Coralline chiefly, becauſe of its Excellence in deſtroying Worms. *Matthiolus* teſtifies, that a certain Boy, by this Medicine, voided above an hundred Worms; and *Braſavolus* obſerves that Nitre is good for the ſame Purpoſe. *I give a Dram and a half of Nitre in Broth, and it brings away viſcid Matter, and ſometimes dead Worms; for it kills Worms in a wonderful Manner. I have given it, not exceeding a Scruple, to a vaſt Number of young Children, and it deſtroyed all Kinds of Worms.* See *Anton. Muſa, Braſavol. De Medicament. Purgant.* p. 122.

Medicines outwardly applied are often ſucceſsful againſt external Tumors. I have happily uſed a Lotion made of Oil of Tartar *per Deliquium*, mixed with *Sea Water*, when the Glands were almoſt turned to a Scirrhus. But if the Stricture of the Veſſels is to be relaxed, *Pliny*'s Decoction of Frogs in *Sea Water* is vaſtly preferable to the common *Plaſter of Frogs.*

But Nature herſelf ſupplies us with the beſt Medicine for diſſolving Tumors, in the *Quercus Marina*, or Sea-Wreck, at one Seaſon of the Year; for in *July* this Plant bears certain Veſicles or Pods that contain a ſlippery and ſoapy Juice. Theſe Veſicles are to be ſqueezed in the Hands, and the Tumor rubbed with them till it imbibes this ſoapy Liquor: And Laſtly, it muſt be waſhed with *Sea Water*, and dried perfectly clean. The following *Fucus*, or Soap, is equally, if not more, powerful

powerful for the ſame Purpoſe, which I frequently uſe.

℞ *Of the Veſicles of the* Sea-Wreck, *full of their Liquor, gathered in* July, *two Pounds,* Sea-Water *two Pounds, let them ſtand together in a Glaſs-Veſſel ten or twelve Days, till it makes a Liquor nearly approaching the Thickneſs of the thinneſt Honey, then ſtrain it, and therewith rub the affected* Glands *(chiefly when the Tumor is abating) twice or thrice every Day. Afterwards waſh it clean with* Sea-Water.

Nothing exceeds this Method in the Decline of the Tumors; for it diſperſes all Hardneſſes.

But all the acrid Preſcriptions of Mercury promote a Calloſity, as may be ſeen in the Uſe of the red Precipitate; therefore to diſperſe ſcirrhous Tumors, we muſt uſe ſuch *Formulæ*, or Preſcriptions, that ſtimulate the Solids without hardening them. And indeed theſe outward *Formulæ* are therefore beneficial, becauſe they have a diſſolving Power, and fit the Veſſels to ſend back the Humours into the larger Tubes, whereby the Diſorder is reduced to the Laws of Circulation, and is more under the Command of the Phyſician. But all thoſe *Formulæ* are hurtful that promote a Suppuration, and it is our Buſineſs chiefly, either to guard againſt a Pus, or to extirpate the Tumor; for when once a Gland is ſuppurated it fouls the Blood, and in a manner lays the Founation of other Tumors; therefore great Care is to be taken by the Uſe of *Sea Water* to correct the Tone of the Solids as well as the Taint of the Fluids; and Regard muſt be had to both theſe Intentions jointly; for although *Sea Water* is alone very powerful, yet in Glandular Diſ-

eaſes

ceaſes of the Liver or Kidneys ſaponaceous Medicines are to be given, that by their Aſſiſtance the Stiffneſs of the Fibres may be leſſened; that the Paſſages may become more ſlippery; and that the Stones in the Liver or the Kidneys may find a readier Paſſage upon drinking Salt Water. But if there is the leaſt Cauſe to ſuſpect a *Febricula* or little Fever, or Pus generating in the Bowels, I lay aſide Soap and lixivious Salts, and depend entirely on Bleeding and ſalt Purgatives. *Sea Water* reſiſts Putrefaction, and is not ſo apt to excite Impoſthumes as the Roſinous Purges, as I obſerved before.

Beſides which, *Sea Water* moſt excellently deterges and diſſolves, and alſo draws forth the Humours from the tumified Glands.

Many cure Dropſies with Salt, and remove an old Cough with a Linctus thereof. *Pliny* L. 30. cap. 9.

Neither were the Ancients ignorant of the Uſes of Salt againſt Putrefaction, for they ordered it to be held under the Tongue, till it was diſſolved, every Morning. They likewiſe uſed it to cleanſe the Teeth and Gums, to reſtrain Eroſions and all Putrefraction. And I believe it is an excellent Dentifrice, becauſe amongſt the great Number of Women that get their Living by daily picking up ſhells upon the Sea-ſhore, you ſhall ſeldom ſee one with rotten Teeth; on the contrary, their Gums are generally firm, their Lungs ſound and free from any ſcorbutic Cough; and this is chiefly cauſed by the ſaline Particles which are communicated to the Air from the Surface of the Sea; or rather which are daſhed out by the breaking of the Waves, for little or no marine Salt is exhaled by the Heat of the Sun.

It would be unjuſt in me to paſs by the Uſe of this Method in a *Bronchocele* or Swelling of the Fore-part of the Neck, becauſe it is here of great Service. And whilſt I was writing this I received a Letter from my very learned Friend Dr. *Lee*, which confirms this. *Sea Water* (ſays he) *is of great Benefit in many Kinds of Diſeaſes. This Medicine performs thoſe Effects in ſtrumous and ſcorbutic Caſes, which perhaps you may in vain wiſh for from any other. A* Bronchocele *which was fixed many Years, ſo that the Breathing was greatly affected thereby, either in ſpeaking or moving, was cured by this Remedy. I knew the Leproſy itſelf twice cured by drinking and bathing, when the Surface of the Body was almoſt covered with Spots and Scales: But this you are well acquainted with; and others ſhould underſtand that the ſame Helps agree with all Patients as well as with all Diſtempers, and would certainly agree with them more readily and frequently if their Uſe was more accurately obſerved, by Perſons rightly qualified.*

When a *Bronchocele* hath continued a long Time it generally contains extravaſated Humours, which muſt be treated by manual Operation.

In the mean Time I perſuade the Patients to ſhave their Heads, and expoſe their Necks to the cold Air, and to rub them with moiſt Sea-wreck, upon the Decline of the Tumors of the *concatenated Glands*, [of the Neck] for nothing, as far as I can judge, does ſo much weaken the Tone of the infirm Parts as the Uſe of warm Cloathing. Indeed the whole Regimen, of Cloaths, Food, Air and Medicines ſhould be cold, which often prevents a Scirrhus or a Cancer; for the warmer State of the Air makes theſe Diſtempers more common among the *Aſiatics* than in the more Northern Countries.

Countries. *As to external Cauſes, chuſe a cold and moiſt Air, chiefly cold. Hence Cancers are ſeldom found in* Germany, *but frequently in* Aſia. See *Fabricius ab Aquapend.* pag. 120.

I have often had Boys brought to me, weak and pale, with long thick hair hanging down their Necks, and covered up with the greateſt Care, leſt the tender Creatures ſhould be killed with the Cold, the whole Texture of the Body being relaxed with the Heat of their Cloathing, and with nocturnal Sweats. I have ſent them back to their Parents, with their Hair cut off, their Necks bare, with a florid, youthful Countenance, having firſt ſtrengthened their Limbs by bathing in the Sea.

I mention this to perſuade fond Parents not to enervate their Children, that are naturally healthy and ſtrong, by too warm Cloathing in their Infancy.

The *Sea Water* is alſo an excellent Remedy where the Belly is bound; for the Inteſtines being evacuated by its Aſſiſtance, and Crudities carried off, which would elſe oppreſs the morbid Bowels, it gives an eaſier Paſſage to the Gravel and Stones out of the Biliary Duct.

And thus I have faithfully declared, as far as I am able, what may be done, and what cannot be done by *Sea Water*; but where there was the leaſt Cauſe to doubt, there I have been ſilent, or have acknowledged my Ignorance, without impoſing my Conjectures or Fancies upon the Reader. The ſeveral Caſes ſubjoined were treated under my own, or by my Friends Inſpection, whoſe Relations I can as much depend on as if I had ſeen them with my own Eyes; and although we do not always meet with the ſame Succeſs,

yet

yet, I have more Dependence upon this than any other Method.

But as ſome Perſons, perhaps, will be deſirous of knowing how I came firſt to take notice of this Medicine, and upon what Authorities I was induced to apply my Studies to diſcover its Uſe, I ſhall add a few Lines on this Matter.

In the firſt place, I had long ſince obſerved, that the Inhabitants of the Sea-Coaſt made uſe of *Sea Water* in Diſorders of the lower Belly, and chiefly in thoſe proceeding from Worms. I alſo found, that *Dioſcorides* employed a whole Chapter in reciting its Virtues; but I obſerved that both he and *Pliny* either had tranſcribed the vulgar Opinions, or elſe knew little of the Power of this Medicine, and but little approved of its Uſe: And I was the more perſuaded of this becauſe I ſaw this Water ſucceſsfully uſed by the Inhabitants of the Sea Coaſt. And theſe Circumſtances pointed out ſome extraordinary Obſervations of its Virtues, which led the way to theſe diligent Enquiries. Beſides, I had experienced that *Glauber*'s Salt was an excellent Purgative in many cutaneous Diſorders, and reſolved to try the Effects of *Sea Water* in the like Caſes, and I preſently found it was an excellent Medicine in Diſorders of the cutaneous Glands.

Afterwards in 1730, I read a Book intitled, *The Domeſtick Companion*, which adviſes the Uſe of *Sea Water*, and commends it to Sailors as a moſt convenient Purge. And laſtly, ſome Years ago, having ſome Converſation about this Matter with Mr. *Webb*, who is a very worthy Man, and a ſkilful Surgeon, and who had tried the Virtue of this Medicine, he preſſed me to try farther, and conſider it more accurately.

And

And theſe are the Reaſons and Authorities which firſt led me to uſe *Sea Water*, and afterwards confirmed me in the Knowledge of its Virtues. And indeed I have employ'd much Labour, Study and Diligence in this Matter, in repeating various and almoſt infinite Experiments. I think proper to obſerve before I proceed to the Recital of the ſeveral following Caſes, that all the Medicines here preſcribed were procured from the Apothecaries Shops, and that every Caſe is ſelected out of ſeveral of the ſame Kind, leſt a longer Account of Cures ſhould prove tedious to the Reader.

CASE I.

Of a Gland of the Lungs maturated, with large Tonſils and ſcrophulous Tumors in the Neck, and near the Ears.

I WAS ſent for to a Boy twelve Years old, extremely waſted with a Hectic Fever, which proceeded from the Pus retained in the Lungs. He had an almoſt continual Cough, no Spitting, but an extreme Difficulty to walk. His Tonſils were large, his Neck full of ſcrophulous Tumors, two of which, near the Ears, were very hard, and full of Pain.

To ſtop the Progreſs of the Abſceſs, I ordered Veneſection, under which the Boy almoſt fainted; this was followed by violent Fits of Coughing and Vomiting, which broke the Impoſthume, and he threw up a little of the Pus or Matter. I remember the ſame thing happening ſeveral times

before; for when the Elaſticity of the Part affected is reſtored by Bleeding, the Pus is preſently ejected. I then gave him what follows:

℞ *Sperma Ceti one Scruple, Salt of Nitre eight Grains, Coralline half a Scruple, Milk-water an Ounce and a half, ſimple Cinnamon-Water half an Ounce, Syrup of Balſam one Dram. Mix them for a Draught, to be taken three times a Day.*

℞ *Sperma Ceti one Scruple, prepared Pearls one Scruple, pearl Sugar half a Scruple. Mix them and make a Powder, to be taken Night and Morning in a Spoonful of Aſſes Milk, drinking after it a Draught of the ſame.*

By theſe Means, and by gentle Riding, his Lungs were cleanſed, and the Cauſe being removed, the Hectic Fever ceaſed: But a little Cough remaining, the Patient was removed to *Brighthelmſtone*, a Town near the Sea, that he might be near the Remedy deſigned for the Cure of Obſtructions. Then he firſt took a Purge of *Glauber*'s Salts and Manna, and after purſued this Method.

℞ *Of Æthiops Mineral twenty Grains, of Woodlice eight Grains, precipitated Sulphur ſix Grains, the Pulp of Caſſia Fiſtula, enough to make them into a Bolus; to be taken going to Reſt, drinking half a Pint of* Sea Water *the next Morning.*

℞ *Tincture of Woodlice prepared with Tincture of Salt of Tartar two Ounces. Take a Tea Spoonful an Hour before Dinner, every Day, in a Draught of* Briſtol Water, *mix'd with a little* Rheniſh Wine.

Theſe Medicines gave him three or four Stools a Day, his Appetite returned, he began to improve in Fleſh, and the Tumors of his Neck and Tonſils grew leſs. Soon after I ordered his Head to be ſhaved, his Neck to be kept uncover'd, and the Tumors to be waſhed daily with the following Lotion :

℞ *Of Oil of Tartar per deliquium half an Ounce,*
Sea Water *one Pint. Mix it for a Lotion.*

And by theſe Means the Tumors were diſperſed by Degrees. Towards the End of their Diſſipation I ordered his Neck and the Parts affected to be rubb'd with *Quercus Marina*, [Sea-wreck,] newly taken out of the Sea, and moiſtened with its native Soap ; and thus the Tumors diſappeared intirely. Then continuing to drink *Sea Water* for three Months, I order'd him the Cold Bath. The Boy uſed to ſwim in the Sea with his Companions, and thereby grew ſtronger and better able to endure Labour, and having thus recovered his Health he departed.

I have treated this Caſe more fully, that it might appear at what Time of the Diſeaſe I uſed to preſcribe *Sea Water*, and to ſhew how convenient it is to uſe this Cathartic ſeveral Months. And it is to be obſerved that the Thirſt which happens at firſt, after drinking the Water, generally goes off by frequenr Uſe. This will ſuffice for the treating of the Glands of the Lungs in a State of Maturation. But it is to be noted, that unleſs the Pus, is firſt thrown up out of the Lungs, the *Sea Water* has very little Effect ; and except new Fluxions are prevented by a conſtant drinking it, the weak Parts cannot recover their

former State, and the Diſeaſe will neceſſarily be renewed.

CASE II.

Of morbid Glands not ſuppurated.

A Servant of the moſt noble Duke of —— came to me. He had a large Tumor reaching from the Ear to the Collar-Bone, which I ſuſpected to be hereditary, becauſe his Siſter was afflicted in the ſame Manner; but becauſe he had contracted a Hectic Fever by a wrong Uſe of Calomel, I ſent him to *Brighthelmſtone*; then, after Bleeding eight Ounces, I gave him the following Medicines.

℞ *Æthiops Mineral two Ounces, prepared Woodlice two Drams and a half, burnt Sponge two Drams, precipitated Sulphur two Drams, Conſerve of Whitlow Graſs ſix Drams, ſolutive Syrup of Roſes, enough to make it into an Electary. The Quantity of a Nutmeg is to be taken Morning and Evening, drinking a Pint of* Sea-Water *after the Morning Doſe.*

℞ *Tincture of Sal Tartar ſix Drams, Tincture of Saffron two Drams. Take a Tea-ſpoonful every Hour before Dinner in a Draught of old Hock.*

The concatenated Tumors of the Neck diſappeared; the large Tumor, which was as it were the Root of the reſt, grew leſs; but there remained a certain ſmall Gland without any Pain, which was yet ſo ſmooth and poliſhed that it ſeemed to be a true Scirrhus. But the Patient not conſenting to have it extracted, it began the next Spring to ſuppurate. Then the Impoſthume

was opened by Mr. *Mercer*, a Surgeon; the Coat of the Gland was cleanſed; and the Patient grew well, without any new Tumors yet appearing, though there is Danger of a Relapſe.

CASE III.

Of the Tumefaction of the Glands of the Knee.

I Was called to a certain Patient afflicted with a pretty large Tumor upon the Joint of the Knee, which had entirely withſtood the Force of the common Method. His Habit was robuſt and fat; his Pulſe calm, only a ſmall Pain in the Part affected, which could not perform its Offices, becauſe of the Thickneſs of the Joint and the Fluxion, which had continued for eight Months; but even this Perſon was cured by the following Method.

After Bleeding I preſcribed an Emetic of *Ipecacuanha* and *Turpith Mineral* once a Week, and on the other Days the following Electary with *Sea Water*.

℞ *Of Vegetable Æthiops* [hereafter deſcribed] *three Drams, Cuttle-fiſh Bone burnt three Drams, Coralline half an Ounce, prepared Woodlice two Drams, Conſerve of Whitlow Graſs an Ounce and half, Syrup of the five opening Roots, enough to make an Electary, of which take the Quantity of a Nutmeg twice a Day, drinking a Pint of* Sea Water *next Morning.*

The Part affected was daily anointed with freſh *Ungent. Nutrit.* and as the Tumor grew leſs, he uſed cold bathing in the Sea, and a ſlight Friction of *Quercus Marina* to ſtrengthen the Part. In

this Manner the Tumor was ſubdued, and the Man could walk without any Trouble.

CASE IV.

Of the Tumefaction of the Glands on the Edges of the Eyelids.

THE Inflammation and Soreneſs of the Eyes, which proceed from continual Fluxions on the Glands of the Eye-lids, are extremely troubleſome to the Phyſician and Surgeon, whether they proceed from a ſtrumous or ſcorbutic Cauſe. But becauſe all theſe Diſorders in general are cured by this Method, I ſhall only take notice of the moſt difficult Caſes of this Kind, where both theſe Diſorders are united.

I was ſent for to a Man two and forty Years old; he was afflicted with an Inflammation of the Eyes and a Lippitude, from a continual Fluxion upon the Glands of the Eyelids. The Veſſels of the conjunctive Membrane, or the White of the Eye, were ſwelled, ſo that they ſeemed to hang down, and had the Appearance of a *Fungus*: The Cornea began to be ulcerated. In this Caſe I ordered Bleeding three or four Times at proper Intervals; Iſſues were opened in the Nape of the Neck, and the following Method was entered upon.

℞ *Æthiops Mineral two Ounces, Vegetable Æthiops three Drams, Woodlice two Drams, red Coral prepared three Drams, Syrup of Violets enough to make an Electary; of which take the Quantity of a Nutmeg Morning and Evening, drinking a Pint of* Sea Water *after the Morning Doſe*

The

The Patient was of a ſtrong Habit, and his Pulſe quiet; and he bore the daily Evacuation without any Inconvenience. The Fluxion preſently decreaſed, and by the aforeſaid Preſcription he was reſtored to Health. *Lommius* has obſerved, that the ſame Caſes are frequently relieved by Nature. *A Flux of the Belly is good for thoſe that are affected with a* Lippitude.

At length the Fluxion ceaſing, he rubbed his Temples, Eyelids and Forehead every Day with *Quercus Marina* or Sea Wreck, or waſhed them with cold *Sea Water* for ſome Time after his Recovery, and he hath been free from this Diſeaſe ſeven Years; although before this Cure, upon taking any Cold it was wont to return. I have ſometimes ſeen this Diſeaſe accompanied with an intermitting Fever, which could not be conquered without the Bark; but in the Caſe juſt now mentioned the Bark had little Effect. And there is another now preſent whilſt I am writing, whom I formerly attended; he had a Fungus, that grew outwardly from the upper Eyelid; the lower Eyelid was turned back, and the Eye thereby covered. Afterwards, when the Flux of the Humours was diminiſhed, I perceived the Coats of the Eye were ulcerated, and a *Lippitude* of both Eyelids cauſed by the Excoriation. The Patient was cured by the following Method.

Take away twelve Ounces of Blood.

℞ *Of calcined Spunge, Cuttle-fiſh Bone prepared, of each half an Ounce, Woodlice prepared three Drams, Æthiops Mineral two Ounces, Conſerve of Whitlow Graſs ten Drams, Syrup of Violets, enough to make it into an Electary; of which take the Quantity of a Nutmeg Morn-*

ing and Evening, drinking a Pint of Sea-Water *after the Morning Doſe of the Electary.*

℞ *Tutty prepared, and Salt Petre, of each two Drams, Mucilage of Quince-ſeeds, enough to make it into a Liniment to anoint the affected Eyelids every Day.*

CASE V.

Of a ſcrophulous Ozæna, *or fetid Ulcer in the Noſtrils, with a ſwelling of the upper Lip, and ſcorbutic Eruptions upon the Cheeks.*

A Certain Perſon came to me, who had before tried all that *Mercurius dulcis* and every other Medicine of that kind could effect alone; but the Diſtemper was not at all mitigated hereby, but grew worſe: For beſides the *Ozæna*, certain Tubercles of the worſt Colour began to appear near the Noſe, Cheeks, and upper Lip; the Noſtrils were ſo ſtuffed, and ſo cruſted over, that he could breath only through his Mouth. The Diſtemper was extremely difficult to be conquered, but yielded at laſt to the following Method, wherein I gave *Mercurius dulcis* in ſmall Doſes for ſome Months with *Sea Water*.

℞ *Of* Glauber's *Salt one Ounce, diſſolve it in an Ounce and an half of Milk water; add to the Solution compound Piony-water half an Ounce, Syrup of Violets half an Ounce, Mix them for a Draught to be taken in the Morning, with the proper Regimen.*

℞ *Of Vegetable Æthiops half an Ounce, prepared Woodlice two Drams, burnt Pumice-ſtone one Dram, Cuttle-fiſh Bone burnt two Drams, Æthiops Mineral two Ounces, Conſerve of Whitlow Graſs*

Graſs ten Drams, Syrup of Violets enough to make an Electary. The Quantity of a Nutmeg is to be taken Night and Morning, drinking a Pint of Sea-Water *after the Morning Doſe.*

The Patient grew better daily; but when he was tired of this Electary I perfected his Cure with the following Pills and *Sea Water.*

℞ *Of Camphire half a Dram, Vipers Fleſh two Drams, Scammony ſulphurat. one Dram and a half, Colomel one Dram, Syrup of Buckthorn enough to make them into Pills, ten Pills of every Dram; of which take two every Night, or once in two Nights going to Bed, drinking a Pint of* Sea Water *the next Morning.*

Obſerve, that when the Cure of the Tumors was perfected, the Liniment of *Sea Water* and *Quercus marina* was uſed, to ſtrengthen the Parts that were ſtill weak.

CASE VI.

Of various Foulneſſes of the Skin.

I Was ſent for to a Woman that was troubled with ſcorbutic Eruptions about the Ears and Face, which fouled ſeveral Linen Cloths every Day. The Eruptions were partly covered with a mealy yellow Cruſt. She had tried many Remedies but ſtill grew worſe: At length ſhe came to live near the Sea, and there took every Morning antiſcorbutic Medicines and the *Sea Water*, and deterged the Skin with *Quercus marina*, taken from the Shore, and by this Method in two Months Time the Woman grew well.

CASE VII.

Of a moiſt Leproſy.

A Woman of an extreme ſcorbutic Habit, had been affected nine or Ten Years with a kind of moiſt Leproſy. Many ſkilful Phyſicians had endeavoured to extirpate the Diſeaſe, but with little Succeſs. The foul Humours were tranſmitted plentifully through the Skin, and in a manner quite covered it, chiefly on the Face, Head and Neck; beſides which her Ears ſtood erect by Reaſon of their unuſual ſwelling, ſo that they appeared like the Ears of the Satyrs, as they are fabulouſly deſcribed by the Poets. Laſtly, her whole Frame was foul and naſty.

I adviſed the Uſe of Antiſcorbutics with *Sea Water*. The Diſtemper was conquer'd by Mr. *Newington*, Surgeon, whoſe Letter I received whilſt I was writing. He commends the good Succeſs of this Method, becauſe, upon taking *Sea Water* only two Months the Woman grew well, and to this Day, (it being now a Year ſince ſhe was cured) ſhe never perceived the leaſt Signs of a Relapſe. The Wife of Mr. *H.* a Sea Captain, was affected in the ſame manner, and cured by the Help of Alteratives and *Sea Water*, as I am aſſured by Mr. *Snaſhall*, Surgeon.

CASE VIII.

Of a dry Leproſy.

A GIRL of twelve Years of Age was troubled with a dry Leproſy, the Top of her Head, and her whole Body, was ſprinkled over with

with white *furfuraceous*, or branny Spots. I gave her the following Medicines.

℞ *Of Calomel ſix Grains, Camphire one Grain, Conſerve of Whitlow Graſs, enough to make a Bolus, drinking the following cathartic Draught next Morning.*

℞ *Of the Decoction of Senna two ounces, Manna three Drams,* Glauber's *Salt two Drams, compound Piony-water two Drams, ſolutive Syrup of Roſes two Drams; mix for a cathartic Draught.*

℞ *Of Vipers Fleſh one Scruple, Camphire one Grain, Conſerve of red Roſes, enough to make a Bolus; to be taken every Night going to Reſt, drinking half a Pint of* Sea Water *the next Morning, when the Calomel Bolus is not to be taken.*

Within fourteen Days the Eruptions began to ſcale off, and this moſt troubleſome Diſtemper, in the ſecond Month, without any other Help, was removed by this Method alone. Which Cure being talked of another Patient came to me, afflicted with the ſame Diſeaſe, and he was ſoon cured by the ſame Means.

CASE IX.

Of a ſcorbutic Eruption, reſembling a moiſt Leproſy.

J. *P.* whom I have mentioned before, had formerly a Diſeaſe of the Venereal Kind, and from the Time of its Cure had been in good Health 'till theſe Eruptions appeared. They were univerſal, and partly incruſtated, and partly moiſt,

Firſt they ſeized his Head and Arms, and then the reſt of his Body and Limbs, ſo that he could bear no Cloaths on. He was very poor, and was ſent to St. *Thomas*'s Hoſpital at *London*, under the care of a very ſkillful Phyſician. He underwent a Salivation by anointing; but as I obſerved before, he returned hectical and emaciated; the Eruptions were fretted and made worſe by the Salivation. He was cured by the following Method.

℞ *Of vegetable Æthiops three Drams, Flowers of Sulphur half an Ounce, Cuttle-fiſh Bone three Drams, Conſerve of Mallows one Ounce and an half, Syrup of Violets, enough to make an Electary. The Quantity of a Nutmeg is to be taken every Night going to Reſt, drinking a Pint of* Sea Water *next Morning.*

It appears very plain that this Diſtemper was not at all venereal, as was thought; becauſe it was not palliated by Mercury, and becauſe I neither preſcribed Mercury nor Æthiops Mineral in the Cure afterwards; it is therefore eaſy to ſee what Power this Method hath in ſcorbutic Diſeaſes, where Mercury fails of Succeſs.

CASE X.

Of a Gonorrhœa.

WHAT I am going to ſay of the Cure of this Diſtemper by *Sea Water*, I do not very confidently advance, becauſe I have but ſeldom treated it in this Method; yet I recommend it to the Conſideration of Phyſicians, becauſe I am apt to think that it will hereafter prove a moſt uſeful Remedy in theſe Caſes.

I have given the following Medicines againſt a virulent Gonorrhœa.

℞ *Of Calomel fifteen Grains, Camphire three Grains, Pulp of Caſſia Fiſtula, enough to make a Bolus; to be taken going to Reſt, drinking a Pint of* Sea Water *next Morning.*

Thus the Acrimony was ſoon ſuppreſſed, taking alſo the following Powder two or three times a Day.

℞ *Of Sal Prunel and white Sugar candy, of each half an Ounce; mix them and take a Dram in half a Pint of Barley-water two or three times a Day.*

Afterwards the Cure was perfected by the Help of Balſam of Capivi and Loaf-ſugar, though there ſeemed to be no Occaſion for it, nor do I think it ſo neceſſary after this Method as after the common Way of Cure; for I know no other Benefit ariſing from Salt Water than Purging; and as the Nitre in *Sal Polychreſt* and *Sal Prunella* relieves the Strangury, ſo I think in like manner the Sulphur and Salt contained in *Sea Water* are beneficial; at leaſt the ſaline Purges do not augment the Inflammation, but rather reſtrain it. In the mean time, I confeſs, I have only treated two or three Caſes of this kind.

CASE XI.

Of the Humoral Rupture.

I Was ſent for to a Perſon who laboured under an Humoral Rupture, which aroſe from the ſuppreſſion of a Gonorrhœa; the Patient was cured in the following Method.

Take

Take away twelve Ounces of Blood.

℞ *Ipecacuanha twenty Grains, Turpeth Mineral three Grains, Conſerve of red Roſes enough to make an emetic Bolus, to be taken as Occaſion requires, drinking a Pint of* Sea Water *in the Morning of thoſe Days when the Emetic is not taken.*

℞ *Of Bean Flour half a Pound,* Sea Water *two Pints, boil them to the Conſiſtence of a Poultice; adding towards the End Unguent. Nutrit. three Ounces; make a Poultice to be applied to the Part affected.*

The Tumor ſubſided, without leaving any bad Symptom: But as I obſerved before, theſe Remarks are not ſufficient to eſtabliſh this Practice, the Way is only opened for future Experience.

CASE XII.

Of the morbid Uterine Glands.

I Lately cured an obſtinate *Fluor Albus* with bathing in the *Sea*, drinking *Sea Water*, and what follows.

Take away ſix Ounces of Blood.

℞ *Ipecacuanha thirty Grains, Carduus Water two Ounces, Oxymel of Squills one Dram. Make an emetic Potion, to be taken as Occaſion requires.*

℞ *Of Spodium half a Dram, the Yolk of an Egg, with ſome of the White; ſmall Cinnamon-water one Ounce and an half, ſtrong Cinnamon-water half an Ounce, white Sugar-candy one Dram. Mix and make a Draught to be taken Morning*

Morning and Night, drinking a Pint of Sea-Water *once or twice a Week.*

It is to be obſerved, that I uſed to preſcribe purging with *Sea Water*, as often as the Patient can bear it without Inconvenience, eſpecially if the Belly is bound; I ſometimes alſo preſcribe the following Injection.

℞ *Balſam of Copaiba three Drams, diſſolved in a ſufficient Quantity of the Yolk of an Egg*; Sea Water *one Pint. Mix them for an Injection.*

CASE XIII.

Of a Teneſmus, with Ichorous Stools.

A Certain Woman thirty Years old, laboured under a Suppreſſion of the Menſes. Many Glands were morbid by the long Continuance of the Green Sickneſs; ſhe had œdomatous, or white, ſoft and inſenſible Tumors on her Legs and Face; the Glands of the *Rectum* were ſo tumefied as to obſtruct the Paſſage, and ſhe ſuffered moſt grievous Pains in going to Stool; at the ſame time there was a continual Diſcharge of Ichor, or a ſharp ſanious Humour, with a moſt painful Teneſmus, or a continual Deſire of going to ſtool. The Woman was cured by the following Preſcription, and the Menſes were reſtored, and became regular.

℞ *Precipitated Sulphur ten Grains, Vegetable Æthiops half a Scruple, Sperma Ceti one Scruple. Mix and make a Powder, to be taken Morning and Night, drinking a Pint of* Sea Water *after the Morning Doſe every Day.*

Becauſe in this Caſe the hardened Glands of the *Rectum*, and the foul, ſharp Humour created a Suſpicion of a Cancer, I think this Cure ſufficiently

ſufficiently ſhews the Virtues of Salt Water indiſcuſſing recent Tumors of the inteſtinal Glands; for the Woman by the Help of it was freed from a very bad State of the Blood, and from many Obſtructions: From whence we may conclude, without Raſhneſs, that the *Sea Water* helps by other Means as well as by Revulſion.

CASE XIV.

Of a fixed ſcorbutic Rheumatiſm, in the Feet and Knees.

THE Captain of a Ship, who was of a full Habit was afflicted many Years with Fits of the Gout, and a ſcorbutic Rheumatiſm, by which the Joints were grown ſtiff, and the Glands diſtended by the long and frequent Fits; his Legs and Thighs were ſo ſwelled with the Scurvy, that he could ſcarcely crawl. I preſcribed him an Electary of Æthiops Mineral, Gum Guaiacum, compound Powder of Arum, *&c.* to be taken daily with *Sea Water*; the Patient by theſe Means recovered, and the Thickneſs of the Joints was diminiſhed; from hence it appears, by what Means *Sea Water* begins the Cure; that is, by opening a new Secretion, and by alleviating the morbid Part.

CASE XV.

Of the Tumefaction of the Glands in the Neck, with an Ulcer in the Wriſt.

THE Virtue of this Remedy in Ulcers accompanied with any Fluxion, will appear by the following Cure. A certain Perſon had an ulcerated

ulcerated Tumor on the Joint of the Wriſt, and the Glands of his Neck were ſcrophulous; but he recovered by taking an Electary of Æthiops Mineral, and by purging with *Sea Water*. And this Remedy is ſo certain a Cure, that Mr. *Webb*, a Surgeon of *London*, whom I have mentioned in another Place, in a Letter I lately received from him, amongſt other Things writes thus, *But this I affirm from certain Experience, that where the Diſeaſe is ſettled upon the Bones of the Wriſt, or the Ankle, this Method is always ſucceſsful*; and further adds, *That he had ſeen an obſtinate Diſeaſe of the Arm cured by the ſame Method.*

But when the Fluxion is removed from the affected Part, it ſometimes falls upon another; and this happened in the Patient above mentioned; for when he was cured, a large, hard Tumor began to riſe in the inner Part of his Knee, but he was relieved by the ſame Medicines as before, though the Tumor was almoſt as hard as a Bone; and I remember almoſt the ſame Thing happening to another Patient under the Care of Mr. *Mannings*, a Surgeon.

CASE XVI.

A Gentleman of a good Family, came to me by the Advice of the ingenious Mr. *Saint-hill*, to try the Effects of *Sea Water*; he had a large Tumor behind the Ear, and ſeveral hardened Glands in his Neck. Before he came to me, he had regularly tried all Mercurial Medicines in vain; but there was ſomething more to be conquered, than has been mentioned above; for in the largeſt Tumor there was an Ulcer; I preſcribed Alteratives with *Sea Water*, and an Embrocation

brocation with the marine Fucus to diſſolve the Scirrhoſities; in three Months Space the Tumors of the Glands diſappeared, and towards the End by bathing in the Sea, the Patient was reſtored to Health; but as there was an Impoſthume in this Caſe, I ſuſpect a Return of the Diſtemper.

CASE XVII.

MR. *Webb*, a Surgeon in *London*, ſent a young Man to me, the Glands under whoſe Collar-Bone were tumefied, one of which that was moſt ſwell'd was as big as a little Egg; and near it, one of the Tubercles was broke, the Pus being maturated; the eminent Surgeon before mentioned, ordered the Wound to be dreſſed with Lenients; when the Patient had taken *Sea Water* with Alteratives for two Months, he went away cured; bathing in the Sea at the latter End of the Time. There was not the leaſt Tumour remaining, nor any Marks of the Diſeaſe; except that where the Tubercle was broke, there remained a little Hardneſs, which might perhaps hereafter prove the Seat of a new Impoſthume; for I have obſerved, that the Sores of the King's Evil, often return near the Old Scars, 'till the Capſula of the Gland is quite eaten away by the Pus, and is cleanſed.

CASE XVIII.

Of a dry furfuraceous or branny Leproſy.

A Certain Perſon came to me with a dry, furfuraceous Leproſy; there were ſeveral Clefts in his Hands, and his Nails were bent, and the Diſeaſe

Diſeaſe prevailed from the Top of the Fingers to the Wriſts; he had tried many Remedies without Succeſs, and among the reſt *Sea Water*; but by the Help of vegetable Æthiops, Vipers Fleſh, and Antiſcorbutic Juices, the Force of the Diſtemper was broken. Indeed, many Diſeaſes of the *Serpiginous* Kind will not yield to *Sea Water*, unleſs continued a long Time; but few can reſiſt its whole Strength. However, I ſeldom thoroughly experienced the Power of this Remedy in theſe Caſes, becauſe moſt Patients are tired with the Tediouſneſs of the Cure.

CASE XIX.

ALthough certain cutaneous Eruptions before mentioned, are not eaſily cured by *Sea Water*, yet I ſaw one of my Relations cured by this Method. He was troubled with an Herpes of a bad Colour, inclining to be browniſh, which had fixed on his Face all the Winter. Early in the Spring, by Order of my Friend, the celebrated Dr. *Wilmot*, he took an Electary of Antimony, *&c.* twice a Day, and *Sea Water*, next Morning; the Power of the Remedy exceeded our Hopes; for the Patient was ſoon reſtored to Health, although he had taken Vipers Fleſh, *&c.* the Winter before in vain; indeed from that Time, I ordered him to take alterative Medicines at four in the Afternoon, and going to reſt, becauſe they ought to be allowed to exert their Virtues before they are diſcharged by Cathartics.

CASE XX.

A Girl living at *London*, about fourteen Years of Age, was troubled with hardened Glands in the Neck and Arm-pit, with an Impoſthume in both Places; having taken Calomel for ſome Time, ſhe was attacked with a Hectic Fever, and a Cough; ſhe came into the Country, and changing her Medicine, ſhe took Æthiops Mineral, *&c.* with Lime-water and Sea-water, at proper Intervals; in the Space of two Months the Cough, the hectic Fever, and the ulcerated Glands, were cured, and ſhe returned to *London* fatter, and of freſher Complexion.

CASE XXI.

THere is brought to me, while I am now writing, a recent and moſt melancholy Caſe of the *Rectum* or ſtrait Gut, and of the lower Belly, with morbid Glands, which occaſioned a baſtard Iliac Paſſion in a Woman I had ſeen a little before; they thought ſhe was big with Child, when ſhe only laboured under a Suppreſſion of the Menſes for about ten Months, upon examining the Abdomen, it ſeemed to me to be compoſed of a certain Collection of morbid Glands, which by the Afflux of Humours, during ten Months, was grown to that Bulk, that it ſhut up the Paſſage of the *Rectum* ſo that there was no Vent for the Excrements but by vomiting. But I have ſubjoin'd the Deſcription of Mr. *Maynard* the Surgeon, who ſaw her dead (*December* 13, 1748.) The woman, ſays he, died the *Thurſday* after you ſaw her; I inſpected her after her Death, and cut

cut out the Tumor of the Glands, which was ſix Inches long, and about ten or twelve in Circumference; it weighed almoſt three Pounds. There was alſo, another Tumor larger than the other, by which the Paſſage of the Rectum was was ſo obſtructed, that it was impoſſible there ſhould be any thing excreted. I ſaw alſo another Caſe of the ſame Nature in a Man, in whom the Paſſage of the *Rectum* was ſo ſhut up, that a ſmall Candle could not be thruſt upwards above three Inches; nothing paſſed by Stool for the Space of forty Days; we ſent to *London* for for Advice in this Caſe, and Quick-ſilver was preſcribed, of which he took altogether, three Pounds; in the mean time nothing paſſed by Stool but the Quick ſilver, every Thing alſo came upwards; during all that Time, he had no Fever; at length, the Lungs begun to be inflamed, and the Inflammation occaſioned Death.

CASE XXII.

Of excoriated Breaſts.

THE Menſes failed a certain Woman of a very full Habit, almoſt forty-nine Years old, the Spring after this Suppreſſion, a Flux of Humours fell upon her Breaſts, which was ſo copious and ſharp, that they were both excoriated; but there was no Hardneſs of the Breaſts, though they were of an unuſual Bigneſs; the Glands of the Skin were grievouſly affected, and there was a Tubercle, ſomething hard, of an inauſpicious Colour, upon the left Collar-bone.

Although

Although theſe Signs portended little Good, yet I undertook to remove the Fluxion with *Sea-Water*, and entered upon this Work in the following Manner.

Take away ſixteen Ounces of Blood directly.

℞ *Of* Glauber's *Salt one Ounce, diſſolved in Milk-Water one Ounce and a half; compound Piony-Water, half an Ounce, Syrup of Violets, half an Ounce; mix them for a Purging Draught, to be taken in the Morning.*

℞ *Of Æthiops Mineral, two Ounces; Woodlice prepared, two Drams; burnt Sponge, two Drams; Conſerve of Whitlow Graſs, ten Drams; Syrup of Violets, enough to make an Electary, of which take the Quantity a of Nutmeg, Morning and Evening, drinking a Pint of* Sea Water, *early in the Morning every Day.*

We took Care to have the excoriated Parts anointed, with a Feather dipt in Unguentum Nutrit. and applied Dr. *Turner*'s Cerate of Lapis Calaminaris between the Breaſts, to prevent the ſpreading of the Excoriation.

By theſe Means the Flux which gave Signs at firſt of being very difficult to cure, was ſtopt in leſs than two Months; the natural Shape of the Breaſts was reſtored; nor was there one cutaneous Gland which appear'd to be hard. The Tubercle of a bad colour mentioned above, which was plainly of a cancerous Kind, as far as I could ſee was neither better nor worſe; but continued for ſeveral Years with little or no Alteration.

CASE XXIII.

Of a hectic Fever proceeding from Pus retained in the Lungs.

A Girl about twelve Years old came to me afflicted with a hectic Fever and a hard and weak Cough; her Belly was tenſe and hard; her Urine of a whitiſh Colour, whence her Parents judged her Illneſs proceeded from Worms; therefore, before ſhe came to me, they had given her Æthiops Mineral, Calomel and Hellebore, and earneſtly entreated me to agree to the Method of *Sea Water*. but I judged that the Child's Health was impaired by the Pus detained both in the Lungs and Meſentery; becauſe, I obſerved ſome Glands in her Neck, tumefied with a Kind of Knots; and alſo, that the Fever was attended with frequent Fits of ſhivering; ſo that there was little Cauſe to expect any Relief from Phyſic, the *Pus being already generated.*

At length being doubtful, I yielded to the Uſe of *Sea Water*, which preſently purged her without much trouble, but without any Appearance of Amendment; for the hectic Heat, and the other Symptoms (as I ſuſpected) grew worſe. Fearing they might be heightened by this Method of Cure, I forbid her the Uſe of *Sea Water.*

Continuing much in the ſame State; ſhe ſoon after went to *London*, but by the Advice of the Phyſician ſhe conſulted, ſhe returned as ſoon as poſſible into the Country, where ſhe died about two Months after; at which Time I was called, for the ſake of inſpecting the Cauſe and Origin of the Diſeaſe.

The

The whole Lungs were beſet with ſmall maturated Glands, and appeared much like the Lungs of the meaſly Sow before mentioned, but the larger Branches of the Windpipe were yet free from *Pus*, whence no purulent Spitting accompanied this Diſeaſe; I found the Liver whole and ſound, but the Meſentery was ſprinkled with morbid Glands, of which ſeveral were maturated.

CASE XXIV.

Of a Cholic with a Conſtipation of the Belly.

I Was ſent for to a poor Fiſherman, who was troubled with a very painful Colic, his Belly being alſo bound. I preſcribed as follows:

Take away eight Ounces of Blood.

℞ *Flowers of Camomile, one Handful, boil them in a Pint and half of* Sea Water *to a Pint, and ſtrain it for a Clyſter, to be given immediately.*

I perſuaded him after the Clyſter, to take a Draught every four Hours made with Oil of Sweet Almonds and Manna, till he had a Stool; but as I heard afterwards, the Draught was omitted, becauſe the Patient found the Clyſter alone had a ſufficient Operation.

CASE XXV.

Of a Jaundice.

A Lady had been afflicted above a Year with the Jaundice, and with frequent Fits of a very violent Cholic from the ſame Cauſe; ſhe went

went to *London* to conſult the ingenious Dr. *Lee* in this Caſe; ſhe returned from the Town, the Violence of the Diſeaſe being nothing abated, for her Urine was almoſt black, and her whole Skin was of a livid Complexion. She had carefully tried every Medicine uſually preſcribed in theſe Caſes; at length, by my Advice, ſhe came into the Neighbourhood of the Sea, that ſhe might join the Uſe of *Sea Water* with *Venice* Soap.

℞ *Venice Soap, three Scruples; Salt of Hartſhorn, ſix Grains; Syrup of the five opening Roots, enough to make a Bolus, to be taken two or three Times, drinking a Pint of* Sea Water *every Day early in the Morning.*

Thus the Paſſage of the Belly was kept open; the Colic very ſeldom diſturbed the Patient, and the natural Colour of the Urine returned; ſhe was remarkably relieved in a moſt obſtinate Diſtemper, and at length reſtored to Health.

CASE XXVI.

I Remember a Caſe not unlike the Fifth, that was under the Care of my honoured Friend the celebrated Sir *Edward Hulſe*, Bart. A Girl eleven Years old, had her Upper-Lip and Noſtrils ſwelled; but upon taking *Sea Water* the Tumor diſappeared; the Diſeaſe returning next Spring, ſhe went to conſult Dr. *Hulſe*, who adviſed her to repeat the Uſe of *Sea Water*, and preſcribed the following Medicines, which ſhe took in Whey while ſhe continued in *London*, and afterwards in *Sea Water* at *Brighthelmſtone.*

℞ *Burnt Sponge, one Scruple; Rhubarb, four Grains; mix and make a Powder to be taken*

Morning and Evening, drinking after it a Draught of Whey, ſweetened with Syrup of Violets.

And this was all ſhe took with *Sea Water*, and which were repeated the ſecond Spring after the Cure was undertaken; thus by their Aſſiſtance, we always ſuppreſſed the Tumors, till about the thirteenth Year of her Age, ſhe had the uſual monthly Evacution; and from that Time, ſhe has never been troubled with the *Ozæna*, to my Knowledge; nor with the Tumor of the Lip.

CASE XXVII.

Of a dry Leproſy.

MR. ——, Captain of a Ship, a few Years paſt, was ſent to me by my Friend the ingenious Dr. *Oldfield*, who had uſed his utmoſt Skill to conquer the growing Diſeaſe by the Help of Mercurials; but theſe Medicines proved of little Uſe, a dry Leproſy poſſeſſed both Arms as high as the Elbows, and almoſt an innumerable Quantity of leprous, yellow, furfuraceous or branny Spots appeared all over his Body; all which I took off in leſs than two Months, except one Spot ſtill remaining upon one of his Arms, when the Ship went to Sea; but I know not what happened to him afterwards: I preſcribed thus:

℞ *Æthiops Mineral, an Ounce and half; Antimony perfectly levigated, half an Ounce; Cuttleſiſh-Bone, three Drams; Woodlice prepared, two Drams; Conſerve of Paronychia, ten Drams; Syrup of Violets enough to make an Electary,*

Electary, of which take the Quantity of a Nutmeg twice a Day, drinking a Pint of Sea Water *every Morning early.*

I judge this Cure to be doubtful; becauſe, I have often obſerved this Diſtemper return, 'till the Glands of the Skin had recovered their Powers, or till the whole Habit of the Body is changed by *Sea Water.*

CASE XXVIII.

Of cutaneous Eruptions, with the Menſes ſuppreſſed.

A Young Woman unmarried complained of Eruptions upon both her Legs, which uſed to riſe every Month in a Swelling, and ſpread wider in the Manner of an Eryſipelas, till upon the burſting of the little Veſicles, or Bliſters, there followed a great Flux of a ſerous or watry Humour.

This Diſeaſe appeared in the twenty-ſecond Year of her Age: Before that Time her Menſes were regular, but they ceaſed entirely afterwards. I attempted the Cure in the following Manner.

Take away ten Ounces of Blood.

℞ *Ipecacuanha, twenty Grains; Turpeth Mineral, three Grains; Conſerve of Roſes, enough to make an Emetic Bolus, to be taken once a Week.*

℞ *Vegetable Æthiops, ſix Drams; Woodlice prepared, two Drams; Cuttleſiſh-Bone burnt, two Drams; red Coral prepared, three Drams; Conſerve of Paronychia, ten Drams; Syrup of Violets, enough to make an Electary;*

the Quantity of a Nutmeg is to be taken twice a Day, drinking a Pint of Sea Water *early every Morning.*

By this Method, the true Period of the Menſes was reſtored; but the Fluxion on her Legs continued violently, and the Valvulæ of the Veins were ſo *varicoſe* (ſwelling ready to burſt) that frequently before the Eruption of the Menſes, a new Flux of Humours uſed to invade her Legs. At laſt, I adviſed her to bathe in the Sea, and uſe proper Bandages upon the affected Parts; ſhe went out of my Neighbourhood, and I know not what happened to her afterwards; but I thought proper to infert this Caſe, chiefly becauſe I have obſerved as in this Woman, ſo in many others, that the Menſes flowed after the Uſe of Vegetable Æthiops and *Sea Water*; and eſpecially whenever I preſcribed ſmall Doſes of *Mercurius Dulcis*, to be taken over Night before the Morning's Draught of *Sea Water*.

CASE XXIX.

Of an Eryſipelatous Criſis.

AS I chiefly intended this Work to illuſtrate that Method in which the glandular Secretions may be directed by the *Sea Water*; I have ſcarce taken any Notice of the Uſe of this Remedy in certain chronic Diſeaſes of the moſt ſtubborn Kind, but have confined my Remarks within the Bounds which I had preſcribed to myſelf; paſſing over in Silence ſome extraordinary Inſtances of this Matter (that is of the great Efficacy of *Sea Water* in chronic Diſeaſes.) But in theſe Diſtempers, we are principally to remember

and

and obſerve in them all, at all Times, that if there are any Separations made of the Humours from the Blood, which have fallen upon any Part for a long Time; theſe Humours muſt be ſuffered to cleanſe and diſcharge themſelves by the old and uſual Way (if it may be done without any great Inconvenience;) but if is neceſſary to make ſome Change, and draw off the Humours another Way, we muſt remember, that ſome new Evacuation muſt firſt be effected; for if it is true, which I often mentioned, and have before endeavoured to demonſtrate, *viz.* that the Phyſician has a certain Power and Authority in reſtraining and directing Nature, it follows, that wherever he ſees her going wrong, and forming a Criſis by the moſt dangerous Way, he ſhould take upon himſelf the Government of the Criſis, and direct it in a ſafer Way.

And nothing, in my Opinion, will procure more Honour to the Phyſician, than if he follows Nature as as a Guide and Teacher, and obſerves, with the greateſt Care and Judgment, all her Motions and Changes; and whenever he finds her going wrong, properly exerts his Power of directing and reſtraining Nature; and takes, as it were, the Reins in his Hands, of the exacerbeſcent Diſeaſe, and rules by his Judgment the important and hazardous Moment of the approaching Criſis, ſince upon this depends the Life or Death of the Patient.

A certain Perſon was ſeized with an Eryſipelatous Quincy; the Glands of the Uvula, the Throat and Tonſils, were inflamed, and extremely red; there was a Tumor about the Larynx, or Top of the Windpipe, and thence a Hoarſeneſs; his Reſpiration was difficult and

quick, which would not ſuffer him to lie down; his Pulſe very quick and ſtrong.

In this Diſeaſe, Nature ſeemed to me to be endeavouring at an internal Criſis, which, if it had broken out in the Glands of the *Trachea* or Windpipe lower down, it would have been a Wonder if the Patient had eſcaped Death; becauſe, in this Extremity, if I had left the Diſeaſe to the Direction of Nature, an internal and fatal Criſis would certainly have enſued; therefore, I uſed the utmoſt Endeavours to turn the Diſeaſe another Way. *Firſt*, I ordered Bleeding, to the Quantity of fifty Ounces, at proper Intervals, and a daily Purge of Glauber's Salt; the internal Fluxion was ſoon ſuppreſſed, the Reſpiration was leſs quick and difficult; nor were the Glands ſo red, nor the Tumor of the Tonſils ſo troubleſome; but the Fever, though ſomething abated, was not entirely ceaſed.

Then I firſt perceived a certain red, eryſipelatous Spot appearing on one Side of the Noſtrils; afterwards, other Spots ſpread on the Forehead, Cheeks, Face, and the whole Head. At the ſame Time his Eyes were almoſt hid by the Greatneſs of the Swelling, and the Patient was reſtleſs and uneaſy at my ordering ſo few Medicines, but when the Danger was over, that I mentioned in the firſt Part of the Caſe, and there was no Delirium, and the Fever was much abated, I judged it beſt to leave the Diſeaſe to the Strength of Nature; therefore, uſing no Medicines till the Swelling ſubſided, except a few cooling Purges, I recovered the Patient; and this Example will, I think, ſhew the great Conſequence of a due Direction of the glandular Secretions.

CASE

CASE XXX.

Of a moiſt Leproſy.

A Gentleman came to me complaining greatly of a moiſt Leproſy, which was grown to ſuch a Height, that it uſed to emit little Drops of a Humour like little Tears, upon the ſlighteſt Touch of the Finger. It was accompanied with ſuch a violent Itching, and ſo troubleſome, that the Patient could ſcarce get any Reſt Night or Day. The Diſtemper ſpread downwards from the Groins over the Inſide of both the Thighs; and on both Sides of the Neck; from the Ears down to the Collar-Bones, and alſo on the Bend of both Arms. The Diſeaſe was of long Standing and deeply rooted, ſo that although the troubleſome Itching ceaſed, and the Fluxion was ſtopt by the Uſe of *Sea Water*, and the Parts affected began to cool and grow dry; yet the evacuating Tubes of the Glands were ſo enlarged, and the Tone of the cutaneous Glands ſo broke and weakened, that the Diſtillation of the Humours returned, after the Patient left off *Sea Water*, and flowed like a ſimple Gonorrhœa; but though not ſo copiouſly as before, and without any Itching; yet through the Debility of the Glands it continued for ſome Time.

I perſuaded him to take Lime Water, and the antiphthiſic Tincture of *Etmuller*, or in their Stead, for the Sake of Variety, Medicines conſiſting of *Vitriolics*, and the *Peruvian Bark*; but how theſe Medicines operated, I cannot tell, as it is now a long Time ſince I heard of the Patient; but this I am ſure of, that in ſome Diſeaſes where

the Glands are greatly weakened, that no Remedy can give Relief.

Sometimes the internal Uſe of Tar may perhaps ſhut up the open Mouths of the Glands; but this is not to be reckoned a laſting Cure; although in ſome of theſe Caſes, where the Glands are affected with a Diſtillation of Humours, I judge Tar-Water may be beneficial, becauſe this Medicine has a digeſtive Quality like Turpentine, and helps to cloſe the open Mouths of the Veſſels; but, I confeſs, I have had very little Experience of its inward Uſe; but I often uſed to apply an Ointment of Tar outwardly with good Succeſs: I ſubjoin the beſt Form hereof, which I have often given, with a happy Event, after I had tried all others in vain.

℞ *Sheeps Suet and Tar, of each ſix Ounces; Powder of Elecampane Root, two Drams; the inner Bark of Elder, half an Handful; let them boil together till the Elder Bark grows criſp, then ſtrain it.*

The affected Parts are to be anointed herewith, rubbing it in before the Fire Morning and Evening, every Day till the Eruptions are cured.

CASE XXXI.

Of a Scrophulous Caries for Rottenneſs of the Inner-Bone of the Ankle.

January, 1748, there came to me, the Beginning of this Year, a young Man, eighteen Years old, Brother to him mentioned in the Letter to Dr. *Lewis*; he laboured under an hereditary

tary King's-Evil; his Pulſe was quick, and his Habit hectical, he not only had ſeveral hardiſh Tumors in the Glands of the Neck, but alſo an Abſceſs on the inner Bone of the Ankle, the Heads of the Bones were ſwelled, and the Joint much larger than it ſhould be; firſt of all, the Pus was let out by a Surgeon; and againſt his other Complaints, I preſcribed as follows:

℞ *Of Vegetable Æthiops, ſix Drams; burnt Sponge, three Drams; Woodlice prepared, two Drams; Æthiops Mineral, two Ounces; Cuttle-fiſh-Bone burnt, two Drams; Conſerve of Paronychia, ten Drams; Crabs Eyes, three Drams; Coralline prepared, two Drams; Syrup of Violets, enough to make an Electary; of which take the Quantity of a Nutmeg at Four in the Afternoon, and at going to Reſt, drinking a Pint of* Sea Water *next Morning.*

The young Man came to me about the Beginning of *March*, to ſhew me the Exfoliation of the Bone; the Ulcer was entirely healed, the Joint and Heads of the Bones were reſtored to their natural Shape; and the Tumors of the Glands of his Neck were diſperſed by the Method before preſcribed.

CASE XXXII.

Of a large ſcrophulous Tumor, reaching from the Ear to the Collar-Bone.

ALTHOUGH I mentioned an Example of this Kind before, yet as this Patient took *Sea Water* ſeveral Months, I was willing to inſert the Caſe, that it might be a Confutation of thoſe Perſons, if there are any ſuch, who condemn the long

long Uſe of *Sea Water*, as being too ſtrong a Medicine.

The Woman in the preſent Caſe, took twenty-five Gallons of *Sea Water*, not at ſtated Intervals, but in one continued Courſe of purging, at a Pint every Morning (which makes in all 200 Pints) and while ſhe was drinking it, ſhe had her monthly Periods more regular and better coloured; a keener Appetite, and the ſtrumous Swellings were diſperſed; but if this vaſt Quantity of *Sea Water* drank, (which was followed by the Cure of the ſtrumous Swellings, and a better State of Health than before) does not procure and demonſtrate its harmleſs Virtues; I fear there will never be any Argument ſtrong enough to remove the unjuſt Prejudices of ſome People*.

CASE XXXIII.

Of the Shingles.

THERE is a very common Species of the Eryſipelas, which is called by the *Greeks Zoſter*, by the *Romans Zona*, and in our Country, the *Shingles*;

* In the Voyage of *W. Schouten* round the World, the Author ſpeaking of the Inhabitants of an Iſland in the *South Sea*, has theſe Words. "Nous vîmes qu'ils be-"voient de l'Eau marine & en donnoient auſſi à leur pe-"tits Enfans; choſe que nous ſembloit contre Nature." That is, We obſerved that the Inhabitants of this Iſland drank *Sea Water*, and likewiſe gave it to their Children; a Practice which ſeemed to us contrary to Nature. This will ſerve to confirm what the Author has aſſerted concerning the harmleſs Qualities of Sea Water. However I believe it is the only Inſtance we have of its being drank in this Manner. It is to be found in p. 112. of the *Paris Edition* in 1618.

Shingles; which Diſtemper infeſts the Trunk of the Body, ſometimes attacking the Breaſt, ſometimes the Shoulders, and ſometimes the Sides and Ribs; it often appears lower, and encompaſſes the whole Body like a Girdle; it is attended with little Bliſters or Veſicles, ſometimes yellowiſh, but oftener of a livid Colour, which are of a corroding Nature like the Herpes, or Ringworm, which Species it greatly reſembles.

This Diſtemper always ſeems to me, to be a Kind of Scorbutic Eryſipelas, or St. *Anthony*'s Fire, inclining to a Ringworm, by a degenerate Mutation. Therefore, I treat it by a Method ſomething different from that of the true Eryſipelas; and have obſerved ſome very troubleſome Accidents happen from a too haſty repelling the Eruption; I find the vulgar Opinion, that it is mortal if it goes quite round the Body, was received by the Ancients; nevertheleſs this Event of the Diſtemper is not always true; but in curing this Species of the *Eryſipelas* two Things are chiefly to be obſerved; one is, that we ſhould forward the Maturation of the little Ulcers; the other, that we ſhould forbear Purging till the Eruption is evacuated by the Skin; then indeed the Belly is to be looſened by *Glauber*'s Salt, or *Sea Water*. But I chuſe to add a Caſe of this Diſtemper.

A Gentleman about fifty was ſeized with a Scorbutic Eryſipelas, or rather with a Kind of degenerate Ringworm. The Eruptions covered the Cheſt and the Space under the right Nipple; the Heads of the Puſtules were of a livid Colour; he ſuffered great Pain, and had a ſlight Fever: But when the Puſtules had continued about three Days, and new ones appeared, a Surgeon thought fit to apply a Cerat to the Eruptions, which, inſtead

ſtead of forwarding the Maturation, only encreaſed the Pain, and they emitted nothing but thin Ichor, and that in ſmall Quantity. At laſt the greateſt Part of the Eruption diſappeared, and the Patient was waked out of his Sleep by a ſudden Fit of an Aſthma, which was very near killing him. Immediately a Surgeon was ſent for, who lived in the Neighbourhood, who bled him. After Bleeding the Fit of the Aſthma was a little mitigated, but returned ſoon after, when the Patient was aſleep, with a very violent Attack; then I was ſent for, and found the Patient ſomething eaſier, having left his Bed; but even then he complained of a great Pain and Tenderneſs of the little Ulcers that could not bear being touched. Upon inſpecting them, I found the little Bliſters were ſunk and turned of a livid Colour, containing a ſharp Ichor. The little Bliſters were preſently cut, and cured by red Precipitate with *Unguent. Aur.* applied with Cerate to keep them from moving; and I ordered a Julep with *Gaſcoign*'s Powder to be taken when he was faint, or had a Sickneſs of the Stomach. Further, a pretty large Bliſtering Plaſter was applied at Night, but waking as before with a *Dyſpnæa*, or a Difficulty of Breathing, the Patient was obliged to get up.

The next Day we found the Bliſter had drawn plentifully, ſo that from that Time he had no freſh Attack of the *Dyſpnæa*, and the Pain was not ſo violent; the Eruptions alſo began to tend towards Maturation. Then he was purged with Manna and *Glauber*'s Salt, and took afterwards an Electary of Æthiops Mineral and compound Powder of Arum, *&c.* purging every other, or every third Day with *Sea Water*.

By

By theſe Means the Patient grew well without any Return of the Aſthma, and only complained a little of a Tenderneſs, that would not bear touching, in the Parts lately affected by the Diſtemper, which I obſerved generally happens in moſt of theſe Diſtempers; but I uſed to cure this Tenderneſs by the following Embrocation, and by the Uſe of Antiſcorbutics.

℞ *Of Camphire, one Dram; Spirits of Garden Scurvy-Graſs, half a Pint; mix for an Embrocation.*

The affected Parts are to be fomented and rubbed Night and Morning, with a Sponge wetted in this Embrocation; and the Belly is to be kept open with the following Electary.

℞ *Of Æthiops Mineral, two Ounces; Compound Powder of Arum, three Drams; Crabs Eyes and prepared Coral, of each two Drams; Syrup of Violets, enough to make an Electary. The Quantity of a Nutmeg is to be taken Morning and Evening, drinking a Pint of* Sea Water *every other Morning.*

But it muſt be obſerved, before I finiſh this Caſe, that the moſt convenient Time for Purgatives is generally when the Heat, Thirſt, and Reſtleſneſs are abated, which ſeldom happens till after the Eruptions are maturated. But as theſe Eruptions are critical, they are accompanied with more Danger if they ſtrike inwards, than thoſe Diſeaſes of the Skin which are not attended with a Fever.

Laſtly, Obſerve, that if the Diſeaſe encircles the Waiſt like a Girdle, then it is to be treated like the Caſe now mentioned. When I found

any

any very bad Symptoms, where the Diſeaſe poſſeſſed the Cheſt, or any other upper Parts of the Body, I took my Meaſures according to the Parts affected.

CASE XXXIV.

A Man forty-four Years old, was troubled with hard ſcrophulous Tumors upon both Knees, and the ſame ſcorbutic Diſorder upon his right Wriſt: In this Extremity he had recourſe to Salivation, but without any Benefit. At laſt he came to me, and by my Advice went to *Brighthelmſtone*, where, for four Months, without any Intermiſſion, he drank a Pint of *Sea Water* every Morning.

When the Tumors began to decline he went into the Sea as a Cold Bath, and went away reſtored to his Health; but there remained in one of his Knees an *Anchyloſis*, or Stiffneſs of the Joint, which was formed before he came to me; and was the Cauſe of his walking with great Difficulty, leaning upon two Canes. But before he went *away*, the Knee that was ſo ſtiff began to be a little flexible, inſomuch that he could walk with the Help of one Cane only.

CASE XXXV.

—SCORBUTIC Eruptions, which ſeemed to be a Kind of moiſt Leproſy ſpread all over the Body, and wherever the Cloaths touched the Skin they ſtuck ſo cloſe, that upon being pulled off, the Blood followed in ſeveral Places. There was room to ſuſpect this Caſe was not free from a Venereal Taint; and therefore the Patient had tried Salivation, though to no Purpoſe. Afterwards he

he came to the Sea in this Neighbourhood, and entered on a Cure in the following Manner.

℞ *Of Æthiops Mineral, one Ounce; Crabs Eyes, ſix Drams; Crude Antimony prepared, two Drams; Vegetable Æthiops, two Drams; Powder of Vipers, two Drams; Syrup of Violets, enough to make an Electary, of which take the Quantity of a Nutmeg Morning and Evening, drinking a Pint of* Sea Water *early every Morning.*

He took theſe Medicines two Months, and towards the End of the Cure I added;

℞ *Tincture of Antimony, Balſam of Gum Guaiacum, of each equal Parts. Take* 30 *Drops three Times a Day.*

Thus the Scorbutic Eruptions were not only cured, but alſo a Rheumatiſm, which had ſeized him after the Salivation.

CASE XXXVI.

—A Dry Leproſy ſeized on the Head and almoſt all the Joints, the Body being ſprinkled over with Leprous Spots. This was a moſt troubleſome Caſe, and which could admit of no Cure without a ſteady, and a long Courſe. The Patient continued to drink a Pint of *Sea Water* every Morning during nine Months, without any Intervals, and patiently bearing the Tediouſneſs of the Cure, recovered his Health.

CASE

CASE XXXVII.

AN Eryſipelas poſſeſſed both Thighs, and the Tenſion of the Veſſels was ſurpriſing, and the Blood was ſo tinged with Bile, that upon preſſing the Skin with the Finger it ſeemed not ſo much of a Saffron, as quite of a Golden Colour.

The Patient took only a Pint of *Sea Water* every Morning for ſeven Days, and all the Tumor being ſuppreſſed, the Patient recovered without any other Aſſiſtance.

D. Turner, Apothecary,
at *Brighthelmſtone*.

CASE XXXVIII.

Of a Scirrhus of the Liver.

A Certain Perſon came to me greatly complaining of a Scirrhus of the Liver. The Tumor was hard, large and uneven; his Eyes tinged with a Suffuſion of a Saffron Colour, and his Skin ſprinkled with itching Eruptions. In this Extremity the Patient had Recourſe to the Uſe of *Sea Water*, by the Help of which the Jaundice and the Eruptions of the Skin were much relieved, but the Scirrhus of the Liver continued in the ſame State after the Uſe of *Sea Water* as before; and indeed I have never any Hopes of Relief from *Sea Water* in a perfect Scirrhus, as I obſerved before in the Patient that was ſhewn to Dr. *Johnſon*; for in that Caſe the Diſeaſe of the Skin alone was diſperſed by bathing in the Sea, and other Aſſiſtances, the grievous Diſeaſe of the Liver continuing the ſame. But in theſe Caſes, which are more troubleſome,

from

from various Diſorders, I have found not a little Help from Tartar Vitriolate; yet, whenever it is uſed, Care muſt be taken that the Tartar Vitriolate is not made too acid; to obviate which Inconvenience, I often uſe to mix with it ſome Salt of Tartar, riſing by Degrees from ſmall to larger Doſes, according as the Stomach of the Patient would bear it.

CASE XXXIX.

Of the American *Scrophula, or King's-Evil.*

A Boy entering upon his thirteenth Year, who was a Native of *Jamaica*, was ſent by his Friends to *Brighthelmſtone*, to be under my Care. His Neck was full of ſcrophulous Tumors; his Head alſo was ſtrangely overſpread with Tumors reſembling a kind of a *Fungus*, of a dark brown Colour. The Bottoms of the Tumors, or rather their Roots, were firmly and deeply inſerted into the Pericranium, and their Heads were ſoftiſh and uneven, preſenting to the Eye a Sort of Pits like Sponge, and bleeding upon the ſlighteſt Touch. I preſcribed the Uſe of the Ointment of Tar before-mentioned, having premiſed Venæſection; then he continued taking an Electary of Vegetable Æthiops, together with *Sea Water*, every Morning for four Months; by this Method the Tumors, both in his Neck and Head, were entirely diſperſed and healed; yet there remained deep Scars in his Head as Signs of the Loſs of Fleſh by the corroſive Ulcers.

APHO-

APHORISMS.

1. *NATURE* is the Healer of Diſeaſes.

2. A Phyſician therefore ſhould always have his Eyes upon her as the ſureſt Guide, and tread in her Steps.

3. Thoſe who labour under Glandular Diſeaſes before Years of Puberty, both Men and Women, often grow well afterwards; the laſt by the breaking out of Monthly Purgations; the firſt by the Change of the Conſtitution.

This appears more clearly, becauſe young Batchelors are often troubled with the King's Evil, who ſometimes upon marrying are cured ſpontaneouſly; the Matter that before flowed to the ſtrumous Tumors, being now diverted to other Parts. Wharton de Glandul. p. 247.

4. If obſtructed Glands in Women are not cured before the 45th Year of their Age, or thereabouts, then the Diſeaſe is renewed upon the ceaſing of the Menſes.

5. But thoſe, who are troubled with obſtructed Glands, if they are put under the Care of a ſkilful Phyſician, before the Age of Puberty, may for the moſt Part be preſerved from the Generation of Pus, by a due Treatment of the Glandular Secretions; but when they have attained the Age of Puberty, Nature generally finds ſome Means to help herſelf, till ſhe is oppreſſed with the Burthen of old Age.

6. Thoſe Glands, which do not adhere ſtrongly to any Part, nor are painful, nor are grown hard with repeated Inflammations, and have again ſubſided, are chiefly curable by *Sea Water*.

7. If

7. If a morbid Gland, either of the Lungs, or of any other Part hath proceeded to Maturation, there *Sea Water* is of no Uſe, till the retained Matter is diſcharged.

8. In tumified Glands, when the Parts have cohered ſo long and ſo firmly, that no Force either of the Heart, or of Medicines, can open their compreſs'd Tubes; then the Hand of the Surgeon is the only Remedy.

9. But every Tumor, which hath not proceeded thus far, nor has any broken Veſſels, is curable by a due Treatment of the Glandular Secretions.

10. When, upon making a Revulſion, the Fluxion paſſes from one Gland to another, then *Sea Water* is always to be uſed, till the ſuperfluous Humours are diſcharged by the inteſtinal Glands.

11. When the Glands are no longer burthened, and hence the Tumors decreaſe; then cold Friction of the Part with the Fucus, and *Sea Water* to confirm the Tone of the weak Parts, produce great Effects.

12. Towards the End of the Cure, Gall-Nuts, Peruvian Bark, and cold Bathing in the Sea, may be properly preſcribed.

13. When *Sea Water* does not paſs off ſoon by Stool, it excites Thirſt, till the Glandular Secretions have carried off the bituminous Salts, and the Quantity of the Humours is reſtored that ought to be carried to the Glands of the Throat; and this is performed when the Effect of the *Sea Water* upon the Glands of the Inteſtines ceaſes; this Thirſt is ſudden, and of ſhort Continuance, although the Evacuation is large.

14. Thoſe

14. Thoſe Women who have not their Menſes, are often cured by the Uſe of the vegetable Æthiops and *Sea Water*; when they are of a more thin and hot Conſtitution than will bear the Uſe of Gums and Chalybeate Medicines.

15. In thoſe Caſes, which are attended with a very great Acrimony, I think, the *Sea Water* does ſometimes irritate too much; but this may be rectified by a Milk Diet, with Abſorbents; and then, even theſe Diſeaſes are curable by *Sea Water*.

16. Tumified Glands, by Reaſon of their weak Tone, are liable to freſh Attacks of the Diſeaſe.

17. The Impoſthumes of the Glands, often riſe again near the old Scars, if the Coat of the Glands is not entirely deſtroyed or conſumed.

18. Thoſe Glands, which are not ſtrongly compreſſed by any Force, are chiefly attacked with Fluxions (becauſe they are lax;) and perform their Offices more ſluggiſhly.

19. Therefore the Fluxions chiefly of the Upper Lip and Noſtrils, uſe to return again after a Cure, and the Cure in theſe Parts, is performed with more Trouble than in any other Parts.

20. The Diſeaſes of the ſmall Glands, are not ſo eaſily cured as thoſe of the larger.

21. Many Ulcers of the Mouth and Tongue, which nearly reſemble Cancers, are often relieved, and ſometimes alſo cured by Sea Water, and other Medicines.

22. Sea Water is good againſt Putrefaction, and reſtrains the Ruptures of the Veſſels.

23. The Cure of Tumors in the internal Glands, is ſafeſt by Sea Water; and no out-

ward Application is to be uſed till the Habit is changed, and the inward Glands relieved.

24. Sea Water keeps the Body from being bound; and thereby affords an eaſier Paſſage to the ſmall Stones and Gravel, out of the Gall-Bladder.

25. Sea Water is a very ſafe Purge with Soap, in a curable Jaundice, becauſe it diſſolves and diſcuſſes the Tumors of the Glands of the Liver.

26. Deafneſs, that proceeds from a ſcorbutic Fluxion upon the Glands of the external Parts of the Ear, is curable by Sea Water.

27. Tumors in the Alimentary Tube are diſcuſſed by Sea Water, if they are neither impoſthumated, nor ſcirrhous, nor cancerous; for this Remedy ought not to be uſed while the Parts labour under an Inflammation.

28. Leanneſs and a hectic Fever, when they proceed from the Defect of the alimentary Tube, are commonly conquered by Sea Water.

29. Sailors by Sea Water, are freed from the returning Fits of bilious Colics, after the Inflammation is removed by bleeding and lenitive Purges.

30. When a Gland continues in a State of Inflammation, Bleeding, Nitre, lenitive Purges, and whatever may prevent Abſceſſes, are to be uſed.

31. When the Inflammation is removed, Sea Water is proper; as it diſperſes Tumors, and ſtrengthens the Tone of the weak Parts.

32. A Fever, attended with Shiverings, in glandular Diſeaſes, is generally a Sign that *Pus* is maturated.

33. A tumified Gland begins firſt to be diſperſed in the ſoftiſh Edges of the Tumors, and proceeds thence till the neighbouring Parts are reſtored to their firſt Form and Magnitude; then it may be plainly diſcerned, whether it is a ſingle Gland or a Maſs of Glands that are morbid; and if the Tumor ſeems fixed, and adheres to the Part it lies upon, and is alſo pretty hard, then the cold Bath is not yet to be uſed.

34. But when the Gland is leſſened and diſjoined from the Part it lies upon, and becomes ſomething ſofter to the Touch; then the firſt Lotion of the milder Fucus, and afterwards by Degrees the Uſe of the fermented Fucus, or marine Soap, is beneficial above all Things; the Cure is to be finiſhed by cold Bathing in the Sea, drinking every Morning enough Sea Water to procure two or three Stools a Day, immediately upon coming out of the Sea.

35. The Glands, by Reaſon of their lax Tone, are more ſubject to the Injuries ariſing from Plenitude than any other Parts of the Body; therefore, the Diſeaſes of the Glands generally return, unleſs the Uſe of Sea Water and bathing in the Sea are continued, till the Parts have recovered their due Tone. Hither may be referred the Aphoriſm of *Hippocrates*, which is alſo mentioned by *Celſus*, *That if a Woman has Milk without being pregnant, or having had a Child, the Menſes are deficient.*

Thoſe Glands, which have often ſwelled, and have again partly ſubſided, and which upon new Fluxions, have been more ſwelled than before, ſuch Glands do ſeldom entirely recover their native Form and Beauty.

37 And.

37. And by Diſſections, I find the Reaſon of this to be, that Nature, to prevent the bad Effect of the Preſſure of the Glands that are growing hard, prepares for them a Sort of *Stratum*, or Wrapper of Fat, upon which the Tumor may lie and reſt; and this encreaſes the Bulk of the Part, and renders it deformed.

38. But the Glands, which have this Cover of Fat, if they are not cured by Sea Water, are nevertheleſs freed from the Fear of Impoſthumes, and ſo all the Danger of a purulent hectic Fever, and a Conſumption, is avoided.

39. But if this Deformity of the Part that remains, gives any Uneaſineſs to the Patient; it may, for the moſt Part, be taken away by the Hand of a Surgeon.

40. When, by the Help of any Part, any Evacuation or Separation from the Blood hath been performed for a long Continuance, and as it were by Cuſtom, and the Perſon receives no Injury thereby; then that Evacuation is not to be turned another Way, but is rather to be continued in the ſame Channel, if in paſſing out of the Body it is not attended with much Trouble or Danger.

41. But if it is very troubleſome, and likewiſe dangerous, it is not to be turned another Way, till we have firſt ſubſtituted ſome other Evacuations in its ſtead, either by Iſſues, or Bliſters, or by conſtant Purging with Sea Water; that by theſe Means, a Paſſage may be made for the ſuperfluous Humours to diſcharge themſelves as uſual, by the Glands of the Inteſtines.

42. All critical Tumors of Fevers, are to be left to the Strength of Nature; that we may ſee what ſhe can perform either by Way of Suppuration, or

or Diſſipation, before we have Recourſe to the Help of Sea Water; that is, if the Pus is generated in a ſafe Place.

43. If the Obſtruction is removed, which had principally affected ſome Glands, it commonly attacks others, unleſs timely prevented by a judicious Treatment of the glandular Secretions; and this Danger in its firſt Riſe, is often apparent to the Sight; ſo that it is uſually obſerved, when an Obſtruction of the pulmonary Glands is removed by Art or the Strength of Nature, that the Diſeaſe appears again afreſh in the Glands of the Neck.

44. In promoting and augmenting the glandular Secretions, either by the Glands of the Mouth and Fauces with the Help of Mercury, or by the Glands of the Inteſtines, by the Help of Sea Water; Regard muſt always be had to the Strength of the Patient.

45. As Mercury is by Nature cauſtic, and makes an Eſchar, and excites Pain, and ſtimulates more than Sea Water; ſo in ſlender People, by Reaſon of the great Evacuations it promotes, it commonly brings on a hectical Habit.

46. But if in the Uſe of either of theſe Remedies, the Pulſe grows quicker than it ſhould be, or the Appetite is leſſened, or the Body waſtes by Degrees, theſe Signs ſhew, that the Evacuation is greater than the Strength of the Patient will permit; then it is to be ſuſpended for a Time, and Aſſes Milk, and abſorbing Medicines are to be uſed in its Stead, which yet very rarely is neceſſary after taking Sea Water.

47. Hot and thin Habits oftener bear without any Inconvenience Sea Water alone, when they

they reject hotter Medicines, although joined with Sea Water.

48. But the more fleſhy Habits, that have vitiated Glands, do very well bear Æthiops, Cinnabar, Antimony, and the Aſhes of calcined Submarine Plants, and the like Medicines joined with Sea Water, and Sea Water is thereby greatly aſſiſted.

49. Sea Water is endued with many and great Virtues; but the Unſkilful may make a very bad Uſe of it.

An APPENDIX *concerning* SEA-WRECK, *or* Quercus Marina.

SEA-WRECK, is a Submarine Plant, growing upon the Rocks and Shores; and by Reaſon of a certain native Soap, is ſo ſlippery, that it makes the Feet ſlide of thoſe who walk upon the Rocks to which it adheres. Enquiring more curiouſly into this Matter, I found the Plant about the End of *July* burſting its Veſicles or Pods, and pouring out a ſoapy Juice upon the Rocks and Shores. About *Autumn* the Plant ſhoots afreſh from the Branches of the Year paſt; at every flowing of the Tide, the Branches float in the Water by the Help of certain Veſicles, or little Bladders, which are filled with Air for this Purpoſe; and at every Reflux of the Tide being left by the Water, they are dried upon the Rocks and Shores: and the Plant continues in this State till about the vernal Equinox, when the Shores are warmed by the Sun's Heat at every Ebbing of the Tide; then the Vegetation is moſtly promoted, and th Veſicles or Pods begin to ſwell

with a certain ſoapy Liquor; and this thickens by Degrees from *March* to *July*, till at laſt, as beforementioned, the Veſicles burſt, and the Vegetation proceeds in the Method aforeſaid.

From hence we may infer, that by how much nearer the Plant is arrived to a State of the moſt perfect Maturity, by ſo much the more its Juice may be diluted with Sea Water.

In the Cure of morbid Glands, I found there was need of ſome ſlippery Soap, which being mixed with Sea Water, was fit to diſcuſs Tumors; and indeed, *Pliny*'s Decoction of Frogs is uſed more ſucceſsfully than the common Plaſter of Frogs; but this Remedy was not always to be had, and indeed was none of the cleanlieſt; therefore, I ordered the Tumors to be rubbed with this Plant, newly taken from the Rocks, and dipped in its own Juice, and I found this of great Benefit in the Decline of the Diſtemper.

Moreover, as it abounds chiefly with a certain native Soap and Salt, I gave it inwardly in Powder, to the Quantity of one Dram; I obſerved the Taſte of it was ſomewhat like Oyſters, and that a large Doſe of it was nauſeous to the Stomach. Afterwards I calcined it in the open Air, and found it converted into a very black *Æthiops*; which in this Work, I have ſo often called the VEGETABLE ÆTHIOPS. The Plant being reduced to Aſhes, contains a bituminous burnt Sea Salt, an alcaline ſulphureous Salt, together with its native Soap, after the Water is dried away by Fire; and this I uſed ſucceſsfully inſtead of burnt Sponge, and I think it far exceeds it in Virtue.

I alſo uſed the Æthiops of the ſame Plant for a Dentrifice, to help the Looſeneſs of the Gums, and to clean foul Teeth; this happily anſwered

my

my Expectation, and gave me in this Inſtance, a great and freſh Proof of its detergent Quality.

EXPERIMENT I.

FIRST, I tried to haſten the Growth of the Plant, that I might thereby ſooner obtain its ſoapy Juice. Therefore, I gathered ſome Veſicles or Pods in the Beginning of *March*, and poured an equal Quantity of Sea Water upon them; then I placed them in a Window which looked to the Weſt, and was warmed by a Fire every Day.

At the End of a Week I found the Pods turgid and full of its proper Juice, but it was thinner and paler than it uſed to be in the Summer Months; yet I anointed my Hands with it, and it deterged the Skin very greatly, and rendered it ſmooth and ſoft; but did not ſtimulate ſo ſtrongly as when it is prepared in the Summer Months by Fermentation with Sea Water. Therefore, in thoſe Caſes which do not require a great Stimulus, it is both a mild Lotion, and an extraordinary *Fucus*.

Then I alſo made a Liniment of that and Cadmia levigated, and laid with a Pencil upon the Eyelids of certain Patients two or three Times a Day, and ordered them at the ſame Time to waſh their Eyes Morning and Evening with Sea Water; this Method preſerved the Parts affected free from Excoriation, and dried up the Fluxion of the Humours, obſerving to purge daily with Sea Water; then alſo, I gave inwardly the Juice ſqueezed out of the Veſicles or Pods, againſt ſharp, ſcorbutic Fluxions upon the internal Glands. I preſcribed it, inſtead of Snails,

with Cream, drinking after it, either eryngiated or Aſſes Milk.

It ſat eaſy upon the Stomach, and unleſs I am miſtaken, it anſwered my Purpoſe. How far this Medicine may be uſeful, I leave to be confirmed by Experiments of other Perſons.

Thus far I have conſidered this Plant, before its Fermentation with Sea Water; now I ſhall take Notice of its various Changes, when it is more ſtimulating and penetrating.

EXPERIMENT II.

THAT I might have the ſoapy Juice of this Plant at Hand after *July*, I put ſome of the Veſicles or Pods perfectly ripe into Glaſs Veſſels; then I poured equal Parts of Sea Water; in ten Days Time the Veſicles generally burſt; a certain Mucilage flowed out about the Thickneſs of new Honey; I applied it outwardly in this State alſo, and found it more deterſive than before.

EXPERIMENT III.

THE ſame Juice after ſome Months, became thinner and fœtid; but even then, it was more penetrating, and ſtimulated the Palm of the Hand with a pricking Senſe of the Nerves.

EXPERIMENT IV.

THEN I tried how far that deterging Quality might be increaſed by Fermentation; for this Purpoſe I kept a Veſſel in the Window near the Fire, from *July* to the following *March*; then the Juice became thinner, and alſo ſo ſharp, that

that it penetrated the Skin in an Inſtant, and excited a Senſe of ſlight Pricking, and was as abſterſive as Soap-Lees; for it made the Ends of the Fingers wrinkled, and the Tips of the Nails paliſh; the fœtid Smell abated: but to take it entirely away, I put to it a little *Hungary* Water: then, becauſe I remembered that the Ancients ordered a warm Fomentation of Sea Water in paralytic Diſorders, I tried an Embrocation of this Medicine in the ſame Caſes; and am ſtrongly perſuaded it was very beneficial: I alſo applied the ſame ſucceſſively in the Decline of Tumors of the Glands, for it diſcuſſes excellently well.

EXPERIMENT V.

I HEATED this Juice, and then I drew ſome Lines upon Paper with Violets freſh gathered; the Colour of the Violets was thereby turned green; from whence it appears that by Fermentation it becomes an Alcali.

EXPERIMENT VI.

THEN I. evaporated two Spoonfuls of the ſame Juice; after Fermentation it afforded a little more than a Scruple of an acrid pungent Salt.

EXPERIMENT VII.

OF the Plant dried with its Veſicles or Pods and burnt in the open Air, is made the Salt Æthiops.

Theſe are the Remarks which I have made upon the Uſe of this Plant: it remains that I ſhould obſerve, that there are two Kinds; of

which, the ſmooth Sort without Veſicles is fitteſt to rub Tumors.

The other Medicines which I take out of the Sea, are *Sea-Chalk*, *Coral*, *Coralline*, *Pumice-ſtone*, *Cuttleſiſh-bone*, and the like; all which correct Acidities in the firſt Paſſages, *for their Qualities are entirely changed by the Salts, where they give a different Shape to theſe Particles; thus Coral diſſolved in Acids, is aſtringent and binding; given by itſelf, it is rather aperient, and breaks the Points of Acids; thus alſo diſtilled Vinegar extracts the opening Tincture of Steel.* Vid. Collectan. Chemic. Leyden. p. 286.

Of MADREPORE.

AS I mentioned before the Uſe of a Lime made of Shells, I have inſerted a Print of *Madrepore* fronting the firſt Page, which Figure I took from the Voyages of Father *Labat*. There are ſeveral Species of this Plant, which is to be placed in the Claſs of Corals. If it is levigated upon a Porphyry and given inwardly, it is powerful in correcting Acidities, and ſuppreſſing Fluxes of the Belly.

But when it is calcined, it becomes a great Alcali; and its Salts received into the Blood, do not only ſweeten it, but alſo cleanſe and purge off Obſtructions of the Glands. But every Calx of this Kind ſhould be newly made and kept dry. I could ſubjoin ſomething more concerning the Virtues of other ſubmarine Plants, or ſubmarine Medicines, but I chuſe to defer it till I have further conſidered the Matter, and have had their Virtues confirmed by more Experiments.

Three

Three LETTERS *from the celebrated* RICHARD FREWIN, EDWARD WILMOT, *and* WILLIAM LEWIS, *M. DD.*

LETTER I.

From Dr. Frewin, *to* Dr. Ruſſel.

SIR,

WHEN you was at *Oxford* ſome Time ago, and conſulted with me and Doctor *Lewis* about your Son, we often diſcourſed upon Medicinal Subjects, and eſpecially on certain Medicines that were leſs known, or little underſtood. Amongſt theſe Diſcourſes, we mentioned *Sea Water*, which you yourſelf had uſed long ago in the Cure of the Scurvy, and many Diſeaſes ariſing from Tumors of the Glands; and as you intended to write a full Diſſertation upon *Sea Water*, you deſired me to commnnicate to you any Remarks I had made upon the Uſe of it, I therefore perform my Promiſe in ſending at length the following Caſe.

Auguſt 28, 1744. The Wife of a Clergyman, living in the Country, came to me, who was Mother of many Children: She was of a very robuſt Conſtitution, and full of Blood; her Hair black; her Face red, inclining to yellow; her Eyes were tinged with a Jaundice Colour; her Pulſe ſtrong; all which were manifeſt Tokens of a ſanguine Conſtitution, inclining to a bilious Temperament: She complained of a Colic Pain

and frequent Returns of the Symptoms of a Jaundice. When ſhe was free from theſe Symptoms ſhe had a tolerable Appetite, without any Inclination to vomit; no Nauſea after eating, or Inflation of the Belly; nor any Pains in the Bowels. But upon the Attack of the Colic her Pulſe was ſtrong and quick, her Tongue rough and yellowiſh, her Body bound, and the Fæces whitiſh; her Urine was thick, and ſometimes red, and oftener of a Saffron Colour. When therefore I had conſidered that this fixed and ſettled Pain chiefly continued in the right *Hypochondrium*, and never moving towards the Navel, nor near the Kidneys, nor to the left Side, and that it was encreaſed by Riding and Exerciſe, or any vehement Motion; upon this I judged the Diſeaſe owed its Riſe and Increaſe not to any acrid Matter, or to a Redundancy of the bilious Humour, but to Stones, either in the biliary Ducts of the Liver, or in the Gall Bladder. Therefore, to prevent an Inflammation or Fever that might happen by the Continuance of the Pain, I ordered her to bleed in the Arm twelve Ounces.

The Surface of the Blood was very red and bright, the lower Part quite black, the Serum greeniſh, and evidently tinged with the Gall; therefore the Patient took a Bolus this Night compoſed of

Quickſilver Alcaliſat. half a Dram; Sperma Ceti, twelve Grains; Species Diambræ without Perfumes, three Grains; Conſerve of Marſhmallow Flowers, half a Scruple; Syrup of Violets, enough to make a Bolus.

And

And next Morning this Draught,

℞ *Of the beſt Manna, one Ounce*; Glauber's *Salt, three Drams. Diſſolve them in two Ounces and a half of Milk Water, and ſtrain it*; *then add Syrup of Buckthorn, one Ounce*; *Elixir Salutis, half an Ounce*; *Compound Spirit of Lavender, one Dram, Mix them for a Draught to be taken early in the Morning, ſleeping after it if poſſible.*

I ordered all her Stools to be diluted with warm Water, and ſtrained through a Sieve.

Auguſt 29, ſhe had ſix Stools, and there was found in the Sieve above an hundred Stones of various Shapes and Sizes, which were outwardly of a dark brown Colour, ſuch as are deſcribed in *Med. Syſt.* Tom. 4. Part 2. Sect. 2. Cap. 3. by *Hoffman*, who is by much the beſt Writer of all foreign Phyſicians.

The Purge having operated in this Manner, and with this Event, becauſe the Patient ſeemed to be a little faint, I preſcribed this Medicine to be taken going to Reſt:

℞ *Salt of Wormwood, twenty five Grains*; *Juice of Lemon, ſix Drams*; *or enough to ſaturate the Salt*; *ſmall Cinnamon Water, one Ounce*; *Nephritic Water, half an Ounce*; *Syrup of Saffron, three Drams*; *Tincture of Species Diambræ, twenty Drops*; *Crabs Eyes prepared, fifteen Grains*; *Sal Prunellæ, ten Grains. Mix them for a Draught to be taken going to Reſt.*

Then that I might help both the Defect of the Liver, and the Colic Pain, I preſcribed the following:

℞ *Roots of Parſly and Aſparagus, freſh and cut in Pieces, of each half an Ounce. Pour upon theſe twenty Ounces of boiling Spring Water, and let it infuſe a quarter of an Hour in a glazed Earthen Veſſel covered. To thirteen Ounces of the ſtrained and ſettled Liquor add Nephritic Water one Ounce; Syrup of the five opening Roots, and Syrup of Violets, of each half an Ounce; Sal Prunellæ and Diuretic Salt, of each one Dram. Take four Ounces of this Infuſion warm three times in 24 Hours.*

℞ Venice *Soap and Diuretic Salt, of each half a Dram. To the Solution, in ten Ounces of Fennel-Water, add ſmall Cinnamon Water, and Nephritic Water, of each half an Ounce; Syrup of the five opening Roots, three Drams. Make them into a Draught to be taken early in the Morning, and at five in the Afternoon, and going to Reſt.*

Within three Days the Jaundice diſappeared; but becauſe the Colic Pain ſoon after returned, the 2d and 13th Day of *September* the Purge was repeated, as before preſcribed, and with the ſame Succeſs, for the Fæces being waſhed, there was found a great many Stones like thoſe before mentioned.

She ſtaid at *Oxford*, and continued the Uſe of theſe Medicines five Weeks, for the moſt part free from the Jaundice, and the Colic Pain, and almoſt every Day voided ſome Stones by Stool.

When ſhe was upon her Return home, I adviſed her to go to *Bath* for the ſake of Bathing, and Drinking the Water, by the joint help of which I had obſerved many Perſons have recovered their Health in theſe kind of Diſeaſes; but

as her Domeſtic Affairs would not permit her to take this Journey, I adviſed her not to uſe the Medicines ſo often, but to drink half a Pint of *Sea Water* every Morning at five o'Clock; and afterwards to ſleep an Hour or two, to take off or avoid the Thirſt which is commonly troubleſome after drinking *Sea Water*. Some Months after I was informed that this Woman had voided above three hundred Stones and continued in Health, and free from Pain: and being with Child; about two Years afterwards, ſhe was brought to bed of a ſtrong healthy Child; and ſhe is ſtill alive and well, and free from the Jaundice, and very rarely troubled with the Colic Pain.

I remember a Man, before I was acquainted with the Virtues of *Sea Water*, whoſe Bowels produced ſuch a large Quantity of bilious Matter that was converted into Stones, that he felt himſelf as it were inwardly bound with Iron Chains, and always complained of this to his Phyſicians; and as I often inſpected his Stools, they looked like Bits of Brickbats wrapt up in the Fæces.

I have known likewiſe, that Stones have been formed in the Gall-Bladder ſo large that they could by no means paſs through the Cyſtic Duct.

A Gentlewoman of a good Family, remarkable for the Gifts of Fortune, was very often tormented for many Years with a Colic Pain, and had had the Advice of the moſt eminent Phyſicians of *London*, and went often to *Bath* in the Spring, and to *Tunbridge* in Autumn, to drink the Waters. And in the Years 1740 and 41, before Summer began ſhe came to *Bath*, and committed her Health to my Care. She was then ſeldom and ſlightly affected with this Complaint; but drinking the *Bath Water*, and bathing in the

uſual

uſual Manner, ſhe conſtantly found Relief. In the Year 1744, where I then was the 13th of *June*, being at her Houſe in *Buckinghamſhire*, ſhe was ſuddenly taken with the ſharpeſt Convulſions of the Bowels, attended with the moſt racking Pain, and being ſeized with a very acute Fever, and an Inflammation of the Bowels, ſhe died in ſeven Days; at laſt the Anatomical Knife diſcover'd the Cauſe of her Diſtemper; for the Body being opened, beſides an Abſceſs in the Liver, there was found in the Gall Bladder ſix blackiſh Stones, almoſt growing together, each as big as a Nutmeg. In this Patient there never appeared any Symptoms of the Jaundice. I have neither Leiſure nor Skill to diſcover what may be the State of the Blood, or what the Condition of the Liver that generates ſuch a Quantity of Bile, or that diſpoſes the Body to form theſe kind of Stones: My Deſign is only to obſerve what great Power the daily drinking of Sea Water has in curing theſe Diſtempers, joined with Remedies compoſed of Quickſilver and Soap.

There is alſo another Caſe that is worthy of Notice, in which I lately experienced Sea Water to be extreamly beneficial.

A Youth of ſixteen, a Scholar of *Wincheſter* School, of a ſlender and lax Habit, growing ſuddenly tall, and therefore weak, loving the Water, and ſwimming well, laſt Summer uſed to go into the neighbouring River twice or thrice a Day, and ſwim in it too long, and often came home faint, and ſhivering with Cold.

About the End of the Summer he complained to the Apothecary of a Dryneſs in his Belly, and of being unuſually bound; upon which he took a purging Draught, and an opening Electary,

by

by the Uſe of which the Symptoms immediately diſappeared, and the Lad thought himſelf pretty well.

About the Middle of *September*, 1748, his School-fellows obſerv'd him making ſtrange Motions with his Hands and Arms, and his Eyes ſtaring and diſtorted, his Head lying ſometimes upon one Shoulder, and ſometimes on the other while ſpeaking, and other ridiculous Motions of his Limbs, ſuch as *Sydenham* deſcribes in the Diſeaſe called St. *Vitus*'s Dance. At laſt he was taken with a Lameneſs of his left Leg, ſo that he could ſcarce croſs his Bed-chamber without the Help of his School-fellows.

The moſt eminent Dr. *Mead* rightly aſcribes theſe Symptoms rather to a Relaxation than to a Diſtention of the Nerves; and indeed in this Youth the Muſcles of the Tongue and Pharynx, or upper Part of the Gullet, were ſo relaxed that he could ſcarcely ſpeak any Words arrticulately, or ſwallow any Food. As he lay in Bed his Tongue came out beyond his Teeth, and the Spittle flow'd out continually. In this State of Things the Patient was under the Care of Doctor *Bowles* of *Wincheſter*, who ordered him to be twice blooded at ſtated Intervals, and four times purged, and preſcribed him Remedies compoſed of the *Cordial Confection, Powder of Gutteta, Caſtor, and volatile Salt of Amber, with a Decoction of Peruvian Bark*, and the like Medicines, ſuch as are recommended in theſe kind of Diſtempers by the moſt approved Authors: He took Care alſo to have Bliſters applied to the Nape of his Neck, and Wriſts.

About the Beginning of *November*, when Things grew worſe I was conſulted: Then I adviſed

adviſed bleeding eight or ten Ounces on the 7th of *November*; that on the eighth the Purge ſhould be repeated, becauſe the new Moon was the next Day; for the eminent Dr. *Mead*, and other ſkilful Authors in Phyſic, have rightly obſerved, that theſe kind of Diſeaſes grow worſe about that Time. I alſo deſired the Patient might take an Electary twice a Day, compoſed of *Peruvian Bark, the great wild Valerian Root, and Cinnabar of Antimony.* I further adviſed to ſend him immediately to *Southampton*, as well for the Convenience of drinking the Sea Water, as for going into the Sea inſtead of a *Cold Bath.* Being carried thither he was put into the Sea the 17th of *November*, and afterwards every other Day.

November 23. After the fourth Time of going into the Sea, he was much better, although this Night being full Moon he grew a little worſe.

November 24. This Night and every Day after, he drank half a Pint of Sea Water, either going to Bed or early in the Morning, and bathed in the Sea every Day.

Nov. 27. Every thing being changed for the better, the odd Motions of his Hands and Fingers being much leſs frequent, and the Uſe of his Tongue freer; being tired of taking Phyſic, I perſuaded him to depend entirely upon drinking Sea Water, and Bathing therein, laying aſide all other Medicines.

Nov 30. Within three Days his Appetite returned, his Limbs were ſtronger, and his Words pronounced more articulately.

December 12. He came from Bathing daily briſker and ſtronger, and readier in expreſſing his Words. Neither on the 9th Day of the Month,

Month, though the new Moon was at Hand, had he any Convulſions or Trembling, or the leaſt Increaſe in any Symptom of his Diſtemper. Therefore, I ordered him to continue in the ſame Method till he had recovered his perfect Health.

Jan. 11. Being informed by a Letter, that the Youth was intirely recovered, I adviſed him to return to his former Method of Living by Degrees, that is to ſay, Firſt, That he ſhould bathe in the Sea three Times, then twice, and then only once a Week; and ſhould drink the Sea Water not ſo often, and in leſs Quantity, or only every other Night or Morning.

Feb. 8. The Patient came to *Oxford*, healthy and ſtrong, to ſee his Friends, and take ſome Recreation, intending ſoon to return to *Wincheſter*.

Worthy Sir, you may make what Uſe you pleaſe of this Letter, but proceed to illuſtrate with your penetrating Judgment, and eſtabliſh with the Authority of your Experience, the Art of Phyſic, in which you have long laboured with the greateſt Induſtry.

Oxford, February 24th, 1748 9.

The Anſwer of Dr. RUSSEL *to Dr.* FREWIN.

SIR,

YOU have laid me under the higheſt Obligations for enabling me to adorn this Treatiſe with your judicious Thoughts, which you have ſo freely and candidly communicated, in which you have acted the Part of a very ſingular Friend. But perhaps you are ignorant how much it is owing to you and your Example, that was in a Manner my Guide, that I have ſo diligently enquired

enquired into the Way and Method by which the glandular Secretions ought to be treated; and will hardly ſuſpect that you laid the firſt Foundation of theſe Enquiries. For when I read the Letters of the very ſagacious and learned Men which Dr. *Freind* has annexed to his Commentary on Fevers, amongſt which your Name alſo is ſeen, it appeared plainly, that in curing that Fever of the Small-Pox, which comes on upon the Decline of the Diſeaſe, you all with one Conſent, placed your greateſt Hopes in carrying off the morbid Matter, by the inteſtinal Glands; and that Nature often effects this by the Help of a Looſeneſs, as is obſerved in the ſame Work by the moſt celebrated Dr. *Mead*, to whom you know the greateſt Regard is due, not only from us who profeſs the Art of Phyſic, but from all Lovers of Learning in General, for his extraordinary Cultivation and Patronage of the politer Arts.

Therefore, as I ſaw the moſt prudent Phyſicians were agreed in this Opinion, and were under no Fear that the morbific Matter ſhould return into the Blood, which generally perplexed Phyſicians; and as I obſerved, that by leaving the common and beaten Path, they had acquired immortal Honour; and had done ſingular Service to Mankind; I was no longer dubious, but concluded, that the ſame Secretion, continued a long Time by the inteſtinal Glands, would moſt certainly prove beneficial in moſt chronical Caſes, when any Diſtempers have a long Time poſſeſt the Glands, or any laxer Parts of the Body. For, if a roſinous Purge may be given without Danger in an eruptive Fever, I readily concluded, that a ſaline Purge might be given in the ſame Manner, when the Diſeaſe was neither acute, nor attended

with

with any Fever; but in the mean Time, it appeared to me extremely difficult, how to procure ſuch a Medicine that ſhould do the Office both of a Purge, and an Alterative, and which ſhould conduce both to cleanſe the obſtructed Tubes, and carry off Redundances, and likewiſe ſtrengthen the Tone of the Fibres. Therefore, about the Year 1724, when I had again read thoſe Letters *treating the glandular Secretions*, and of the various Medicines which may be applied to various Parts; I drew out a Sort of a Sketch, and ſent it to my very learned Friend *B. S. Albinus*, at that Time Profeſſor at *Leyden*; but as this was a rough and imperfect Piece, and not worthy this Age, and the Experience which I have obtained in the Space of more Years, I thought proper to publiſh ſomething more perfect upon this Subject; eſpecially becauſe, having conſidered the Uſe of Sea Water, I ſeemed at length to have found a Remedy, which would do the Work propoſed, without any Danger.

And I was confirmed in this Opinion, by the Letters of Dr. *Friend*, that Light of your Univerſity; I mean, his Remarks on inteſtinal Excretion, and purging in an Eryſipelas of the Head; and I alſo have ſeen this Diſeaſe happily treated, with the Help of Glauber's Salt; ſo that if I had any Scruples remaining, they were all removed by this Conſideration.

And being convinced by theſe Arguments, I thought it plainly appeared, that Nature had formed theſe Paſſages and Excretions, that they might be ſubject to the Command of the Phyſician, more than all the reſt; and that whenever it was requiſite for Health, they might afford a ſalutary Diſcharge to all ſuperfluous and noxious Humours.

Having

Having premiſed theſe Things, there is ſtill ſomething remaining beſides what I have ſaid before in this Work, concerning which, I ſhould take ſome Notice; eſpecially as you gave me an Opportunity of ſeeing its Effects in the elegant Caſe you ſent of St. *Vitus*'s Dance; I mean, thoſe Things which it is neceſſary to obſerve in uſing the Cold Bath; and I do this the more willingly, becauſe the Uſe of Sea Water either internal, or external, is not of ſuch a Nature as to do neither good nor harm; but we are to judge as the celebrated *Mead* has ſomewhere obſerved, that in all Things which our Art contains, there is nothing that does good, but what may alſo do harm. I ſhall write to you upon this Subject, without confining myſelf to any particular Order or Rules of writing, not intending to give an accurate Account of the Cold Bath, but ſhall ſet down every Thing, as it occurs to my Memory. In the firſt Place therefore, it is to be noted, that neither the Cold, nor Hot Bath, is to be entered into after eating or drinkly freely; which the Ancients avoided ſo carefully, that they judged it neceſſary to abſtain both from eating and drinking, for a ſmall Time after coming out of the Hot Bath; but in the Uſe of the Cold Bath, a little Draught of Sea-Water is convenient immediately upon coming out of the Sea; becauſe, by purging the Belly, it prevents the Blood from flying into the Head, and preſerves the Patient free from the Head-ach; neither if this Method is obſerved does the Noſe bleed, which otherwiſe does ſometimes happen; nor are the Glands of the Neck ſubject to ſwelling, as they are ſometimes when the Patient uſes the Cold Bath too ſoon.

More-

Moreover a perfect Repoſe of the Body, and Calmneſs of the Mind, is to be obſerved, before the Uſe of the Cold Bath; and all the Exerciſe of the Parts affected muſt be forborn, that the Fibres by theſe Means, when they contract themſelves, may have the greater Force to overcome any Obſtruction; which if they are tired before with any Labour, is not ſo eaſily affected, and I give the greater Caution about this, both becauſe I have ſeen ſome Perſons bathe after hunting, and other rural Exerciſes without any Regard to Time or Circumſtances; and alſo, becauſe I have ſeen others err in a different Way; for as Sea Water greatly conduces to ſtrengthen the debilitated Power of the Fibres, if it is given after due Evacuations, and after the Obſtructions are ſomething relieved by internal Remedies; ſo I have ſeen the ſame Water do Harm in any Plenitude, or any troubleſome Obſtruction of the Tubes, that ſtill continued painful; for in theſe Caſes, the Solids are diſtended, and thereby more weakened; becauſe they ſtrive to throw out that with a great Force which in this State of Things can by no Means be rejected.

And I obſerved this more than once, and ſometimes in hard Tumors upon the Joint of the Knee, when I have ordered cold Water to be poured upon the Part affected, and the Cold Bath to be uſed, though the Obſtructions were diminiſhed before by internal Remedies, even here by a too haſty Uſe of the Bath, theſe Caſes ſeemed to grow worſe.

But altho' I deſpaired of thoſe Patients, as being incurable; yet after repeated Fits of intermitting Fevers, which ſhowed that the Syſtem of the Glands had undergone a great Change, and when

thoſe Viſcidities, which had been lodged a long Time upon the Part affected, by ſome Means were ſo diſpoſed, that they might be moved; then I have ſeen even ſuch Patients eaſily cured by Sea Water, and the Cold Bath.

Then the greateſt Care is to be taken, to know whether the Bowels are ſound, or not, before the Uſe of the Bath; for if the Lungs, the Liver, the Pancreas, the Spleen, or the Glands of the Meſentery, labour under any Diſeaſe, or Putrefaction, or Scirrhus, then the Bath will do harm; for although *Celſus* adviſes ſwimming in the Summer for the Jaundice; and *Antonius Muſa* alſo (who firſt inſtituted and promoted cold Bathing) preſcribed the Cold Bath for an Obſtruction of the Liver, which afflicted *Auguſtus Cæſar* after his Journey to *Spain*, as *Suetonius* relates; yet they who give an Account of the Emperor's Caſe, differ ſo much in their Relations, that we can draw no Inferences from hence for Practice.

But I have very often found Sea Water ſerviceable in the Jaundice, and *Celſus* mentions Salt Water, and ſalted Wines, as the chief Remedies in the Jaundice; but indeed, I never ordered the Bathing till the Obſtructions of the Liver were partly removed. There is alſo another Kind of Cold Bath, when the Water falls, or is poured upon the Part affected; but this alſo increaſes the Strength of the Diſeaſe, if proper Care has not been taken to remove Obſtructions; becauſe it occaſions frequent Vibrations of the Nerves, and Contractions of the Membranes; but where it is neceſſary before the Uſe of the Bath, to take off the Burden on the morbid Part, and make a Revulſion, I have for the moſt Part found Emetics beneficial; and chiefly ſo in Diſ-

eaſes

eaſes of the uterine Glands, and of the Joints. Bathing in the Sea is generally to be uſed early in a Morning, becauſe it is not ſo cold as ſome Springs; and in moſt Caſes, I order a little Draught of Sea Water immediately after coming out of the Sea, which generally paſſes off ſoon, and makes the Patient chearful, and procures a good Appetite; ſometimes inſtead of pouring *Sea Water* upon the morbid Parts, I preſcribe a ſlight Friction with Sea-Wreck, without Veſicles, or Pods newly taken from the Rocks; and ſometimes in Palſies, I adviſe a Fomentation of warm *Sea Water*, and rubbing of the Part affected with a Fleſh bruſh, to open the Obſtruction of the Part, till by a general Evacuation, the Patient is prepared for the *Bath*.

But Paralytic Perſons are very much fatigued, and their Spirits much depreſſed, if they bathe in the Heat of the Day, as they bear Heat leſs patiently than Cold; and how much the cold Weather relieves their Diſorder appears from hence, that in the ſevereſt Cold of Winter, they walk better than when the Air is hot and moiſt. And though the Vapours of the Sea, which are exhaled by the Heat of the Sun, are very plentiful, yet they are moiſt, and relaxing, and deprived of that Salt, which gives a firm Tone to the Solids; for there is little or no marine Salt exhaled by the Heat of the Sun, which is plain from an Experiment delivered down to us by the Ancients; for the Seamen of thoſe Days uſed to obtain a very grateful, though ſmall Supply of freſh Water by this Means. *Seamen often ſuffer for want of ſweet Water, we ſhall therefore direct them how to find this Supply; Fleeces of Wool ſpread about the Ship,*

Ship, grow moiſt with the receiving the Vapours of the Sea, out of which ſweet Water may be ſqueezed. Plin. Nat. Hiſt. lib. 31. cap. 6.

And in paralytic Caſes, the Method of purging and the Cold Bath, to the beſt of my Knowledge, is to be preferred before any other Means; for this Diſeaſe ſeems to ariſe from a Relaxation of the Tone of the Parts; and therefore when they are oppreſſed with Heat, the Evacuation by the Skin is increaſed, the animal Spirits are diſperſed, and there is a more plentiful Diſcharge of Urine; the Conſequence of which is a Conſtipation of the Belly, which is ſometimes ſo troubleſome, that for ſeveral Days together, they have no Diſcharge by Stool, without ſome Aſſiſtance; therefore, if in theſe Caſes *Sea Water* is rejected, it is abſolutely neceſſary to take another Purge; and indeed, if the Evacuation procured by purging is ten times greater than what is naturally uſual, yet as the Annotator on *Sanctorius* obſerves, it does not weaken the Patient more than if the Evacuation by Perſpiration was doubled; but cold Sea Water renders the whole Habit healthy and ſtrong, and though perhaps it will not entirely cure a Palſy; yet with proper Evacuations premiſed, joined with internal Remedies, it is generally, as I think, more ſucceſsful than any other Method. It is not improbable that the Uſe of the *Sea Bath*, after a Fomentation with warm *Sea Water* might come into your Mind when you lived at *Bath*.

For, as I have heard many Years ſince, from my learned Friend Dr. *Oliver* of *Bath*, the warm Bath, in order to attenuate and diſſipate the Humours, is commonly and ſucceſsfully uſed there before the Cold; and unleſs I am miſtaken, I

have

have before obſerved, that if *Sea Water*, and cold Bathing do not ſucceed, I always reſolved upon a contrary Method; and that I have often cured Diſeaſes, that had before withſtood all the Power of *Sea Water*, and the Sea Bath, after uſing a Warm Bath, and Aſſes Milk.

I have further obſerved, in my Account of *Sea Water*, the Uſe thereof in Diſeaſes of the uterine Glands; but if we would know the Benefit of cold Bathing in the Sea, as well in melancholy Madneſs, as alſo in the Bite of a mad Dog; as alſo in Impotency ariſing from the immoderate Uſe of Venery, and how greatly it helps all the glandular Secretions; the Writers of our Art are to be conſulted, the greateſt Part of which, extol its Virtues with the higheſt Praiſes. Laſtly, it is to be obſerved, that the Sea Bath is ſo ſucceſsfully uſed in ſcorbutic, and almoſt all cutaneous Eruptions, not only becauſe the Salts with which it is ſaturated do greatly deterge, and cleanſe the Skin better than common Water; but becauſe it penetrates through the Skin into the Glands, and mingles with their Juices, and wonderfully purges off the Phlegm, and Viſcidities that obſtruct the Tubes of the Glands, and thus removes the inward Cauſe of the Diſeaſe, as well as the outward Foulneſs of the Skin. And here moſt learned Sir, I ſhall make an End of Writing, leſt what I ſend you, ſhould look more like a Book than a Letter, and ſhould think myſelf extremely happy, if you, who are a principal Perſon, and as it were, the Maſter of the Art of Phyſic, in the moſt flouriſhing Univerſity, ſhould approve my Way of reaſoning. *I am*, &c.

A Letter

A Letter from Dr. Wilmot *to Dr.* Russel.

S I R,

I Delayed writing ſo long on purpoſe. that I might have ſome Proofs, how beneficial Sea Water is in the King's Evil, either being drank, or applied outwardly; and that having experienced its Virtues, I might communicate my Obſervations to you according to your Deſire. My Wiſhes are at length accompliſhed.

CASE I.

A Woman about Forty, in every other Reſpect healthful, was ſubject from her 15th Year to a freer Flux of the Menſes, but upon its decreaſing at this Time, ſhe was taken with ſuch a violent itching of the *Pudenda*, that ſhe could ſcarce ever refrain from ſcratching, and lay awake whole Nights, unleſs ſhe took Opium; which ſenſe of itching continued to increaſe every Day; to compleat the Misfortune, a Heat and Hardneſs about the *Pudenda* miſerably afflicted the unhappy Patient; ſhe was a modeſt Matron, and utterly abhorred the Thoughts of being examined by a Surgeon, but upon my Advice ſhe ſent for a Midwife, who found many hard Tubercles approaching, the Size of Peas, lying hid in the Parts beforementioned.

As this was the Circumſtance, and that neither Medicines of Sulphur or Mercury, nor the Waters of *Holt*, *Scarborough*, nor *Cheltenham*, which ſhe drank ſeveral Weeks every Year, could conquer, or even mitigate this troubleſome Diſeaſe, I had Recourſe to Sea Water, the ſingular Efficacy of which, in opening Obſtructions of the Glands,

Glands, I was formerly acquainted with from your Accounts, and now from my own Experience. I ordered her to bathe in the Sea every Morning, and to drink half a Pint of Sea Water immediately after bathing, and the ſame Quantity an Hour after; and to foment the Parts affected frequently every Day with Sea Water, and to apply a Linen Cloth wetted with the ſame Water, warm within the Parts at Night, keeping it there all Night.

In about ſix Weeks Time, the Woman began to recover, the Itching and Heat ceaſed, what before was hard and rough, grew ſoft and ſmooth, and the Tubercles entirely diſappeared in about eighteen Weeks more; and together with theſe, which deſerves particular Notice, another Tumor diſappeared, which was certainly of the ſame Kind, that had long appeared very ugly under her Chin.

CASE II.

A Young Lady of noble Birth, juſt entering upon her ſeventeenth Year, was troubled to that Degree with hard Swellings continually riſing near the Breaſts, under the Ears, and in other Parts of the Neck, ſo that ſhe had no Reſt from the Diſeaſe, and no End of taking Phyſic.

In one Place, you might ſee a Knot riſing, growing, ſuppurating, and extremely difficult to heal; and being ſcarcely covered with a Skin, a new Knot would riſe in another Place, and begin to ſuppurate, giving a melancholy Example of others to come after.

When Things were in this Situation, and the Diſeaſe had long exerciſed the Lady's Patience, nor any Relief could be obtained from Calomel,

Mercury, Precipitate *per ſe*, and other Mercurial Medicines; when burnt Sponge, Coralline, Woodlice, Lime-Water, with *Boyle*'s Infuſion of *Paronychia*, joined to the Uſe of purging Waters, were of little Service, and though they gave ſome ſmall Relief, were of no Uſe to diſperſe and intirely root out the Diſeaſe; upon conſulting with Mr. *Ranby* the King's chief Surgeon, by far the moſt excellent in his Art, we reſolved upon a new Method of Cure.

We ordered her to go into the Sea every Morning, and to drink as much Water thereof as would give two or three Stools a Day, and to waſh the Ulcers and the hardened Glands frequently with the ſame Water warm; by this Method of Cure, continued about two Months, the Ulcers were healed up, and ſome of the ſtrumous Knots being intirely diſperſed, and the reſt mollified, the Lady recovered her former Health; ſhe returned to Town, and having experienced the ſalutary Effects of this Remedy, by our Advice ſhe ſo happily continued all the next Winter to drink the Sea Water every Day, waſhing with it warm, that ſhe enjoyed her Health entirely free from her old ſtrumous Diſorder, or from any new Attacks thereof.

CASE III.

A Young Lady of the firſt Rank, about ſix Years old, was troubled with a ſtrumous Swelling upon her Upper Lip, the axillary Glands were increaſed in Bulk, and grown hard; her Abdomen was unequally ſwelled, with hard Knots here and there, which yielded not to the Touch; to this was joined a dry Cough, without

out Spitting, and a little Difficulty of breathing, eſpecially at Night.

Theſe plain ſtrumous Signs in the Lip, and the axillary Glands, gave me ſtrong Suſpicion, that the Glands of the Lungs and Meſentery, were infected with the ſame Taint, and were ſwelled, and grown hard, and that without timely Aſſiſtance there was Danger of their forming a Pus, which would produce a Conſumption of the Lungs, and an Atrophy, or waſting away of the Body.

After bleeding, I ordered five Spoonfuls of Sea Water every Morning and Night, which generally procured three mucous and very fœtid Stools, waſhing her Lip often every Day with the Sea Water warm.

By this Method of Cure ſtrictly continued for a Month, the Lip, and the axillary Glands were ſoftened, and the Abdomen returned to its natural Condition, but ſo that as the Swelling of the Abdomen declined, ſo much the more the Knots appeared and reſiſted the Touch, which were before hid under the Tumor.

This Work ſo happily begun, three Months more were ſpent in the Cure, excepting every fourth Day, in which the Patient was allowed to reſt; for the Swelling of the Lip was intirely ſubſided; the Knots of the Abdomen were no longer to be felt by the Fingers; the axillary Glands were plainly diminiſhed, and would certainly have yielded in like manner to this Remedy, if the tender Age of the Patient could have born a longer Uſe of it; but being nauſeated with repeated Doſes, and ſuffering an immoderate Thirſt, which I have obſerved to torment all thoſe who have long uſed Sea Water, ſhe was

hindered at this Time from proceeding ſo far as to remove that Tumor intirely; for her moſt noble and tender Parents thought proper not to exerciſe any farther the Patience of their deareſt Daughter, thinking that thoſe ſmall Remains of the Diſeaſe leſs troubleſome, becauſe leſs in Sight, were of no Conſequence, or might be deferred till another Time. I could bring more Examples of thoſe who have been freed from the King's Evil by the Uſe of Sea Water, but I think it needleſs to enlarge upon this Subject. I have ſelected theſe Caſes out of many, as they ſeem to have ſomething ſingular in them beyond the reſt, leſt by adding many parallel Caſes, I ſhould repeat the ſame Thing over again: a Repetition of many Caſes would be tedious, and give no Confirmation to the Truth of a ſmall Number, and would greatly tranſgreſs the Bounds of a Letter.

How great Thanks therefore, are due, and will be given to you by the Sons of Phyſic, who have ſtruck out and communicated to them, ſuch an eaſy, ſafe, and (I might almoſt ſay) a certain Method of curing a Diſeaſe, which has hitherto been found ſo very troubleſome both to the Patient, and the Phyſician. *I am*, &c.

Dr. RUSSEL's *Anſwer to Dr.* WILMOT.

MOST worthy Sir, I received your moſt obliging Letter, and though I have a juſt Senſe of the many Obligations I owe to your Friendſhip, yet I am at a loſs for Words to expreſs it; what you write, that you ſtill hold in the Opinion concerning the Virtues of Sea Water, which (in a very friendly Manner) you formerly

formerly readily entertained upon my Teſtimony, is very agreeable to me for two Reaſons, becauſe you did not reject this Medicine, and becauſe it did not deceive your Expectation.

But I am extremely pleaſed that you approve, and are convinced of its Virtues by your own Experience; for all Phyſic is generally, and ought to be built upon this Foundation; for the ſplendid Names of their Patrons, cannot long ſupport and defend bad Medicines; nor can the Authority of their Oppoſers long ſuppreſs and keep in Obſcurity, thoſe that are good; but they will at laſt break through the oppoſing Shades, and ſhine with greater Luſtre; although the Authority of its Oppoſers may give ſome Check to the Progreſs and Increaſe of any new Remedy; which you will eaſily remember to have happened in the Riſe and Progreſs of the Peruvian Bark, and ſome other powerful Remedies.

And in the ſame Manner in which I firſt recommended this Medicine to you, I have alſo propoſed it to the ſeveral Practitioners in Phyſic, with whom I have happened to converſe; imparting to them certain Facts and Experiments that they might judge of them, and being taught by Experience, might be convinced after ſome Years of the great Efficacy of this Method.

And indeed, as far as I can judge by my Experience in this Matter, it does not appear that any Hurt can ariſe from hence, unleſs it is raſhly uſed. Nor did I ever hear any Thing from my Friends, that diſcovered any hurtful Qualities in this Medicine, but rather all the Teſtimonies I received from them, unanimouſly agreed in the Praiſe of it, and confirmed its Excellence and Virtues, as well becauſe it opens Obſtructions,

and diſſolves hard Tumors, ſometimes even where the Heads of the Bones were affected; and becauſe it cleanſes and defends the whole Syſtem of the Glands from impure Viſcidities. All which it performs ſo wonderfully, and ſo ſafely, that I may truly ſay, that this new Medicine, is in a manner a Rein delivered into the Hands of the ſkilful Phyſician, by which he may govern the Secretions of almoſt all the Glands.

As to the free Uſe of Sea Water, and the Quantity which may be taken, it does not ſeem to me to be a Thing ſo much to be feared, as ſome People imagine; for, I do not remember any Perſon who was hurt by too much Sea Water; for many Perſons have uſed it for a Year together, allowing ſome little Intervals of Reſt, with very great Benefit in ſome very obſtinate Caſes; and I now ſend you an Inſtance that lately happened of this Matter; you will find in my Treatiſe, the Caſe of a Patient who drank 25 Gallons of Sea Water in an uninterrupted Courſe of purging; in the mean Time, the hereditary King's Evil diſappeared by Degrees, and ſhe daily recovered a better State of Health, and ſhe never had a Relapſe, nor any Reaſon to ſuſpect one.

I call this Diſeaſe *Hereditary*, becauſe ſoon afterwards I ſaw her Brother labouring under a large ſuppurated ſcrophulous Tumor, reaching from the Ear to the Collar-bone.

And theſe Inſtances I think ſufficiently proved, that this Remedy is not liable to thoſe Inconveniences that ſome People apprehend; I may alſo add, that it opens Obſtructions, and ſuppreſſes Putrefaction, and defends from the Fear of an Impoſthume, and ſtrengthens the Tone of the Stomach and Bowels; and at the ſame Time, waſhes

waſhes the Mouths of the lacteal Veſſels, and purges the meſenterical Glands; by which Means, a ſweet and healthful Chyle is tranſmitted to the Blood in due Quantity; and the Heat and Draught of hectic Habits, are hereby moderated; and to ſpeak my Sentiments, among all the Medicines that have a Place in the *Materia Medica* (and they are almoſt innumerable) you will not find any other which may be continued ſo conveniently, and which ſo ſafely opens inward Obſtructions as *Sea Water*; if it is not raſhly uſed, nor the Veſſels of the Glands burſt, nor the morbid Parts grown perfectly ſcirrhous; for as it diſſolves external Tumors of the Glands, ſo in like manner producing the ſame Effects every where, it alſo diſperſes internal Tumors; for being inwardly taken, it chiefly carries off the morbific Matter by the Glands of the Inteſtines, which more nearly feel its Power and Stimulus, and moſt eaſily carry off the Diſeaſe by their Diſcharges; and ſo, by this Method of Cure, almoſt all the Syſtem of the Glands is exonerated, relieved, and cleanſed; as it is well known to happen in a Salivation, by the Help of the Glands of the Mouth.

But allowing *common Salt* to be taken by ſome Perſons in greater Quantity than is convenient, (although, in my Opinion, this ſeldom happens) yet I do not admit that any Arguments can be drawn from hence againſt the Uſe of *Sea Water*; for the Waters of the Sea are mingled with many mineral Springs flowing into it, and abound with the Helps of Bitumen and Nitre, and various Salts; and are in a Manner enriched with the Spoils of ſubmarine Plants and Fiſhes, and of other Things which are almoſt innumerable; therefore

therefore the *Sea Water* is to be looked upon as quite a different Thing from common Salt, which is evident from its different Effects; and Experience teſtifies, that the Uſe thereof is never attended with any bad Conſequences if it is given with proper Caution.

And that it confirms the Tone of all the Parts, and gives Strength and Vigour to the whole human Frame, may be inferred from hence, that thoſe are moſt inclined to Venery, and are ſtimulated to it that uſe ſalt Meats, as it is generally ſaid of Sailors. And it is probable, that the Antients were well acquainted with this Property of Salt, as they feign *Venus* to be born of the Sea, who was the Goddeſs of Love and Pleaſure.

Salt is alſo a kind of Inſtrument in the Hands of Nature, which ſhe uſes for the Procreation of all Kinds of Plants and Animals, and it is neceſſary that there ſhould be a due Proportion of it in our Blood, and upon it, in a manner, our Health depends; for if the Kidneys, or any other Glands, are not ſufficiently ſtimulated to perform the Secretions neceſſary to Health, and preſerve entire the elaſtic Force of the Solids; then the due Secretion of the Lympha being leſſened, a Dropſy enſues.

But where this Salt fails, and is not ſufficient to ſtrengthen the Tubes of the Veſſels, the Veſſels are thereby relaxed, and loſe their proper Tone, and alſo ſuffer the Fluids to paſs through imperfectly ſecreted: Which happens in a *Diabetes*; for when the Urine begins to flow without this Salt which abounds in the Urine of all healthful Perſons, and reſembles the Sweetneſs of Honey, then preſently the Tone of the Kidneys being deprived of its due and neceſſary ſaline Stimulus,

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is more and more relaxed, and the ſmall Veſſels are weakened to ſuch a Degree, that they pour out the Urine in a copious, and almoſt uninterrupted Stream, 'till the Urine ſometimes flows out mingled with the Chyle. And ſome affirm, that red Wine has paſſed through the Kidneys without any Change of Colour. But this morbid State of the Kidneys is never relieved 'till that State of the Urine is recovered, which ſufficiently abounds with that Salt.

The Digeſtion of Ulcers in diabetical Perſons will continue no longer than their Urine continues ſalt. Moreover, I remember to have ſeen Iſſues that were made upon the Shoulders againſt ſcorbutic Palſies, that were continued for the ſpace of many Years without Danger; but when the Patient was at length ſeized with a Diabetes, then the Iſſues ſpread wider every Day, as long as the Urine continued ſweet. And although the Spirit of Sal Ammoniac reſiſted the growing Evil better than any other Remedy, and rendered the Fibres of a brighter Colour, yet this always ſeemed to me, as it were, to give Place ſlowly to the Enemy. For if the Force of the Diabetes was not broke by the Bark, nor any other Helps, and the Saltneſs of the Urine did not return, the Edges of the Iſſues uſed to mortify, and the Patient generally ſunk under the Diſeaſe; although the Surgeon, at the ſame time, omitted nothing that the greateſt Skill in the Art could ſuggeſt.

I was the more willing to relate this Caſe, becauſe when the Iſſues were upon the Shoulders, there ſeems to be no other Cauſe to produce this Misfortune than the Diſeaſe alone. And how much the Salts of the Gall, rather than any others, conduce to form cutaneous Eruptions,

appears from the Eryſipelas, and from more than one kind of ſcabby Eruptions as alſo from certain furfuraceous Foulneſs of the Skin, where the Matter with which the Puſtules are filled, is yellow, and deeply tinged with Gall. And theſe Eruptions are cured, not by changing the ſaline State of the Blood, which is a very tedious and troubleſome Work, but by bringing away a greater Quantity of Gall from the Liver, by the Uſe of Purgatives. This plainly appears by Dr. *Freind*'s ſhort Treatiſe *De Excretione Inteſtinali*.

Therefore we ought to eſteem Salt neceſſary to preſerve the Tone of all the Parts, leſt whilſt they are continually acted upon by a certain propelling Force, they ſhould loſe their Power and Strength, and be enervated, and by their Weakneſs and Sluggiſhneſs give Riſe to Diſeaſes.

But I have not mentioned theſe Things that you ſhould think I uſe the *Sea Water* in the Diabetes, for I never tried it in this Diſeaſe; my Deſign was only to ſhew how much, in my Opinion, a due Proportion of Salt contributes to the Health of the Body. And indeed, that Salt is neceſſary to Health is plainly demonſtrated by what Phyſicians obſerve, that thoſe Perſons who uſe little or no Salt with their Food, or who are but little aſſiſted by that internal Salt, either that this is carried off by the Flux of Urine, or other Excretions; that ſuch Perſons do generally exhale a ſtrong, and putrid Smell. And further, that in ſuch Perſons the Food generally continues longer in the Stomach and Inteſtines, and after Extraction of the Chyle a uſeleſs Load ſeems to remain, and oppreſs the Fibres.

And what great Benefit Sea Salt is to thoſe Animals that eat it with their Paſture, will

eaſily appear upon a ſlight View. A large Quantity of Salt, taken in this manner, preſerves Sheep free from the Diſtemper which the Shepherds call the Rot, which Diſeaſe is often produced by wet and rich Paſtures, that are not ſeaſoned with Salt: And Examples of this kind are well known, and very common in this Country.

For if you drive Sheep that are very ſound into moiſt Paſtures, that are ſubject to the Overflowing of Rivers, and the damp Vapours of the *Spring* and *Autumn*, theſe Symptoms generally follow. At firſt the Sheep become ſuddenly very fat and briſk, but ſoon after grow dull and heavy-ey'd; ſoon after a vaſt Number of Animalcules breed in the Paſſage of the Gall; then the Liver is tainted, and filled with innumerable Tubercles and watery Veſicles; then livid and ſcorbutic Spots ariſe in the Skin; then the Wool is eaſily plucked off, or rather falls off. In theſe Circumſtances they call it the *Dry Rot*. But when theſe watry Veſicles are burſt, and the Water is collected in the Abdomen, it is then called the *Wet Rot*. But if you drive Sheep to feed in thoſe Places that are waſhed by every Tide of the Sea, and are therefore ſalt, then you will find the Rot, and all thoſe Symptoms, ſuppreſſed by Sea Salt, ſo that there will be no Animalcules in theſe Sheep, but they will rather be ſound and healthful for a long Time.

I will alſo add, that when Horſes are affected with ſcorbutic Eruptions, and the Horſe Doctors have tried all Means in vain, they often ſend the Horſes in this Extremity to the Salt Marſhes, by which the Diſeaſe is generally cured.

And theſe are the Remarks, moſt learned Sir, which I intended to impart to you concerning

my Method, and the Uſe of Salt, beſides thoſe I have taken Notice of elſewhere, which, if your penetrating Judgment ſhall approve, I ſhall be extreamly pleaſed, and ſhall not repent that I have undertaken the difficult Taſk of writing.

I am, &c.

A Letter from Dr. LEWIS *to Dr.* RUSSEL.

Dear Sir,

AT length I perform my Promiſe, in ſending you this Letter, but I am afraid it will not anſwer your Expectations, as it contains no ſtudied Thoughts, nor any lucky Invention, nor any Fruits of a penetrating Judgment; I only ſend you an Account of two Caſes in Phyſic that are faithfully related, though in a plain, and artleſs Manner. Whatever Reception it may find, it will be a great Pleaſure to me to have ſatisfied your Requeſt, and to prove by this Inſtance how ready I ſhall always be to obey your Commands.

CASE I.

A Man thirty Years old, of a phlegmatic Conſtitution, and of a lax and ſpungy Habit of Body, after drinking large Quantities of Liquor, to which he had been too long accuſtomed, fell into a ſudden and violent Pain, about the *Pit of the Stomach*; it extended alſo over all his Back, as far as his Shoulder-Bones, which would not permit him to breathe, to walk, nor to ſtand upright. He had a foul Taſte of Bitterneſs in his Mouth, with a Nauſea, and continual caſting up of Gall. The Apothecary was preſently ſent for, who ordered him to loſe a large Quantity of Blood, and to take a gentle Purge to give him

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two or three Stools. This greatly relieved his Pain, and the Patient, for ſome Time, thought he had eſcaped all Danger; when he ſoon found his Hopes deceitful, for the Symptoms returned again with more evident Tokens of a Jaundice. His whole Skin was yellow, but chiefly in the Whites of the Eyes, and about the Temples: Both his Body and Mind was affected with a great Sluggiſhneſs, and his Strength failed him remarkably; he had a Difficulty of Breathing; his Fæces were few, white, and ſomewhat viſcous; his Urine was ſo red and thick, that it came near to Blackneſs, and inſtead of the forementioned Pain, he had a troubleſome Weight, in the right Side, under the falſe Ribs, but without any Hardneſs, or any viſible Tumor. I was preſently ſent for, and conſidered all the Circumſtances as carefully as I could, and becauſe there was no Sign of a Fever, or an Inflammation, I thought the Intentions of Cure were only to diſperſe the Obſtructions in the Paſſages of the Gall, which ſeemed to be obſtructed with a viſcid and chalky Matter; and by this Method the Gall would obtain a freer Courſe into the Inteſtines. Therefore I immediately ordered a Clyſter, and about the Middle of the Night gave him a Bolus, containing about fifteen Grains of Calomel, and after a purging Potion of the Infuſion of Senna joined with Manna, and *Glauber*'s Salt; both which were repeated three times every third or fourth Day, as the Strength of the Patient would bear it. Beſides which he took Vomits; and that every Day might be employed towards a Cure, I adviſed him on thoſe Days he did not purge, to take twice a Day five or ſix of the following Pills, drinking after them four Spoonfuls of the ſaline Mixture.

℞ *Of* Caſtile *Soap, three Drams; Woodlice prepared one Dram; Syrup of Saffron, enough to make it into moderate Pills.*

℞ *Of Salt of Wormwood, four Scruples; Diuretic Salt, one Dram; Juice of Lemons freſh ſqueezed, two Ounces. When the Fermentation is over, add ſimple Milk-water, four Ounces; Water of Nutmeg, and Syrup of Saffron, of each one Ounce. Mix it.*

By exactly perſiſting in the Couſe of Medicines the Diſeaſe ſeemed to give way a little, yet it continued, and with great Obſtinacy; for though the Skin came ſomething nearer to its natural Complexion, yet it was tinged with Yellowneſs, and the Pain ſtill remained fixed; but, which was of greater Conſequence, he began to loſe his Appetite, and his Strength entirely. Having ſeriouſly conſidered all theſe Circumſtances, I reſolved to try the Power of *Sea Water*, which has a Stimulus ſharp enough to purge the Belly effectually, and to cleanſe the Paſſages of the Gall, and does not hurt the Stomach nor weaken the Patient, but rather augments both the Strength and Appetite: For *Sea Water*, or which amounts to the ſame, *Salt Water*, was frequently uſed by *Aſclepiades* heretofore in the Jaundice, as *Celſus* relates in the 24th Chapter of the 3d Book; and now again it is uſed with the greateſt Succeſs, moſt accompliſhed Sir, by your Perſuaſion, in opening Obſtructions of the Glands. I therefore ordered the Patient to drink half a Pint of this Water warm every Morning as ſoon as he roſe. And that I might add ſomething of a ponderous ſoapy Medicine to this ſaline Stimulus, I preſcribed the following Electary, to be taken

every

every Day at four in the Afternoon, and at going to Reſt.

℞ *Of Conſerve of Orange Peel, one Ounce; Cinnabar of Antimony prepared, and* Caſtile *Soap, of each half an Ounce; Woodlice prepared, three Drams; Powder of Saffron, half a Dram; Syrup of Orange-Peels, enough to make an Electary.*

This Method of Cure being followed for four or five Days, ſoon produced a Change for the better; the foul and jaundiced Hue of the whole Habit began by Degrees to diſappear, his Appetite and Strength returned, that very troubleſome Senſe of Weight which he almoſt continually felt on his right Side went away entirely, after diſcharging by Stool a vaſt Quantity of viſcid and bilious Matter; and to be ſhort, he was happily reſtored to his former perfect Health in three Weeks.

CASE II.

A Beautiful and amiable young Lady, ſcarcely entered into her nineteenth Year, having hitherto always enjoyed a perfect State of Health, by an accidental Fall ſtruck her left Leg againſt a Stone, but only ſo as to raze the Skin. This ſeemed to be a ſlight Hurt, and perhaps in a thouſand others leſs beautiful, and of a more healthy Conſtitution, it would certatnly have proved of no Conſequence; but the Blood that nouriſhed this moſt lovely Form was infected with a ſcorbutic, if not a ſtrumous Taint, which from this ſlight Cauſe, as from a Spark, broke out ſoon after into a moſt dreadful Fire. This ſlight Wound was at firſt neglected, and looked upon as nothing, till the Skin ſeemed to be inflamed,

flamed, and diſtended round about it. Bleeding was ſoon adminiſtered and repeated three times, cooling Purges were given, and Emulſions prepared with Nitre, and all the Medicines that could appeaſe the violent Emotion of the Blood; and outward Remedies were applied of a mollifying, and diſcuſſing Quality, under the Care of a very ſkilful Surgeon; but all in vain, the Evil encreaſed every Day, and the Inflammation now tended towards a Suppuration: Therefore, that the Bone underneath ſhould get no Damage, as ſoon as the Pus began to generate, the Abſceſs was opened by the Help of a Cauſtic, and all poſſible Means uſed to cure the Wound: But though it was now ſeven Weeks from the Time the Accident happened, there was yet no Appearance of healing the Sore: The Wound was foul, and the ſuperincumbent Fleſh ſoft and fungous, the Edges were inverted, and inſtead of a white, ſmooth and even Pus, it continually diſcharged a thin, fœtid, and bloody Ichor. Nor was the Cauſe of theſe dreadful Symptoms long concealed, for upon a careful Examination of the Ulcer by the Help of a Probe, the Bone was found to be ſtript of its Membrane, the Bone itſelf being uneven, rough, and carious; therefore it was neceſſary to enlarge the Wound, and to make Inciſions in the affected Part quite to the Bone, to cleanſe it, and to do every thing to promote an Exfoliation, or ſcaling of the Bone. Nor was it neglected, at the ſame Time to give the beſt internal Medicines, which might temper the ſharp viſcid Humours, and render them fluid, or carry them off by gentle Purgations; for very ſmall Doſes of Calomel repeated at proper Intervals, and Boluſes compoſed of crude Antimony,

Æthiops

Æthiops Mineral, and the like Medicines, with Diet Drinks prepared of Lime-water, varied as the Caſe of the Patient ſeemed to require, and ſometimes mild Emetics were employed to make a Revulſion; but for fear of a Hectic Fever, Recourſe was had to Aſſes Milk and teſtaceous Powders, to be taken twice a Day; but I ſhould tire you to relate all the Means uſed for the Recovery of this moſt lovely Lady.

In theſe unhappy Circumſtances the Lady was confined at home, without reſting Night or Day; fore ſhe had loſt all the Comforts of Life, being deprived of her Companions, and no longer followed by a Crowd of Admirers, but left alone to mourn her unhappy Fate. And though ſhe was grown thin and pale, and almoſt killed with Grief, and want of Sleep, yet ſtill the Charms of her Perſon remained unconquered by the Injuries and Power of the Diſeaſe.

Eight Months were now almoſt paſt ſince the Patient had laboured under this Diſorder in ſpite of all the Aſſiſtance of Phyſic. There appeared as yet no Hope of Recovery, no Signs that the Bone would ſcale.

It was often queſtioned whether the *Bark* would be of any Service, or whether a ſlight Salivation might not diſpoſe the Humours to a better State? But as one was rejected on Account of the Patient's ſtrength being greatly impaired, and her being alſo inclinable to a Diarrhœa, ſo the other gave little Hopes of effecting a Separation of the Bone, though perhaps it might have given her more Strength, and might alſo have relieved the hectic Fever.

There remained yet one Help untried, and that, alas, was the only one, *Sea Water*, the

Power

Power of which in curing ſcorbutic, and chiefly ſcrophulous Ulcers hath often been tried by our beſt Surgeons; therefore the unfortunate Maid was carried to the Town of *Newport* in the *Iſle of Wight*, which was not far from the Place of her Abode, and there directly laying aſide all other Medicines but Aſſes Milk, ſhe drank *Sea Water* in the uſual Manner, which at firſt occaſioned a Nauſea and Thirſt, as it commonly does; but theſe Inconveniences ſoon vaniſhed, in two or three Days. This purged her at leaſt thrice a Day; nor did ſhe perceive her Strength or Appetite impaired by repeating this Purgation, but rather daily improved. Growing cheerful upon this, and bolder with the Hope of recovering her Health, ſhe bathed in the Sea, firſt only twice a Week, then three times, and at laſt every Day; and always after bathing in the Sea returned home with more Strength and Spirits. But not to detain you any longer by Particulars, after four Weeks reſolutely ſpent in drinking and bathing, the Appearance of the Ulcer was changed for the better, the thin, fœtid, ſanious Matter that daily flowed from it in large Quantities, now was turned to a white thick Pus, without any Smell, and not in ſuch Quantity as before; the Edges appeared ſoft, even and depreſſed, and at length, by good Fortune, the corrupted Part of the Bone, which began to ſhake upon the Touch of the Probe, was entirely ſeparated from the ſound Part. From that Time all Things went on ſucceſsfully; the Cavity of the Ulcer ſeemed to decreaſe more and more every Day, the white bluiſh Edges growing cloſer together, and drying up, and at laſt, in three Weeks more, was covered with a firm Scar.

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The young Lady being ſenſible of her returning Health, uſed to appear publickly every Day, and go into Company, and enjoy the Pleaſures of her former Life: And though ſhe was confined almoſt a whole Year by a grievous Diſeaſe, in a languiſhing Condition, which could not be worſe unleſs ſhe had been entirely confined to her Bed; yet upon recovering her Strength, her Charms ſhone forth with a new Bloom of Youth; and I may ſay ſhe roſe from the Sea like *Venus* adorned with the utmoſt Graces and Beauty.

This is what I have to communicate to you at preſent, moſt accompliſhed Sir, and will not detain you any longer; for I ſhould think myſelf unjuſt to Mankind if, by theſe Trifles, I ſhould take up any more of your precious Time, which is ſo happily employed in the Service of the Diſeaſed. Continue to give Health to ſuffering Mortals; and continue to improve our Art with your Genius, to illuſtrate it with your Writings, and to ſupport it with the Fame of your Reputation; in the mean Time, pardon my Boldneſs in venturing to ſay any Thing of Medical Matters before ſo great a Judge.

Farewel, worthy Sir, and condeſcend to receive me into the Number of your Friends, who ſhall always have the greateſt Reſpect and Eſteem for your Merit, I am, *&c.*

Chriſt-Church, Oxford, March 1, 1749.

Dr. RUSSEL's *Anſwer to* Dr. LEWIS.

Moſt accompliſhed Sir,

I Readily ſend you the Caſe of a *ſcrophulous Caries of the Leg*, which I intended to add to the ſeveral Caſes before collected; but how it came to be omitted I cannot recollect. I was willing

willing to give this alſo into your Hands, that you might know what this Method will effect in a Hectic Fever, ariſing from morbid Glands, when the purulent Matter is ejected by Spitting. Indeed an Exfoliation ſeems to be aſſiſted by a Derivation of the Humours from the Part affected; for thus the Bones are not ſo much moiſtened by a conſtant Flux of watry Humours, and the drier they are, ſo much the eaſier do they ſcale.

A Lad about twelve Years old (whoſe Brother is mentioned in the 31*ſt Caſe*) was reduced to the laſt Extremity by a Hectic Fever; he had a Cough and Night Sweats, with a Difficulty of Breathing upon walking; he had a foul and purulent Spitting; the Glands of his Neck were morbid and hard; and there was an Impoſthume upon each Leg, with a Caries or Rottenneſs of each Fibula, (the ſmaller Bone of the Leg) near the Heel. This Boy, when he firſt drank the *Sea Water*, was waſted to a ſurprizing Degree; but when he had uſed it ſix Weeks the hectic Fever abated, the Cough and Night Sweats went off, and no freſh Tumors roſe. While he continued drinking *Sea Water*, the Bones of his Legs ſcaled, and the Tumors of the Glands were entirely diſperſed. In ſix Months he grew well, and from that Time he has had no Sign of a Relapſe.

Will you alſo give me leave to declare my Sentiments upon the general Cauſe of morbid Glands, I know you will eaſily grant it me, and I take the Liberty which your Candour affords me.

It appears to me that Parents moſt commonly have Children that are like themſelves in Conſtitution. The Children of thoſe Parents that are of a lax Habit of Body, are alſo weak and infirm; whence

whence it happens that the Glands are ſubject to the ſame Fluxions that I ſuppoſe are in their Parents. And therefore I do not think the King's Evil ariſes ſo much from a certain Infection, or hereditary Taint, as from a weak and bad Tone of the whole Syſtem of the Glands. And this ſeems to me to be the Fact; but as this is meerly a *Theory*, if others are of a different Opinion, I do not ſet ſo great a Value upon my own as to contend ſtifly about the Matter. But this is certain beyond all Controverſy, that the Glands, by Reaſon of their looſe and weak Texture, are more ſubject than other Parts to repeated Attacks of the Diſeaſe; not to ſay that many of them ſometimes ſeem to be quite incurable. Moreover, when there is a Redundance of any thing in the Body, which hath been a long time diſcharged by this or that Paſſage, by the Aid of ſome Secretion, which by Cuſtom, is made as it were a Law, then it is evident that there is neceſſarily a Decreaſe of the Secretions of the other Glands, which threatens ſome Danger to thoſe Parts. Whence in ſome Leproſies, both dry and moiſt, which I could never cure by *Sea Water* or any other Medicines, I obſerved that the Patients, for the moſt part, while the Diſeaſe is thrown out by the Skin, had a leſs Flux of Urine, (like thoſe who are inclined to a Dropſy) and that all other Secretions had not their uſual Freedom. And indeed in theſe moſt ſevere Diſorders of the Skin, there is ſometimes not the leaſt Hope of a perfect and eſtabliſhed Cure: For the Evacuation which has continued ſo long by theſe Paſſages, having broken, or very much weakened the Tone of the Part, upon the firſt Plenitude that happens, the Diſeaſe flows again the ſame Way; as in a Gonor-

Gonorrhœa, where the Glands are changed from certain other Cauſes. But if we do but rightly touch upon the Hiſtory of Leproſies, I think it will eaſily appear, that the cutaneous Glands were not deſtined for ſuch a conſiderable Work as is required for carrying off theſe Diſeaſes. They ſeem plainly to me to be formed for Aſſiſtances, which, whenever the other Secretions are by Accident obſtructed, might adminiſter their Help, and having performed that Office, they ought to return to their natural Form by their own Elaſticity, and be entirely reſtored; for whatever Part of the Body is a long time more diſtended than the Laws of Nature permit, is evidently morbid, and liable to Obſtructions and Tumors, and ſuch like Diſorders: And that the warmer Countries are more infeſted with theſe Diſorders than the Cold, there can be no room to doubt, if we give Credit to Authors, who deſcribe the Northern Leproſy as being leſs virulent, nor accompanied by ſuch Variety of Miſeries as the *Leproſy*, or *Elephantiaſis* of the *Greeks*, which, though it is quite unknown in *Europe*, yet where the Fluids are more attenuated by the Heats of the Sun, and the Evacuation by the Skin is more copious, as in *Egypt*, it is common, and the Veſſels of the Skin being at length obſtructed, it riſes to a greater Height.

I have lately undertaken to cure, for the firſt Time, a Boy troubled with the *American Evil*. His whole Head is covered with a kind of Tumors like Muſhrooms of a dark brown Colour, His Neck is full of hard ſcrophulous Glands. The Diſeaſe is called the *Yaws* by the People in *America*. The Cure has hitherto baffled all Endeavours of the Phyſicians at *Jamaica*, and here alſo;

alſo; but becauſe the Medicines I have uſed but a ſhort Time, have a good Effect, I have Hopes of performing the Cure. But you ſhall be acquainted hereafter with the Succeſs of this uncommon Caſe, and indeed it is entirely new. It is not long ſince my Friend Dr. *Wilmot*, with his uſual Courteſy, hath kindly communicated to me ſome Extracts from *Scribonius Largus*, which relate to my Method, by which it appears, that *Scribonius* made uſe of *Sea Water*, to diſperſe Tumors of the parotid Glands behind the Ears, before they had ſuppurated. He ſays, *Having dipped new Sponges in hot* Sea Water, *and wrung them in a Linen Cloth, let the Parotides be fomented with this Medicine, and afterwards covered over with ſulphurated Wool.* See *Scribon. Larg.* Chap. 6. Then in the 41ſt Chapter, where he ſpeaks of both Kinds of the Gout, the hot and cold, we find the following Words, *When the firſt Violence of the Fit is over, both in this, and the former Kind of the Gout, the Parts are to be long fomented with warm* Sea Water: *But if this cannot be had, put Salt into hot Water, and afterwards uſe the Epithem before preſcribed; for it carries off the Remains by Perſpiration, and ſtrengthens the Nerves for the future, and prevents their being eaſily vitiated.* It is certain, that *Sea Water* is a very powerful Diſcutient, and I am perſuaded that this Quality is chiefly owing to its Sulphur and Bitumen. *Bolducius*, writing on the *Bourbon Waters*, thinks they contain a mineral Sulphur, or rather Bitumen, which is communicated to them by the Sea Salt, which is evidently found in theſe Waters, (for Sea Salt always contains more or leſs Bitumen) and which the Alcalies that abound in theſe Waters, preſerve in a fluid

State.

State. In the ſame Place he gives a Method of ſeparating them. The Separation of theſe Alcalies is performed by Spirits of Wine infuſed in the loweſt Parts of the Water, in which there is the greateſt Quantity of theſe Subſtances. The Alcalies ſink to the Bottom, and the Bitumen, being ſeparated, aſcends in Drops to the Surface of the Water, or cleaves to the Sides of the Veſſel. *See the Hiſtory of the Royal Academy of Sciences*, Anno 1729, p. 33, 34.

This does not only confirm, that the *Sea Water* contains a pretty large Quantity of Bitumen, but likewiſe ſhews us, in ſome manner, what we are to expect from its Aſſiſtance.

I received your two Caſes, which are wrote with your uſual Elegance, and thank you for not deferring to ſend them, and would have returned the Obligation, as well as I could, by the Caſe of a Caries on the Shin Bone, cured by *Sea Water*, if I had not received it too late to be inſerted in this Edition. Improve, in Virtue, moſt friendly Sir, and go on to cultivate the Art of *Healing*, which you have undertaken, and raiſe it to the higheſt Degree of Perfection; * *and may you always keep in View that Mortality, which you are ſure of eſcaping by this ſingle Monument.* I repeat my Wiſhes for your Welfare, and that you may always continue your Friendſhip for him who will always bear you the greateſt Affection.

I am, &c.

* *Pliny's* Epiſtles, Book XI. Chap. 10.

A COMMENTARY ON SEA WATER,

Tranſlated from the Latin of Dr. SPEED,

AS the Uſe of Sea Water is grown into Faſhion, I thought it would not be improper for me to make Enquiries into its Nature; eſpecially as many Patients flock down to *Hampſhire*, I determined to try Experiments on the Waters that waſh the Shores of that County.

EXPERIMENT I.

1. I procured half a Pound of Sea Water from the South Side of the *Iſle of Wight*.

2. I got another half Pound from the Shore of *Southampton* at the Time of the *Spring-Tide*, which happens ſoon after the new and full Moons.

3. Likewiſe another when the Moon was in the firſt and the laſt Quarter, that is, at the *Neap-Tide*. The Weight I made Uſe of was not that of the Apothecaries, but Averdupois, the half Pound containing eight Ounces. I evaporated each with a gentle Sand-heat, and when the watry Particles were flown off, there remained behind two Drams * and eight Grains of that from the *Iſle of Wight*. That from *Southampton* at the Spring-Tide left the ſame Quantity; and that at the Neap-Tide two Drams and two Grains. In the Reflux of the Water there wanted ten Grains in that of *Southampton* at the Neap-Tide. However, it is proper to take Notice, that when the Tide is out there is not Water enough to bathe in, the Shore being left naked; but when the Tide is in, it is otherwiſe. Beſides, the Place to be choſen for bathing is of no great Moment, provided a Pound of Water contains a little above an Ounce of Salt, which muſt be weighed while it is dry, and before it attracts the Moiſture of the Air.

The Maſs remaining after the Evaporation of the Sea Water was of a whitiſh Yellow, and of a bitteriſh ſalt Taſte. Its Particles aſſumed no particular Figure, unleſs a few Grains at the Bottom, which ſeemed to be cubical; for Sea Water contains an earthy ſabulous Subſtance, which thoſe that make Salt call *Scum*, which hinders the Cryſtalliſation. Nor can the Salt be granulated before it is freed from this Subſtance. There is not above ſeven Grains of this in every Pound.

* The Doctor ſhould have told us what Drams he means; we ſuppoſe it muſt be Apothecaries Drams, as appears by what follows.

The

The Solution of the Remainder of this in Rain Water, after the Fæces above mentioned had been ſeparated by Filtration, was of a yellowiſh Colour, and being placed in a very gentle Sand-heat, there appeared Cubes on the Surface, which being perfectly formed fell to the bottom. As the Evaporation went on, the Liquor became gradually more yellow than it was before. And here it will be proper to obſerve, that though Salt Water is ſo intirely mixed with the Fæces, that they will both paſs through the Filtre together, yet the Caſe is otherwiſe after Evaporation, for then it will not unite ſo intimately with Water as it did before.

EXPERIMENT II.

When this yellow Liquor, which *Hoffman* calls the Lye of Salt, ceaſes to yield any more Cubes, the Surface by the Continuance of the Heat will begin to be covered with a white Cruſt; which being removed from the Sand, and ſet in a dry Place, it ſhot into priſmatic Cryſtals, aſſiſted by the Help of the Sun and Air in the Summer Time. Thoſe Cryſtals being purified by a freſh Solution and Cryſtalliſation, they became the cathartic Salt of the Shops, commonly called *Epſom* Salt. *Hoffman* aſſerts that this Salt is not to be made without the Addition of certain other Salts to the Lye *; but in this he is miſtaken, for Experiments ſhew the contrary.

There is nothing in Nature attracts the Air ſo much as this *Lixivium* of Salt, for if it be calcined to the Hardneſs of a Stone, and afterwards expoſed to the Air, it will readily melt. This

* Obſ. Med. Chym. Pag. 198.

Liquor, which contains *Epſom* Salt, being mixed with Urine, and ſublimed, after the Effervescence is over, will produce Sal Ammoniac, as ſome of the Makers of Salt affirm ‡.

When all the priſmatic Salt was taken out, which was about two Drams, there remained in the bottom a browniſh inſipid Fæces, with a very little inſipid Water †, void of all Bitterneſs. Therefore they ſeem to be in an Error who aſſert the Bitterneſs of the Sea Water ariſes from Bitumen, unleſs there is any ſuch Thing as a bituminous Salt, which thoſe whom it concerns may endeavour to find out.

EXPERIMENT III.

I ſuſpected that theſe Fæces were much of the Nature of Lime, and therefore I diſſolved Sal Gem. in Lime Water; and I evaporated the Solution in a Sand-heat: Towards the End the Liquor began to turn yellow like the former Lye, which is not the Caſe when the ſame Salt is diſſolved in pure Water. You may conſult

‡ Take of the Lixivium of Salt a Gallon; of Urine, three Gallons; mix them, and let them ſtand in a Leaden Veſſel 48 Hours to ferment. Then evaporate to a Dryneſs, and ſublime what is left according to Art. This is the Method of making Sal Ammoniac, as was communicated to me from the Salt Works near *Newcaſtle*.

† Theſe inſipid Fæces and Water were obtained from Sea Water which I evaporated myſelf, and which was deprived of all the common Salt. But the Remainder of other Lye, which I had from the Salt-works, had a ſaltiſh Taſte. For which Reaſon I conclude that the *third Salt*, which is ſaid to be in the Lye in the *Philoſophical Tranſactions*, is nothing elſe but common Salt, which being diſſolved all together with the Lye, as is rightly deſcribed in the *Limington* Proceſs, No. 377.

Dr.

Dr. *Grew*'s Treatiſe of the *bitter purging Salt*, which entirely agrees, as I have learnt by Experience, with the *bitter marine Salt*.

From what has been ſaid it appears that Sea Water contains, 1. Common Salt, which all agree is drying, and, as *Hippocrates* affirms, renders the Body coſtive. "Thoſe Men are deceived and ignorant of the Nature of Salt Waters, who believe they are purging; for they have directly the contrary Qualities; nor are they digeſtible while they are crude, and rather bind the Body than open it." *

This I imagine ſhould be underſtood of Waters that are ſaturated only with common Salt, as thoſe in *Cheſhire*, *Worceſterſhire*, and in ſeveral Parts beyond the Seas. Thoſe that live upon ſalted Meat are generally coſtive, which perhaps would not be the Caſe if the Makers of Salt were not too careful in ſeparating the common Salt from the bitter Lye, which abounds with the purging Salt: For Fleſh Meat ſalted with Bay Salt is not rendered ſo very hard, becauſe it has a Mixture of this bitter Salt.

2. Bitter Salt, whether diuretic or cathartic, is very good to open Obſtructions, as being the moſt penetrating of all Salts, except thoſe that are coroſive. Hence the Virtue of Sea Water is principally derived, of purging both by Stool and Urine, as well as that of opening the Obſtructions of the Glands, I mean when taken inwardly.

I have often freed Boys from the Obſtructions of the Meſentery, by the Uſe of *Ens Veneris* or the Martial Flowers, with *Æthiops* Mineral, purging them now and then at proper Intervals

* *De Aer. Loc. & Aquis.* cap. 16.

with Calomel and Rhubarb; and no doubt others have done the ſame Thing. Now as Sal Ammoniac is a principal Ingredient in the Martial Flowers, and if it contributes any Thing towards the Cure of theſe Diſorders, we muſt remember that it is made of Urine and the bitter Lye which contains *Epſom* Salt. And whatever Virtue Sea Plants may have when given as Medicines, Sal Ammoniac has the ſame when united with Deobſtruents; for Inſtance, Cinnabar of Antimony. But then, if the Patient is of a cold Conſtitution, inſtead of giving crude Sal Ammoniac, it will be beſt to ſubſtitute the Martial Flowers; and if with either of theſe the diſeaſed Perſon has been purged between whiles, I have known the ſtrumous Swellings to diſappear ſooner than by drinking Sea Water. This is no uncommon Practice, for the *Perſians* are not unacquainted with this Salt in the Cure of the King's Evil, becauſe it enters internal Compoſitions intended againſt that Diſeaſe, as appears from their own Diſpenſatory, No. 20 and 126.

3. Both the *Fæces*, that is, the firſt that hinder the Cryſtalliſation of the Salt, and the ſecond which remain after the Cryſtalliſation of the purging Salt, ſeem to me to be of the ſame calcarious Nature.

Heiſter, a Writer in Surgery of the firſt Claſs, in many Places adviſes a Mixture of Sea Water or Brine, with diſcutient Cataplaſms and Fomentations.

The Ancients were very cautious in giving it internally, and *Dioſcorides* acknowledges Sea Water was given internally as a Purge by itſelf, or with Oxycrate, or Wine, or Honey; but then

then when it began to work, the Acrimony was to be mitigated with Chicken or Fiſh-Broth.

His Compoſition, which he calls *Thaſſomeli*, he directs to be made with equal Parts of Honey, Sea and Rain Water, which is to be clarified, and then be ſet in the Sun in a pitched Veſſel, during the Dog-Days. He likewiſe recommends Wine * made with Sea Water to purge the Body, to help thoſe that ſpit purulent Matter, and thoſe that are coſtive: As alſo to relieve thoſe who have Diſorders in the Head from drinking *Armenian* Wine. But then it is an Enemy to the Stomach, and generates Wind, as the ſame Author affirms. In the firſt Book *de Parabilibus*, if *Dioſcorides* is the Author, he affirms that Sea Water drank with Oxymel will break internal Abſceſſes.

Paulus Ægineta † takes Notice of both the Methods of uſing it, and ſays, that "Sea Water "is acrid, and moderately heating and drying. "That it is prejudicial to the Stomach when "drank, raiſes Commotions in the Belly, and "brings away Phlegm. That being applied hot "externally, it is drawing and diſcutient."

When a chronic Diſeaſe is not hereditary, or contracted by any evident Cauſe, I ſuppoſe it makes its Progreſs in the following Manner. Firſt of all inſenſible Perſpiration is obſtructed from the frequent erroneous Uſe of the ſix Non-naturals, and the digeſtive Power of the Stomach begins to grow languid. Hence the Aliment is imperfectly digeſted, and a viſcid Phlegm, by little and little, adheres to the Stomach and In-

* Med. Mater. lib. v. cap. 23.
† Lib. vii. Cap. 3.

teſtines; and when theſe are beſet with Phlegm or viſcid Excrements, there can be no due Secretion by the inteſtinal Glands, inſomuch that a crude Chyle is carried into the Blood, whence its Temperature being vitiated, its Circulation through the capillary Veſſels will be irregular, as well as the Secretion of the Humours through the Glands of the whole Body, eſpecially the leaſt, and of the nervous Fluid by the Brain.

When Things are in this Situation, thoſe who have ſtrong vital Stamina may, by their Means, keep off the impending Diſeaſe for ſome Time, thinking they have no need of the Phyſician's Help. However at length, though by ſlow Degrees, ſome chronical Diſeaſe appears, but of what Kind, perhaps, may be learnt from the Nature of the firſt Error, or the Patient's Diet and Way of Life, or from his having ſomething particular in his Conſtitution.

When the Rickets and King's Evil are not hereditary, they ariſe from Errors in Diet, or from the over Care and Tenderneſs of the Parents, or from the Omiſſion of timely Remedies, when the Bodies of little Infants are ſubject to various Obſtructions, and fall into one or other of theſe Diſeaſes.

When the Habit of Body is plethoric, acute Diſeaſes are commonly generated. And yet in phlegmatic Conſtitutions, this Habit may produce Infarctions of the Bowels, and the Symptoms of certain chronic Diſeaſes may be exaſperated.

It is therefore no Wonder that the Medicine that carries Phlegm from the Stomach and Inteſtines downward by its internal Uſe, and redu ces the Circulation of the Blood, and the Secre tion of the Fluids to their natural State by its external

ternal Uſe, ſhould be proper for the Cure of theſe Diſeaſes before they have taken too deep a Root, eſpecially ſince they ſtrengthen the Body at the ſame Time, when bathed in, or applied by Way of Fomentation to any particular Part.

What the Ancients ſpeak of the diſcutient Virtue of Sea Water, may be referred to its external Uſe; and as, when drank, it almoſt comes in Contact with the inteſtinal Glands, thereby opening their Obſtructions, it may be ſaid to act as a Topic in that Reſpect.

However, we ought to be cautious in the Uſe of Sea Water either Way; for thoſe who are of hot Conſtitutions ſhould never drink it, for it corrodes the Inteſtines of ſuch, and by a conſtant Uſe puniſhes them very ſeverely.

Not that there is any Thing deleterious in Sea Water, but becauſe it is unfriendly to Bodies thus conſtituted. Likewiſe thoſe ſhould abſtain from it, who are hectic, who are ſubject to Looſeneſſes, and who are diſordered after taking a Purge.

I have known that Sea Water would not purge at all, and then it created a very great Uneaſineſs in the Stomach, which did not ceaſe till the Patient had taken a gentle Cathartic. Others, who have drank it unadviſedly, have been by its Acrimony thrown into an almoſt incurable Looſeneſs, and which has ſometimes proved fatal.

It will gently open the Bodies of the Phlegmatic, ſtrengthening the Stomach, and reſtoring its Heat, when it has been oppreſſed by a Load of Phlegm, and will revive the Appetite, provided the Doſe is not too large. Half a Pint of Sea Water drank at Night going to Bed, and re-

peated in the Morning, is generally enough for Adults. But the Doſe is beſt determined by its Effects. It cauſes a very urgent Thirſt in many, though not in all. But for what Reaſon ſome Phyſicians purge their Patients who are going to be purged by drinking the Sea Water, or why preſcribe the drinking of it to all who uſe it as a Bath, let them anſwer; it is none of my Buſineſs.

The Phyſicians of our own Country have written very accurately of cold Bathing, without depreciating that in the Sea. But for my Part I think the latter is much preferable to the former, becauſe the ſpecific Gravity of the Sea Water is increaſed by the Salt. Beſides the Salt, as a *Stimulus*, is an efficacious Cleanſer of the Glands of the Skin, and thoſe who come out of the Bath perceive a Kind of Firmneſs, with Heat over the whole Surface of their Bodies, which is a Forerunner of re-eſtabliſhed Health. But if this Heat does not come on ſpontaneouſly, it is to be procured by moderate Exerciſe. Beſides, it receives a remarkable Increaſe of Virtue from the purging Salt, which *Floyer* affirms to be the very Nitre wherewith the cold Baths of the Ancients, ſo much cried up, were ſaturated.

Sea Water therefore is not ſimply a cold Bath, but a *cold medicated* Bath. But whatever Virtues this Water may have, we cannot ſo exactly calculate its Force, as to determine what Number of Immerſions are ſufficient for the Recovery of any particular Patient. Yet many are ſo ſilly as to expect this, and ſometimes Phyſicians are ſo raſh as to pretend to comply with their Requeſts.

What

Whatever Precautions the Authors above cited have recommended to be uſed in cold Bathing, the ſame are to be regarded in bathing in the Sea.

Oribaſius obſerves, that "whoever intends to "bathe ſhould have his Body well rubbed before "hand, and that he ſhould plunge into the "Water at once." To this may be added, that a Patient ſubject to an *Eryſipelas*, will by bathing in Sea Water cauſe it to return; I remember two remarkable Inſtances of this Kind. One of the Patients not believing that Sea Water could have any ſuch Effect, would need bathe in it again ſoon after his Recovery, which cauſed the Eryſipelas to return. This was repeated three Times with the ſame Succeſs. The other, after having been once puniſhed, deſiſted. *Proſper Alpinus* formerly obſerved from the Writings of the Dogmatics, *that Sea Water was prejudicial to an Eryſipelas*. I ſuppoſe he means when uſed externally.

Sea Water uſed hot is of very great Service to ſoften Tumors, and in other Caſes as a Topic; as has been found by Experience, ſupported by the Authority of *Hippocrates*, which ſurely will ſerve to ſtrengthen my Teſtimony.

I ſhall proceed to mention the particular Diſeaſes in which Sea Water is beneficial, without entering into a particular Account of the Diſeaſe, any farther than the Method of Cure by this Means; for we ought to ſuppoſe that the pharmaceutic Cure is well known to Phyſicians. Perhaps ſome may think I have not given all the neceſſary Cautions and Directions that might have been expected for the Exhibition of this Remedy; but this I have done deſignedly, be-

cauſe

cauſe there are ſo many things to be left to the Judgment of the Phyſician who is conſulted, that ſcarce any Rule can be laid down, from which it will not be neceſſary ſometimes to recede. But whoever is acquainted with the true Principles of Medicine, and takes Notice of the Cautions abovementioned, will be able to apply the following Obſervations to each of his Patients in a judicious Manner.

Of the SCROPHULOUS DISEASE, *or the* KING's EVIL.

THE King's Evil proceeds from a ſizy cold Matter obſtructing the Glands, rendering them almoſt of a ſcirrhous Hardneſs. Theſe are often inflamed, and turn into Ulcers that will hardly admit of a Cure. The Cauſe of this ſeems to be, if you will form a Conjecture, from the Obſtruction of the excretory Tubes of the Glands, by the Matter to be ſecreted becoming too thick. The Inflammation is excited in the Veſſels that nouriſh the Glands, which are ſo ſmall that they are unable to excite Heat ſufficient to digeſt and turn into Pus the thick Humour which obſtructs, and has greatly increaſed the Volume of the Gland, inſomuch that Nature wants rhe Aſſiſtance of Art to attenuate ſufficiently theſe groſs Humours.

I have ſeen many Patients relieved, and ſome cured, by the joint Operation and Uſe of Sea Water exhibited internally and externally; which many when they have drank have thrown up again,

again, or have been purged by it ſo as to bring away a great Quantity of Phlegm. Beſides, by the long Uſe of cold Bathing, Embrocations and hot Fomentations, the Humours have been attenuated, and the Swellings diſperſed; likewiſe the Ulcers have been brought to heal ſooner by theſe Means.

The Ancients have ſaid nothing of its internal Uſe in the Cure of this Diſeaſe; but the Author *de Parabilibus* has aſſerted, "that ſweating procured by Sea Water will diſperſe ſtrumous Swellings." And *Marcellus Empiricus* informs us "that Snails that are found near the Salt Works, being bruiſed with their Shells and laid on ſtrumous Swellings, will certainly heal them," which I imagine to be owing to the Salt, which they have imbibed. Among the Moderns, *Fabritius ab Aquapendente* praiſes a Remedy which he affirms has a wonderful Efficacy in curing ulcerated ſtrumous Glands. Now almoſt a fifth Part of this is common Salt. The following Caſes I take to be very remarkable.

CASE I.

A Clergyman in *Oxfordſhire* was ſtrangely afflicted with ſcrophulous Ulcers and Swellings. He had uſed all the Helps from Surgery and Phyſick a long while in vain. At length he went annually during three or four Summer Months to drink and bathe in the Sea Water, from which he found Relief without taking any other Medicines. But as his Affairs would not permit him to ſtay long enough to perfect the Cure, the Diſeaſe gained Ground every Year, notwithſtanding

ſtanding he conſtantly drank the Sea Water at Home. But when he returned to bathe in it, he always found himſelf better.

CASE II.

A Girl from *London*, about twelve Years of Age, had her Eye-lids, Noſe, and upper Lip infeſted with a Swelling and Redneſs. Beſides the Glands of her Neck, between her Ears and Clavicles, were ſwelled and hard. She had taken many Medicines according to the Advice of the *London* Phyſicians, and at length was brought down to *Southampton*. I directed her to leave off all Remedies, and to ſtick to bathing in the Sea Water, to drinking it, and to hot Embrocations therewith. After ſome Time the Diſeaſe began to give Way, and in ſixteen Months, by perſiſting in the ſame Method, ſhe grew perfectly well, and returned Home.

Of the SCURVY.

IT is hard to ſay what is meant by the Scurvy among the Phyſicians of this Age, for all Diſeaſes of the Skin are diſtinguiſhed by this Name, becauſe it ſounds better in the Ears of the delicate than the Itch, the Leproſy, or the King's Evil. But theſe Diſeaſes differ widely from the *Stomacace* or *Scelotyrbe* of the Ancients, which our elder Phyſicians affirm to be the true Scurvy. This is doubtleſs the ſame Diſeaſe to which Sailors

lors are ſubject, as well as the Inhabitants of marſhy Places. The Moderns call it the Muriatic Scurvy, and the Chemiſts affirm it proceeds from an alkaline Acrimony, for it may be cured by Acids.

But there is another Scurvy of a milder Kind, to which our Countrymen are ſubject, which though it apes ſome of the Symptoms of the above Diſeaſe, yet it may be borne a long while without any remarkable Inconvenience, nor does it proceed with the ſame Rapidity and Cruelty as the other, unleſs it be very ſeldom. But if any ſhould affirm that it differs rather in Degree than Kind from the other, they are welcome to enjoy their own Opinion, for it is not worth diſputing about.

This Diſeaſe, which I call a *milder Scurvy*, generally proceeds from Errors in Diet, that is, from eating ſalt and high-ſeaſoned Proviſions; as alſo from a Neglect of Exerciſe, without any Fault in the Air or Water, unleſs fermented Liquors may be reckoned as ſuch. There is a great Variety of Symptoms, of which the chief are a Laxity of the Gums, a Laſſitude of the Body and Members, eſpecially in a Morning: An itching of the Skin, when the Patient is a little hot: Puſtules, and Breakings out in the Skin of various Kinds, wandering Pains, and other Things which Practitioners are well acquainted with.

When this Diſeaſe attacks phlegmatic Conſtitutions, it is called the *cold Scurvy*: When it invades the bilious, or thoſe of a hotter Temperament, it is diſtinguiſhed by the Name of the *hot Scurvy*. Both are relieved by an Evacuation of the Inteſtines, but Sea Water is moſt ſuitable to the cold Sort. In the Scurvy, unleſs it is very

bad

bad indeed, recourſe is generally had to ſome Doſes of Manna and *Glauber*'s Salt, with good Succeſs. I never adviſed any of theſe Patients to drink Sea Water, becauſe I have known the Symptoms of many exaſperated thereby, eſpecially the Eruptions of the Skin; nor was this done by driving the morbific Matter to the Surface of the Body, but by increaſing the Diſeaſe by the hot Acrimony of the Sea Water. I dare not venture to affirm that this is the Caſe of all, for human Bodies are ſo differently conſtituted, that one Medicine cannot be depended upon to cure the ſame Diſeaſe in various Conſtitutions.

In both Kinds of this Diſeaſe the Blood is rendered leſs apt for Circulation and Secretion, eſpecially by the Glands of the Skin. Hence bathing is proper for both, as I have known confirmed by a Multitude of Examples.

What Sea Water will do in the Cure of the Scurvy in Sailors, I know nothing from Experience, and without that all Conjectures are frivolous and vain. But perhaps it may prevent this Diſeaſe in thoſe who have regular Stools. What Good it will do in the Scurvy of inland Patients may be known from the following Caſes.

CASE III.

A Man about ſixty Years of Age, who lived an inactive Life, indulging himſelf in eating and drinking too freely, was afflicted with various Symptoms of this Diſeaſe, particularly with purple or livid Spots on his Legs. After a long Uſe of Antiſcorbutics, he betook himſelf at laſt to the drinking of, and bathing in, Sea Water, and by that Means got rid of his Complaints.

CASE

CASE IV.

Being called to a Man afflicted with the Scurvy, I removed all the Symptoms by the common Method, except a Condenſation of the Skin on each Leg, with a kind of eryſipelatous Eruption covered with a white Cruſt, and from whence a ſharp Humour proceeded. I adviſed him to embrocate theſe Parts with hot Sea Warer twice a Day conſtantly, by which Method he quickly recovered his former State of Health.

Of the PALSY.

THOSE who are afflicted with the Palſy have their Stomach and Inteſtines almoſt always covered with a viſcid Phlegm, which being removed by purgative Medicines, the Patient ſometimes ſuddenly recovers. Now the drinking of Sea Water is excellent for this Purpoſe, and I have known ſome greatly relieved thereby. When any Member is relaxed, bathing in Sea Water is proper enough; when a Limb is contracted I never could find it did any Good; for when the extending Muſcles of a Limb are only relaxed, the contracting Muſcles of the ſame Limb wanting their Antagoniſts, remain in a conſtant State of Action, and therefore that Limb will ſeem contracted, and the contrary. If this is the Caſe, the Limb may be extended with foreign Help without Pain. But if the bending or contracting Muſcles are in Reality become ſtiff, the Limb cannot be extended without great Pain both in the Muſcles and Tendons; and this Rigidity or Stiffneſs of the Fibres muſt be removed

moved with Emollients, before bathing in Sea Water is attempted. When old Men are paralytic, or the Diſeaſe has continued a long while, the Patient cannot be reſtored to Health without great Difficulty.

Cœlius Aurelianus, in the Chapter of the Palſy, adviſes Fomentations with Brine or Sea Water; as alſo ſwimming [or bathing] in the ſame. *Celſus* directs Fomentations with hot Sea Water, in the ſame Caſe, and, if that is wanting, with Brine.

Of the EPILEPSY.

YOUNG Perſons have been cured of this Diſeaſe by bathing in Sea Water without drinking it. But then they have taken at the ſame Time cathartic and alterative Medicines, accommodated to the Degree of the Diſeaſe, and the Conſtitution of the Body, and this ſome Ages before *Æſculapius* had learnt to quaff the Cups of *Neptune*.

Patients are very ſeldom freed from this Diſeaſe without the Uſe of the cold Bath, except thoſe that by arriving at a riper Age are delivered from it ſpontaneouſly.

After a Fit is over, ſome Patients vomit up a ropy Phlegm, which, by creating an Uneaſineſs in the Stomach, perhaps was the immediate Cauſe of the Paroxyſm. The Fits of Children who are loaded with viſcid Phlegm, the Fore-runner of Worms, and whoſe Inteſtines are vellicated and gnawed by Worms, can ſcarcely be diſtinguiſhed from epileptic Paroxyſms. Cinnabarine, volatile, and fetid Medicines are very properly pre-

preſcribed to attenuate this Phlegm, and on this Account they are good againſt the Epilepſy. *Aretæus* affirms the Contents of the Abdomen are ſometimes the Cauſe of this Diſeaſe, and when that is the Caſe he adviſes ſuch Medicines as purge Phlegm: Now Sea Water is of this Claſs, and not of the loweſt Repute.

Bathing in Sea Water attenuates the Blood, ſtrengthens the Solids, and by that Means renders the Circulation equal through all Parts of the Body, which is the chief Thing to be attended to for the Preſervation of Health. Perhaps *Oribaſius*, if his Tranſlator has done him Juſtice, means epileptic Patients, when he mentions thoſe who *morbo exagitantur*, and whom he adviſes to bathe in the Sea. The Antients ſuppoſed the Cauſe of this Diſeaſe lay in the Head, and therefore *Celſus* adviſes to ſhave the Head, to anoint it with old Oil, Vinegar and Nitre, as alſo to foment it with Salt Water. I did not think it worth while to confirm a Thing ſo well known, with an Addition of Caſes.

Of the ITCH.

DIſeaſes of the Skin, ſays *Hippocrates*, ſuch as the Leproſy, Itch, Pſora, *&c.* are generated by Phlegm. This Opinion is conformable to Experience; for the Itch amongſt us, when it is an original Diſeaſe, and not caught, very ſeldom appears but among poor People, whoſe naſty way of living and low Diet bring on a pituitous Habit of Body: Now as far as Evacuations, by Stool, are concerned in the Cure, it may be performed by Sea Water; and yet this is not proper for all that are afflicted with this Diſeaſe. But Bathing

is

is of more univerſal Uſe, for it cleanſes the Glands of the Skin by the ſtimulating Property of the Salt, and by diſperſing the obſtructing Humour, reſtores it to its Office, in which the Cure of theſe Diſeaſes principally conſiſts. Beſides, Practitioners well know that nothing contributes to prevent Diſeaſes of the Skin more than cold Bathing in general.

CASE V.

An old Woman had been afflicted with a violent Itch for four or five Years, and had taken Variety of Medicines preſcribed by Phyſicians to no manner of Purpoſe. At laſt ſhe was ſent to drink the Sea Water, which ſhe did, and likewiſe bathed in it for the Space of three Weeks without any Relief: On the contrary, the Itch grew worſe and worſe every Day; beſides, as the Sea Water made her Stomach very uneaſy, I adviſed her to leave it off unleſs ſhe was coſtive. After this ſhe began to be better, and when ſhe had continued bathing for about two Months, ſhe returned Home quite free from the Diſeaſe.

Of the DRY LEPROSY.

THIS Diſeaſe may be made to diſappear by various Methods, and yet it is very apt to return again. I have known ſome relieved by the external and internal Uſe of Sea Water for the preſent, but ſome cannot away with the drinking it. Others, who have been cured by the taking of Shop Medicines, have been kept ſound by conſtant bathing. And indeed I ſhould not venture to promiſe any Patient that this Diſeaſe

eaſe would never return, if he was to abandon every Method of Cure.

CASE VI.

A young Man had been troubled with this Diſeaſe for ſome Years, and had the Advice of the ableſt Phyſicians, to no Purpoſe. I gave him alterative Medicines, and a Purge with Calomel, every Week, which freed him from the Eruptions. Then I ordered him to bathe in the Sea Water, which he has conſtantly done for two Years, and continues pretty well, except a few Scales, which appear now and then, but without Itching, which formerly was exceeding troubleſome. Theſe diſappear in a few Days.

CASE VII.

A Man of an illuſtrious Family had his Body and all his Joints covered with white leprous Scabs. The Diſeaſe was hereditary, and he had taken Mercury, Antimony, Viper's Fleſh, and other Drugs uſually preſcribed againſt it, in vain. It would ſometimes diſappear for a while, and would then return as freſh as ever. At length his Phyſicians ſent him to drink Sea Water, which he did ſix or ſeven Weeks before he bathed therein, without any Relief. But after he began to bathe in it, the Diſeaſe would give way, and the Scales fell off, which were ſure to return when he began to drink it again. Wherefore he left off the internal Uſe of it, of his own Accord, but continued his bathing while he ſtaid near the Sea, which rendered the Diſeaſe more mild.

Of

Of the RHEUMATISM.

DAILY Experience has taught me how far Sea Water will contribute to the Cure of the Rheumatiſm, eſpecially that of the ſcorbutic Kind. It was frequently uſed in Diſeaſes of the Joints by the Ancients; and *Aretæus* informs us that cold Bathing in Sea Water was excellent for Diſeaſes of the Joints. And *Cœlius Aurelianus* adviſes when iſchiadic Pains are become inveterate, to fill a Bag with decrepitated Salt, and lay it to the Place, and afterwards to ſprinkle hot Salt Water on the Parts affected. But perhaps this may more properly be referred to the genuine Gout than to the Rheumatiſm. The Precepts of *Oribaſius* are likely to be more to the Purpoſe, when he adviſes bathing in Sea Water to thoſe who are troubled with Defluxions in the Legs or other Parts of the Body.

Of the BITE *of a* MAD DOG.

IT has been cuſtomary for thoſe who have been bit by a mad Dog, to go to be dipt in Salt Water; and if it be done before the Patient is affected with the Dread of Water, it generally ſucceeds. After this it will do no Good, and no other Medicine can be abſolutely depended upon. However it will be proper to uſe all Kinds of Aſſiſtance. I have in my Hand the Caſe of a Girl who had a pretty violent Hydrophobia from the Bite of a Cat, in the Year 1707. This was perfectly cured by repeated Scarifications, Bleedings, Bliſters, Purges, and Sudorifics.

Of

Of the RICKETS.

THAT this Remedy is proper for the Rickets any one may perceive, who will take the Pains to conſult *Gliſſon* on this Diſeaſe. Cold Bathing has been long in Vogue for the Cure of this Malady, and therefore bathing in Sea Water cannot but be very proper.

I have known a *ſimple Gonorrhœa* cured by bathing in the Sea, when it had eluded the Force of Balſamicks and Aſtringents.

It will likewiſe cure the *Whites* when they proceed from the Laxity of the Fibres.

Of the OVERFLOWING *of the* MENSES.

CASE VIII.

I Knew a Woman who laboured under an immoderate Flux of the Menſes, who if ſhe happened to ſail on the Sea had it ſuddenly leſſened, and almoſt ſtopt. I adviſed her to bathe in the Sea, giving her at the ſame Time aſtringent Medicines, which ſhe had taken formerly in vain, and by this Means ſhe was cured.

I have known an *Obſtruction* of the *Menſes* removed by drinking the Sea Water.

Of DISORDERS *of the* NERVES.

BATHING in Sea Water has afforded great Relief in Pains of the Head, Spaſms, and Convulſions proceeding from Diſorders of the Nerves, contrary to the Expectation of the Unexperienced. But I ſhall inſiſt the leſs upon theſe Things,

Things, becauſe its Power is very well known in curing all Diſeaſes of this Kind within the Reach of Medicine. Thoſe which affect the Muſcles of the whole Body, or fix their Seat in any particular Part, are of the ſame Kind. It would be needleſs to recount any Hiſtories of Caſes relating to ſo common a Remedy: However, the following is of ſo extraordinary a Kind, I could not well omit it.

CASE IX.

About twenty Years ago, two Girls were at the ſame Time afflicted with a Relaxation of the Muſcles of the Larynx, with a *Prolapſus* of the *Uvula*. They could neither of them ſpeak a Word but with the greateſt Difficulty, and every Time they drew in their Breath they made a Noiſe not unlike the crowing of a Cock. They were both reſtored to perfect Health by bathing in Sea Water.

Of the GRAVEL.

CASE X.

AN old Man had been extremely tormented with nephritic Pains for above forty Years, and had taken every Remedy then in Uſe againſt that Diſorder. At length he was ſo much relieved by the drinking of Sea Water, that he had ſpent the Remainder of his Life pretty eaſily, after the Uſe of it had brought away a great deal of Gravel, and many ſmall Stones.

A SURGEON informed me that carious Bones had been exfoliated by means of Sea Water; but as it was uſed both externally and internally, it is uncertain to which Method this Effect may be attributed.

The

The Ancients have recommended the Uſe of Sea Water in Diſtempers, in which it is now quite neglected, at leaſt of which I have not experienced its Effect in the Cure.

An ATROPHY is ſometimes a Symptom of a Conſumption, Diabetes, the Scurvy, or an Abſceſs in one of the Bowels, and whenever this is the Caſe, Regard muſt be had to the original Diſeaſe. But when this is a Diſeaſe of itſelf, it may ariſe from a great Weakneſs of Digeſtion, or from a too free Perſpiration through the Skin. The firſt Kind is mentioned by the Ancients under the Title of the Cachexy, which is produced by the ſaid Diſorder in Patients who receive no Benefit from their Food. In this Caſe *Cœlius Aurelianus* recommends bathing in Sea Water, as well as *Oribaſius*; and *Dioſcorides* praiſes bathing in it when it is made hot. In the latter Caſe, when the Matter of inſenſible Perſpiration is too great, bathing in Sea Water may ſtrengthen the Glands of the Skin, and by that Means leſſen the Quantity.

There is another Kind of *Atrophy*, to which Infants and Children are ſubject, which ariſes from an Infarction of the Mouths of the lacteal Veſſels, by a viſcid Matter, and from an Obſtruction of the Glands of the Meſentery; whence theſe little Creatures are almoſt ſtarved to death, though they can ſwallow their Victuals very freely. This viſcid Matter which obſtructs the Lacteals may be readily carried off by drinking the Sea Water; and the Obſtructions of the Glands of the Meſentery, if they are not become ſcirrhous, may be removed by the ſame Means. Likewiſe bathing in it may anſwer the ſame End as Frictions, ſo beneficial in this Diſorder.

If a NERVOUS ATROPHY, ſo called by the Moderns, is not one of the former, particularly the cachectic Atrophy, I muſt confeſs I cannot tell what it is. For in all Kinds of Atrophies, when the Nouriſhment of the Solids is impeded or derived elſewhere, the Nerves may be rather ſaid to ſuffer by the common Diſorder which injures the reſt of the Body, than to be the Cauſe thereof: For an Obſtruction of the Nerves produces Symptoms quite of a different Kind.

Sea Water is good for the Dropſy ſo far as it cleanſes the Body from Phlegm, either by Stool or Urine. But I never thought it was a Purge ſtrong enough to begin the Cure with. I have rather recommended bathing in it to perfect the Cure after the Waters have been evacuated, becauſe I judged it too weak to be truſted to alone. However, *Oribaſius* commends bathing in Sea Water againſt this Diſeaſe: And there is a Caſe in *Baynard* of a hard Drinker, who had a prominent Dropſy-Aſcites, whom he ſent to the cold Bath. But the Patient, of his own Accord, went to the Sea-ſide, and both drank and bathed in the Sea Water, returning in perfect Health. He likewiſe adds, that he had heard of ſeveral dropſical Patients who had been cured only by drinking the Sea Water: But of this I have had no Experience.

Marcellus Empiricus, writing about the Gout, ſpeaks thus, "As ſoon as the Violence of the "Fit is over in both Kinds [that is the hot as "well as the cold] the Feet muſt be fomented "with hot Sea Water. But if that is not to be "had, with hot Spring Water, in which Salt is "diſſolved." For when a Fit of the Gout is off, the Joints of the Feet continue exceſſive weak,

weak, and it is very probable this Kind of Fomentation will reſtore their Strength.

Cœlius Aurelianus recommends bathing in the Sea Water againſt a ſcirrhous Liver or Spleen, and, after the Tumor is ſoftened, a Cataplaſm with Salt. But I muſt own I have always been in great Doubt whether a ſcirrhous Tumor can be reſolved or not.

Perhaps the Reader will think I have given a long Catalogue of Diſeaſes that are to be cured by the ſame ſimple Method, which indeed is true, if he only regards the Names, but if he conſiders the Cauſes, he will find I have not mentioned too many.

From what has been ſaid it will appear, that this Method of Cure is no Invention of the Moderns, but was known to the Fathers of Medicine while it was in its Infancy. However, I would by no Means have Patients or Phyſicians look upon it as a Panacea to be uſed unadviſedly in any Caſe, much leſs to recommend it as the *one Thing neceſſary* for thoſe Diſeaſes in which it is ſerviceable: For we ſhould enquire into the natural Diſpoſition of the Body of the Patient, as well as into the Genius of the Diſeaſe. Inſomuch that we ſhould not only conſider what will cure this Diſeaſe, but what is moſt convenient for this Patient in this Diſeaſe at this Time; for I well know that ſome of theſe Diſeaſes beforementioned, will ſometimes want the Aſſiſtance of other Remedies; that many of them may be cured by other Methods, and that almoſt all of them are ſometimes incurable.

However, the Uſe of Sea Water in theſe Diſeaſes is not to be neglected; and yet to ſay the Truth, whatever peculiar Virtue the Sea Water

may have, it ſeems to me to depend entirely upon bathing, and its external Uſe. For you may remember in the firſt Caſe while it was uſed only internally, the external Uſe being omitted, the Diſeaſe grew worſe. Likewiſe the Patients in the fifth and ſeventh Caſes received no Benefit from drinking it, and bathing together; but as ſoon as the former was ſuſpended, the good Effects plainly appeared. Beſides, I never met with any Patient that was relieved by the purging Virtue of Sea Water, that would not have received the ſame Benefit from other Cathartics, appropriated to his particular Caſe, when the ſame Aſſiſtances were uſed along with them, I mean bathing in, and the external Uſe of Sea Water: For when the Humours are brought to ſuch a State, as to be ſafely carried off by Stool, it is of little Conſequence what Medicament is made Uſe of for that Purpoſe, provided a due Regard is had to the peculiar Conſtitution of the Patient, and the Nature of the Diſeaſe. But it may be done by other Means; it may be done by Sea Water in Caſes wherein it is judged to be proper. But as for thoſe it does not agree with, by creating an Uneaſineſs in the Stomach, there can be no Neceſſity of troubling them with it, eſpecially in theſe Days when there is ſuch an elegant Variety of efficacious purgative Medicines, which may be exhibited in different Forms, and which may be ſuited to every Diſeaſe in which purging is required. It was for want of ſuch Advantages as theſe that the Ancients had Recourſe to the internal Uſe of Sea Water.

But what I have ſaid of the Virtue of Sea Water hitherto, is to be underſtood only of its purging Quality; for when cold Humours are to be deſic-

deſiccated, it may ſometimes be more efficacious than other Purges. Beſides it is the mildeſt of all hot acrid Purges; likewiſe it may be looked upon as a warm diuretic: and from theſe two Qualities all the Effects of Sea Water taken inwardly may be deduced. I have ſometimes tried what it would do as an Alterative given in a ſmall Doſe, but I never could perceive the leaſt Advantage from the Uſe of it.

Thus have I ſaid all that I intended concerning Sea Waters; and whoever will credit my Aſſertions, and attend to the Conſequences that may fairly be deduced from them, will never have Occaſion to repent. But if any Perſon ſhould think all that I have ſaid of no Value, he is welcome; for I ſhall not endeavour to perſuade him to the contrary.

I could have added a great Number of Caſes to confirm all that I have advanced, but I thought it needleſs to ſtuff this Treatiſe with ſuch a tedious Collection. Things that are true cannot be made more ſo by a Multitude of Examples. Beſides, I was afraid of diſguſting the Reader, if I inſiſted too long upon Inſtances of this Kind, which related chiefly to my own Practice. And ſome would be apt to ſay I was writing a Treatiſe on myſelf, rather than Sea Water.

There may be ſome Things in which I ſeem to claſh with Dr. *Ruſſel*'s Account of Sea Water, and ſome may think I have done it with Deſign. But this is ſo far from being true, that I had written the greateſt Part of this Commentary before I had ever heard of Dr. *Ruſſel*'s Book or Name. But I could not help taking Notice while I was reading this Book, that though the Author ſays a great deal concerning the internal Uſe of Sea

Water, yet in all his Caſes which he wrote himſelf, or received from his Friends, which he thought proper to publiſh, there are only four who experienced the internal Uſe of Sea Water alone, except one to whom it was given by way of a Clyſter. In the reſt it is joined to the external Uſe, to which the principal Effects ſeem to me to be owing, or elſe with other Medicines, which have been noted for their Efficacy againſt particular Diſeaſes; and in moſt, both theſe Aſſiſtances were uſed. In the eighteenth Caſe, the Strength of the Diſeaſe was ſaid to be weakened by Antiſcorbutics, joined to the Uſe of Sea Water; for many Medicines had before been taken in vain, and, among the reſt, Sea Water. Therefore I think we ought to attribute the Alleviation to the prudent Uſe of other ſelect Medicines, which this Author employed, rather than to the drinking of Sea Water.

Nor does it ſufficiently appear how much we ought to attribute to Sea Water in the other Cures, notwithſtanding his Account of opening the Obſtructions of the Glands is ſo very well written. He likewiſe affirms, that Patients may indulge themſelves in the plentiful drinking of Sea Water, from the Example of a Woman who drank a large Quantity, *viz.* Twenty-five Gallons, without any Harm. Perhaps forgetting we cannot infer Univerſals from particular Caſes. See Caſe 32.

I muſt needs own I have not been ſo fortunate as to make the ſame Obſervation, nor have I been ſo happy as never to have perceived any Inconvenience from the free internal Uſe of Sea Water. I entertained the firſt Doubt from the Correctors of the Medicines which are to be met with in the

the Writings of the Ancients These were ſo well acquainted with their Effects on human Bodies, and have delivered their Obſervations ſo faithfully down to Poſterity, that I rather believe they attempted to correct Sea Water from their Experience of the Inconveniences that attended the Uſe of it, than that they invented them purpoſely for the Sake of ſeeming to correct it. This I have often ſeen confirmed by my own Experience.

It is worthy Notice, that among other Methods of correcting Sea Water, that of *Dioſcorides*, by keeping it ſome Time, is much celebrated. Wherefore thoſe who live at a Diſtance from the Sea, are perhaps leſs liable to its bad Effects. But indeed the beſt Corrector is the Uſe of it prudently directed.

It is my Cuſtom, if the State of the Diſeaſe will bear it, to abſtain from all other Medicines during the Uſe of Sea Water; though I muſt acknowledge, that in ſome grievous Diſeaſes, Helps of all Kinds ſhould be called in. However, when you are trying the Effect of one Medicine, if another be joined to it you will not be able to judge to which of the two the Effect is owing.

Thus having taking Notice of the Nature and Principles of Sea Water, perhaps it will be no hard Matter to find out ſomething that will ſupply its Place, particularly by diſſolving Bay Salt in ſoft Water, or common Salt together with *Epſom* Salt, in due Proportions; as alſo Sal Ammoniac. I mention theſe Things for the Sake of thoſe that live at a Diſtance from the Sea-ſide, and who, by their Affairs or Circumſtances, are prevented from coming to ſuch Places. But as

for thoſe who are willing to travel a good Way to uſe theſe Waters, or who live in maritime Places, it cannot be expected they ſhould uſe any Succedaneum.

I ſhall now bid the Reader farewel, hoping he will receive Benefit from this Treatiſe in general; or at leaſt that he will find ſome uſeful Hints whenever he thinks proper to drink the Sea Water.

AN

ACCOUNT

OF THE

Nature, Properties, and Medicinal Uſes

OF THE

MINERAL WATERS

IN THE

Different Parts of ENGLAND.

IN treating of the Mineral Waters, which are to be found in different Parts of *England*, I ſhall begin with the moſt famous, and afterwards proceed to thoſe of leſs Note, let their Efficacy be what they will. BRISTOL WATER is one of theſe, and proceeds from a Spring, not far from *Briſtol*, which in that City is called the *Hot Well*: The Rock from whence it proceeds, ſtands on the North Side of the River *Avon*, and affords a romantic and beautiful Proſpect. This Rock is of Lime Stone. as are all thoſe called St. *Vincent's* Rocks in general, which is extremely hard; and lapis calaminaris, is found in plenty in the Neighbourhood.

The *Hot Well* Water newly drawn is of a whitiſh Colour, at leaſt ſometimes, which it looſes gradually as it grows cold, and many ſmall Bubbles ariſe in it, after taken immediately from the Pump, for half a Minute or more, as though it were in a State of Fermentation, and theſe ſparkle, and ſeem to bound therein. The Cauſe of this inteſtine Motion is ſuppoſed to be Air, or ſome other elaſtic Subſtance, becauſe they roll over each other with great Facility, according to Dr. *Sutherland*, and preſerve the Water from Putrefaction; though I muſt confeſs I cannot ſee how this ſhould be a proof of his Aſſertion.

The Taſte is exceeding ſoft, pleaſant, and milky at the Spring Head, and very agreeable to the Stomach; but it leaves a ſort of Stypticity on the Palate. It is entirely without Smell, and is only lukewarm to the Touch. It keeps well in Bottles that are well ſtopped, loſing only a Part of the elaſtic Air, which flies off before the Corks can be put in. With regard to Chemical Experiments, if a Glaſs of Water is poured upon a few Grains of Sal Ammoniac, it immediately diſſolves it, with a very ſenſible Effervescence. A few Drops of the Spirit of Sal Ammoniac, made with Lime, dropped into a Glaſs of Water, produces the ſame Effect. A Solution of any fixed alcaline Salt, diſſolved by the Moiſture of the Air, not only produces the ſame Effect, but renders the Water milky, which after it has ſtood a while, goes off, and leaves behind it a light earthy Precipitate. When Soap is diſſolved, and ſome of it dropped into a Glaſs of Water, it immediately curdles, and in a ſhort Time the Surface will be covered with a greaſy Subſtance; while

while the Water below loſes its Tranſparency, and becomes turbid. Oil of Tartar gives it a bluiſh white Cloud, and Spirit of Sal Ammoniac renders it white, as well as Lime Water. The Solution of Sugar of Lead precipitates a white Sediment, and that of Allum produces white Grumes, and a few Bubbles. Twenty Drops of the Solution of Silver, mixed with three Ounces of the freſh Water, in three Hours time, made it appear, as if a ſmall Quantity of Ink had been dropped thereinto.

Theſe ſeveral Experiments ſeem to declare, that there is ſome degree of an Acid, in the *Briſtol* Water, though not diſcoverable by the Taſte; or as others think a ſmall Portion of Sulphur, which is no Contradiction to the former Suppoſition. This laſt Opinion is farther confirmed, becauſe that when the Bottles wherein this Water is contained, happen to be broken, it will ſtink very much. However, ſome have affirmed, that if 15 Drops of Oil of Vitriol, be added to two Ounces of the Water at the Fountain, it diſcovers an infinite Number of extremely ſmall Bubbles, which in a Minute or two diſappear; and if 15 Drops more be added to the ſame Water, this Appearance will be renewed, and ſo on till the fifth or ſixth Time; which is ſomewhat ſtrange. It is hard to ſay, how this Ebullition ſhould be produced, if this Water contains an Acid; beſides, diſtilled Vinegar will excite a very ſmall Fermentation.

Galls added to this Water, will not turn it to a purple Colour, but it will be a little bluiſh near the Surface, which after ſtanding three Days becomes Green. Dr. *Browning* has obſerved, that *Briſtol Water* being frozen, and afterwards thawed,

thawed, depoſites a white calcareous Sediment, very much reſembling the calcareous Earth contained in Sea Water. The Contents of a Gallon of this Water, is about 34 Grains, when evaporated the common way; but if the Water be drawn off in a Glaſs Retort, in a gentle Sand-heat, 56 Grains may be gained therefrom. This Sediment is of a light grey Colour, of a brackiſh Taſte, which is bitter in the Throat; and which makes an Ebullition with Acids, and turns green with Syrup of Violets, after ſome Time; but if ſome of it be put on a red hot Iron, it ſparkles, and has a ſtinking Smell.

The Salt that may be ſeparated from this calcareous Subſtance is white; but it will not ferment, with diſtilled Vinegar or Oil of Sulphur. When thrown upon a red hot Iron, it riſes in Bliſters, and in the Air it grows damp. Dr. *Keir* affirms it will ſhoot into hexagonal Chryſtals, interſperſed with ſome that are cubical. The Earth ſeparated from the Salt and dried, ferments with Acids, and by Calcination becomes Lime. The proportion of the Earth to the Salts, in one Experiment was as 15 to 11, and in another as 13 to 11.

Briſtol Water differs from that of *Bath*, in its lightneſs, for it is but a little heavier than Rain Water, whereas the *Bath Water* is much heavier, and they likewiſe differ in their Virtues; for that of *Bath*, is a powerful Attenuant, deobſtruent, and laxative, with a ſtrengthening and heating Quality: But the *Briſtol Water* thickens the Humours, and is aſtringent; and it is ſo cooling, that it is ſucceſsfully preſcribed in internal Inflammations, hectic Fevers, Coughs, and the Scurvy attended with Heat. It is alſo cleanſing

and

and balſamic, and theſe Qualities render it very uſeful in curing the Diabetes, as well as in all Obſtructions of the urinary Paſſages from the Gravel. It does not entirely loſe theſe Qualities when it is brought to *London*, but it is moſt efficacious when drank warm from the Spring.

Briſtol Water alſo promotes an Appetite and helps Digeſtion; and when it is drank it leaves no diſagreeable Taſte in the Mouth, as many Mineral Waters do. In the firſt Stages of a Conſumption it is exceeding good, but when the Lungs are too far gone, the Uſe of it is to be avoided. When People drink this Water warm from the Spring at firſt, it proves an Aſtringent, and renders them coſtive; but this little Inconvenience is ſoon over.

Sometimes likewiſe it will occaſion a ſort of an Uneaſineſs in the Head, which has occaſioned many to leave it off; but this bad Effect ſoon ceaſes, and its more ſalutary Operation will ſoon be perceived.

Others have left this Water off becauſe they have received no immediate Benefit from it; not conſidering that the Effects of this Water are very ſlow; but then, when ſuitable to the Caſe, they are always ſure. There have been ſome Inſtances of Perſons who have left it off, and yet have afterwards found they have received Benefit from it, which has cauſed them to repent they did not continue it longer.

Phyſicians inform us, that the *Briſtol Water* is good in Diſorders of the Eyes, and will cure obſtinate Ulcers therein; beſides which, many with weak and inflamed Eyes receive great Benefit therefrom, if it be taken warm from the Pump in a Cup, and applied with a ſoft Rag. It has alſo

cured

cured many ſcrophulous Ulcers, merely by waſhing them in this water; and, according to ſome, it has cured cancerous Ulcers, by daily waſhing the diſeaſed Part with this Water, and fomenting it with Linens dipt therein, drinking the Waters daily at the ſame time. It ſtrengthens the Stomach, quenches Thirſt, cures Windineſs and the Heart-burn. It ſometimes throws out Pimples on the Skin, which is a certain Sign of its good Effect: and it cures all ſorts of Cholics proceeding from acrimonious Matter, when other Remedies have failed; but it is moſt ſerviceable in hot and dry Conſtitutions. Sometimes it will bring on a Diarrhœa, which is probably produced by the Acidity of the firſt Paſſages, forming a neutral Salt with the abſorbent Earth of this Water; which likewiſe will ſometimes happen in the Uſe of other Waters that are not purgative.

It has been found ſucceſsful in the Bloody Flux, and in Ulcers of the Guts, Kidneys and Bladder. It generally ſtops all Fluxes, and checks immoderate Secretions of Phlegm from the Lungs and adjacent Parts; as alſo exceſſive Diſcharges from the Guts, Kidneys and Matrix. Thus it ſtops a Diabetes as before obſerved, a Fluor Albus, and a Gonorrhœa. However it is obſervable, that though ſometimes it will cure a Diabetes in three Weeks, it ſometimes will not do it in leſs than ſo many Months; but it will make a perfect Cure at laſt.

It will ſtop Bleedings of every Kind from whatever Part they proceed; it will alſo cure hectic Fevers from purulent Ulcers, whether external or internal, as well as Conſumptions of the Lungs, if the Drinking of it is not deferred too long;

long; though ſome have affirmed it has cured manifeſt Ulcers when the Body was waſted to a Skeleton, when nocturnal Sweats were produced, and when a Looſeneſs ſupervened; but this may juſtly be doubted.

It has, as was obſerved before, been of great Service in the Gravel, as well as in the Stone and Stranguary, in the Scorbutic Rheumatiſm, and in red Pimples in the Face; as alſo in rheumatic and gouty Pains.

The Method of drinking this Water, when a Patient firſt comes down is to go to the Pump-Room in the Morning, and drink a Glaſs or two before Breakfaſt; and about five in the Afternoon to return and take another or two. The next Day the Patient takes three Glaſſes before Breakfaſt, and three in the Afternoon; and this he continues during the Time of his ſtaying at the Hot Wells. Theſe Glaſſes hold each a third Part of a Pint, and half an Hour's time is allowed between each Glaſs; during which time he either ſits on a Bench in the Pump-Room, to hear the Muſic which plays every Morning, or elſe he goes out and takes a Walk on the Side of the River *Avon*, where he may ſee a great Number of Ships paſſing and repaſſing almoſt every Tide.

Beſides the ſix Glaſſes, which is the uſual Quantity every one drinks, ſome take a ſingle Glaſs an Hour before Dinner; but this has not always the ſame Effect, for it creates an Appetite in ſome, and takes it away in others. Others again ſend for it to their Lodgings and drink it as common Water, either alone or with Wine; ſome make their Tea with it, and others make it the Baſis of their Punch.

Some

Some are apt to imagine, that when they have drank their three Glaſſes in a Morning they ſhall have no Occaſion for Breakfaſt; but this is a Miſtake, for they ſoon find themſelves to have a very ſtrong Appetite, and to eat a heartier Breakfaſt than at other Times; even People, in a bad State of Health, find themſelves much more hungry than before they began to drink the Water.

Briſtol Water is undoubtedly beſt when drank upon the Spot; however it continues tolerably good, when brought to *London*, or to any other Part of the Kingdom. It is never to be put into Cellars, nor any cold damp Place; for the warmer and drier it is kept the better. At the time of Uſe, it will be proper to put the Bottle, with the Cork taken out, as high as the Neck, in boiling Water, for a few Minutes, and then it will have much about the ſame Degree of Warmth as at the Hot Well; and this not only renders it more agreeable to the Taſte, but in ſome Senſe reſtores its Virtues. However there is one Advantage in drinking it at the Well worth taking Notice of; that is, it coſts nothing there, nor is there any thing to be done but making a Preſent to the Maſter at going away, and a Trifle to the Servants.

Mr. *Owen*, who acknowledges himſelf to be no great Philoſopher, thinks the Virtues of the Water are not owing to the Solution of any Subſtances therein; for when, ſays he, many other Waters are examined by Evaporation, there remains a Salt which poſſeſſes the ſame Virtues; or elſe an earthy Matter, to which they have in ſome Degree owed that Origin; but nothing like this is the Caſe when we make the Hot Well Water a

Subject

Subject of the like Experiments. When a Gallon of *Briſtol Water*, continues he, has been evaporated, there ſcarce remains any thing perceptible in the Veſſel; but in this he is much miſtaken, as appears from the Account given above of the calcareous Earth remaining after Evaporation. But what he ſays of their Expedition in bottling the Water, and corking it inſtantly to preſerve its Spirit; and the vaſt Quantities of Air Bubbles that riſe in it, when freſh filled and expoſed to the Sun, is certainly true; as alſo that it will not lather with Soap unleſs firſt boiled. He obſerves farther, that it is a moſt plentiful Spring, though, like moſt others, it falls in dry Weather. It is alſo obſervable, that they are obliged to leave off pumping a few Hours in the Day, for a Day or two before, and two or three Days after, every new and full Moon; becauſe at the times of the Spring Tides, the Salt Water of the River *Avon* uſually riſes very high, ſo as to break into the Hot Well Spring. But when there has been much Rain, and the Spring is full, it in a great Meaſure reſiſts the Spring Tides, and they affect it very little; however when the Seaſon is very dry, and the Spring low, it hurts the Hot Well conſiderably; and yet by continual pumping, the Water will be rendered bright and pure again as at firſt. Upon the whole, the lateſt Writers upon this Subject have concluded, that beſides the pure elemental Water, there is a volatile Spirit, a vitriolic Acid, a marine Acid, a neutral Salt, and an abſorbent Earth.

Of the Waters of BATH *in* Somerſetſhire.

THERE are few Phyſicians that are ignorant of there being hot Mineral Springs in various Parts of the World, and that they were formerly thought to be heated by ſome ſubterranean Fire, or at leaſt that they had a Paſſage thro' mineral Strata that were actually hot; but the lateſt and perhaps the beſt Writers upon this Subject, though they do not deny a ſubterranean Heat, yet they believe it is owing to the Stone called Pyrites, which conſiſts of ferruginous and ſulphurous Particles. But this perhaps is not univerſal, becauſe many of the Springs that are met with in *Naples* and *Sicily*, not far from the burning Mountains, moſt probably owe their Heat to the actual Fires that are kindled in the Bowels of the Earth.

They are of different Degrees of Heat, for ſome are only lukewarm, others will harden an Egg, and others will boil fleſh Meat ſooner than a Kitchen Fire. Some pretend that the Springs in *Ireland* are ſo hot, that they will boil a Piece of Beef in a Quarter of an Hour's Time, which is altogether improbable. What is ſaid of other hot Springs is more likely to be true, namely, that they will kill any Animal that falls thereinto.

But whatever the Cauſe be of Heat in theſe Waters, it is certain it is not proportionable to the mineral Subſtances diſſolved and contained in them; becauſe ſome of them when cool are as clear and well taſted as any other Water, and as healthful to drink. However it is certain that many of theſe Waters are impregnated with Sulphur, Bitumen, Sea Salt, Natron, Earth and Iron, in various Combinations and different Proportions.

tions. This is partly evident from the hot Springs in ſome Parts of *Italy*, where Bitumen or Petrolæum are often ſeen to ſwim on the Surface; and there are others which ſend off Vapours that will take fire if a Candle is held near them; but this laſt Circumſtance is not always accompanied with hot or warm Water, ſince the Spring is often found to be actually cold. There is an Inſtance of this Kind at *Broſby* in *Shropſhire*. Hence it appears, that nothing can be determined about the Nature of hot Springs in general, any more than concerning cold mineral Waters; for which Reaſon a chemical Analyſis will be always proper to determine their Nature in part; for I am afraid it will be inſufficient to diſcover their Nature ſo fully as to be able to determine their medicinal Effects therefrom.

A ſmall Quantity of the *Bath Waters*, when viewed by itſelf, appears clear and tranſparent; but when beheld in the Bath, the Surface has a greeniſh Caſt, or it is rather of a Sea Colour. The Smell is not very agreeable, eſpecially of the hot Bath; and when it is quite freſh it has a ſoft and milky Taſte; but when carried to a Diſtance, it is ſomewhat nauſeous and ſaltiſh. Dr. *Baynard*, who was ſufficiently acquainted with theſe hot Springs, affirms, that in a great Drought, and when the Wind is about North Eaſt, the Water is ſomewhat acidulated with a volatile Gas, not much unlike the grateful Acid of the *German* Spaw Water.

The Country about *Bath* is very hilly and uneven, but the Hills lie pretty regular; and they are generally rocky and ſteep from South-weſt and by Weſt to North-eaſt and by North. The whole Face of the Country, within five or ſeven Miles,

Miles abounds with Coal Mines; but there are no other, that we know of, any nearer than ten Miles diſtance, among *Mendip Hills*, excepting ſome of Lead at *Bury* in *Gloceſterſhire*, which lies to the North of this Place, about four or five Miles diſtant.

The Town and Baths are of very great Antiquity, inſomuch that ſome aſſert, they were known Eight hundred Years before Chriſt. Some have affirmed, that the City is moſtly built upon a Quagmire; however this is certain that Mire has been found by digging, about ten Feet deep, without the North Gate; and ſometimes at ſeven or eight Feet they have met with Oyſter Shells.

The Town and circumjacent Country generally abound with cold Springs; and in ſome Places the hot and cold ariſe very near each other. In one Place they are within two Yards, and in others within eight or nine of the main Baths.

The Water of theſe Baths is ſaid to be twenty-two Grains in a Pint heavier than diſtilled Water; and that at the different Seaſons of the Year, the Water of each Bath, when tried by a Thermometer, has always been invariably the ſame. But this is contrary to what the Guides have experienced; though they perhaps will not be allowed to be ſufficient Judges. There is one remarkable Circumſtance, that this Water will keep its Heat, for ſeventeen Hours or longer, in a froſty Day, and when the Window is kept open all that time; which Water heated to any Degree by Fire will not do. There is a conſiderable Difference in the Heat of different Baths, inſomuch that ſome have obſerved, that a Patient can better endure to remain four Hours in the Croſs Bath, than an Hour and a half in any of the reſt. The King's Bath has

has ſo hot a Spring, that it can ſcarcely be borne; yet it is not hot enough to harden an Egg. Others ſay that called the Hot Bath has ſo great an Heat that it can hardly be endured; that the King's Bath is a Degree leſs hot, and the Queen's Bath moderate.

With regard to the Experiments made with it, it will, when carried at a Diſtance from *Bath*, precipitate Silver out of Spirit of Nitre, more than Salt Petre, into a hardiſh Curd, but not ſo much as common Salt; hence ſome conclude, that Sea Salt predominates in *Bath Water*. Dr. *Hilary* obſerved that the Water of the King's Bath and Hot Bath turned the Solution of Silver white with a bluiſh Caſt, which became gradually more dark coloured, and then depoſited a dark grey Sediment. Likewiſe the Solution of Sugar of Lead precipitated a white Powder, intermixed with ſeveral greyiſh Spots. Add to this, that the Solution of *Engliſh* Vitriol exhibited a pearliſh Colour, with the King's Bath and Hot Bath, and both became covered with a thin variegated Pellicle, which was of a more purpliſh Colour with the Hot *Bath Water*.

With Oil of Vitriol and other Acids, the *Bath Waters* will excite ſome inteſtine Motion, and greatly blunt the Acidity. If one Part of boiling Milk be added to two Parts of *Bath Water*, a thin Whey and Curd will appear, if the Water be juſt taken up. A Dram of Syrup of Violets gives a graſs-green Colour to an Ounce of the King's Bath, as well as of the Hot Bath, in twenty-four Hour's time.

Some Trials ſhow that there is a vitriolic Principle in the *Bath Waters*, but then it ſoon flies off; for if it be taken freſh from the Pump, eſpecially

eſpecially in clear froſty Weather, Galls will tinge it of a purple Colour; but when cold they ſcarce make any Alteration at all. Each Bath will retain this purple Colour in proportion to its reſpective Degree of Heat. *Charlton* has obſerved, that the King's Bath will take the Tinge as ſtrong again, with the ſame Quantity of Galls, as the Hot and Croſs Baths will do; and that Logwood will give a deep Violet with them all. The Water of all the Baths, kept twenty-four Hours in an open Phial, will looſe the Property of being tinged with Galls, except in froſty Weather. But by dropping in Spirit of Vitriol, or Spirit of Sulphur, may be preſerved for a great Length of Time.

It is generally thought to be owing to the ferruginous Principle of *Bath Water*, that it will make better and blacker Ink than common Water; and that the Sand kept a while, expoſed to the Air, becomes vitriolic, and will make Ink with the Infuſion of Galls. It has been generally ſaid, that the *Bath Water* will turn Silver to a gold Colour; but this has been long diſcovered to be a Fraud, and that it has been done with ſtale Urine, or with the old Mud of piſſing Places. This was formerly made uſe of as an Argument to prove there was Sulphur in the *Bath Water*; but there has been no Method found of ſeparating or collecting any ſuch Subſtance. However Silver, that was immerſed a long while in one of the Springs, became firſt of a copper Colour and then black; and Pins that have been accidentally dropt have turned partly black, and partly of a gold Colour; but this is no more than what will happen in common Steel Waters.

It has been obſerved that Iron Bars, or any thing elſe made of that Metal, will be greatly coroded by Length of Time, which is ſuppoſed to be owing to a ſubtile vitriolic Gas or acid Vapour; and the Croſs Bath has eaten ſo much of a Shilling, in a Week's Time, that it might be wrapped about one's Finger. That there is an Oker in this Water, appears from the yellow Colour of the Stones, in the Bottom of the Bath, and from the yellow Matter like thin Cream, found floating on the Surface of the Water, when at reſt in the Winter Time. However this Oker evaporates in part, becauſe it has been found ſticking to Places expoſed to the Steam of the Bath; and yet there is nothing of a yellow Colour found in the Sediment of the *Bath Water* after Evaporation.

It is concluded, that there is a Mixture of a calcarious Subſtance with the Oker, from the white and yellow Sediment depoſited by the Water; from its growing white and turbid like Whey, from ſtanding, and from the Earth which is like Lime, andwhich is found adhering to the Bottoms of the Canals that convey the Water. The Mud of the Water conſiſts of a blue Clay, with ſome teſtaceous Particles; and when it has been uſed as a Cataplaſm, it has ſomewhat of a Smell of Sulphur; and when rubbed on Silver it changes it black, according to *Charlton*. Likewiſe the Sand thrown on a red hot Iron, emits a blue Flame, with a ſulphureous Smell and on being expoſed to the Air, becomes vitriolic; add to this, that if it be digeſted, for a few Days, in diſtilled Rain Water, it becomes poſſeſſed of all the Properties of a natural Chalybeate, according to the ſame Author.

It has formerly been diſputed whether there has been any bituminous Matter in *Bath Water* or not; but later Authors are fully convinced that it has, from the Experiments they have made. The artificial Analyſis commonly yields a little above two Drams of ſolid Contents, from a Gallon of Water, though it is taken from any of the Baths. Dr. *Hilary* obtained 155 Grains from a Gallon of the Queen's Bath Water; 139 from the Hot Bath, and 130 from the Croſs Bath. The Quantity of a calcareous and argilaceous Subſtance is double to that of the ſaline; for the Quantity of Salts in each Gallon ſcarce exceeded forty Grains; and the reſt of the Matter is a Grit, with a blue ſulphureous Earth or Marle, according to Dr. *Hales*. This Gentleman obtained ten Ounces, and five Drams and a half of Sediment, from an Hogſhead of *Bath Water*; but *Guidot*, in froſty Weather, got fifteen Ounces and ſix Drams from the ſame Quantity; of which, five Ounces and three Drams were Grit; two Ounces a Dram and a half, a blue ſulphureous Earth or Marl; and three Ounces ſeven Drams and an half were Salt. Of this more than two Parts in three were common Salt, and the reſt Nitre. The groſs Remainder emits a ſtrong ſulphureous Smell, with a blue Flame, upon Calcination; by which Operation a fourth Part of the Weight is loſt by burning away. It appears that ſomewhat ſulphureous adheres to the Oker, Mud and Sand, from the Obſervations above taken Notice of; and likewiſe the Lye of the Salts has a ſulphureous Smell, and the Salts being melted emit a blue Flame.

From theſe Experiments it appears, that the Minerals in *Bath Water* conſiſt of a calcareous and

and marly Earth and Oker, a marine or Sea Salt, a little calcarious Nitre, a Gas of Vitriol, a little Bitumen, and a very ſmall Quantity of Sulphur, inſomuch that this laſt can be made to appear no otherwiſe than by Conſequences, or at leaſt not much more.

In the Philoſophical Tranſactions we are told, that the *Bath Waters* are uſeful in Diſeaſes of the Head, ſuch as Palſies, Epilepſies, and Convulſions; in Diſeaſes of the Skin, as Leproſies, the Itch, and Scabs; in all Obſtructions of the Bowels, as of the Liver, Spleen and Meſentery; in Scirrhoſities and Hardneſs of thoſe Parts; in moſt Diſeaſes of Women, and in the Scurvy and Stone.

It is now generally agreed, that the *Bath Waters* are a moſt powerful Deobſtruent, and that their Energy is ſo great, and their Operations ſo ſudden, that a very exact Preparation of the Body is required, and a ſtricter Regimen than in drinking other Waters. But be this as it will, it is moſt certain that Regard muſt be had to the Habit of Body, the Seaſon of the Year, the Symptoms of the Diſeaſe, the Changes of Weather, and the different Degrees of Heat in the ſeveral Baths. As for Inſtance, the Heat of the King's Bath, without due Precautions, is apt to inflame the Blood, heat the Bowels, and ſometimes to cauſe a Fit of the Gout. It is alſo ſaid, that a Palpitation of the Heart is often increaſed by bathing; and that in a very hot Seaſon, and in Caſes highly ſcorbutic, with a hot and ſharp Blood, bathing, except in the moſt temperate Baths, is commonly forbid.

The general Virtues of the *Bath* Waters, whether by bathing or drinking, are thus enumerated; externally they heat, dry, attenuate,

reſolve, and ſtrengthen, and have a ſingular Efficacy in Diſeaſes from a cold and moiſt Cauſe. They eaſe Pains, diſperſe cold Tumours, and dry up moiſt Ulcers; they are very advantageous in phlegmatic Diſeaſes, and for cold, moiſt, and groſs Bodies; and it is remarkable, that nothing more effectually prevents too great a Corpulency, than the frequent Uſe of theſe Baths.

This, as well as ſome other Mineral Waters, will cauſe a red Eruption and Roughneſs of the Skin, not unlike the Itch, which by continuing the Uſe ſoon diſappears. Bathing in them not only cures Contractions, but Relaxations of the Limbs, and reſtores loſt Senſe and Motion; but the Hot Bath and King's Bath are more ſtrengthening than the Croſs Bath, and fitter in cold Diſorders and phlegmatic Temperaments. That frequent Bathing is ſalutary and ſtrengthening, appears from the Guides, for they generally live to a great Age; and ſome have been an hundred Years old. It alſo appears from hence, that is, let two Children be taken, of equal Strength and Vigour, and let one bathe and the other not; and that which has bathed ſhall be able to walk better and ſteadier at a Year old, than the other at fifteen Months.

However it is obſervable, that Bathing is not proper in a Fit of the Gout; for if any one puts his Feet into a Bath, while it is upon him, it will cauſe it to rage much more, or will ſtrike it in. However it may be of great Service in the Decline of the Gout, becauſe it prevents the Fixation and Concretion of the gouty Matter, and ſtrengthens the Part. It alſo is highly ſerviceable to thoſe whoſe Sinews are impaired and crippled by ſevere Fits and their frequent Returns.

Theſe

Theſe Waters being taken internally, in large Quantities, that is, to two or three Quarts, will commonly give two or three Stools extraordinary. This is remarked particularly of the Hot Bath, that it generally keeps the Body open, while the King's Bath has a contrary Effect. When they are drank quick, and not thrown up again they purge moſt and paſs ſooneſt; but if taken ſlowly they are longer in paſſing, and are moſtly diſcharged by Urine, and ſometimes by Sweat. In ſome they will not paſs off till Midnight, and yet with very good Succeſs; they are obſerved to quench Thirſt, which they will do more certainly than double the Quantity of any other Liquor. They affect ſome with Sleepineſs or Giddineſs, almoſt as if they were drunk, when they are firſt taken.

When uſed as an Alterative, they dilute, attenuate, ſweeten, ſtrengthen, and heal; they correct the Acrimony of the firſt Paſſages, and are good in many Diſorders of thoſe Parts; they ſupply a Want of Spirits, and are good in Diſeaſes where the Secretions are diminiſhed; whereas the *Briſtol Waters* are of moſt Uſe, where the Secretions are increaſed; in all cachectic and ſcorbutic Habits of Body, and in Obſtructions of the Liver, Spleen, Pancreas, and Meſentery, as obſerved above.

As theſe Waters are hot, they are thereby rendered more agreeable to the Stomach, eſpecially of thoſe which have been hurt by ſpirituous Liquors. They have a more powerful balſamic healing Virtue than cold Mineral Waters, and they may be drank in all Seaſons of the Year. They are ſometimes very ſlow in producing their good Effects, inſomuch that ſome have received

little Benefit till a good while after they have returned Home.

The *Bath Waters* have been found to be good in Want of Appetite and Digeſtion, in Pains of the Stomach; in hypochondrical Flatulencies, the Heart-burn, frequent Vomitings from Weakneſs, and in Pains of the Cholic, as well when drank as bathed in; and they have done great Service in Cholics ariſing from a clammy Bile, with an Obſtruction of the Gall Bladder, and with Stones generated therein. There are Inſtances in their having cured ſcirrhous Indurations of the Liver, and particularly thoſe hard Tumours left after the Ague, called Ague-Cakes; and in theſe Caſes, bathing and drinking ought to be uſed alternately. Dr. *Baynard* affirms, that the *Bath Waters* properly uſed, are the beſt Remedy in the World for the Jaundice, and have alſo proved ſucceſsful in the Beginning of Dropſies. They are very profitable in hypochondriac Diſorders, Melancholy and Dejection of Spirits, by drinking only; for bathing in ſome of theſe Caſes is not to be uſed without a great deal of Caution. They have been found of great Uſe in Diſorders of the urinary Paſſages, particularly Sharpneſs of Urine, the Stranguary, Gravel, and Ulcers of the Bladder; in which laſt Caſe it muſt be both drank and bathed in. But the moſt celebrated Effects, which have been taken Notice of for a long while, is the ſtrengthening the nervous Parts, both by external and internal Uſe, but chiefly by the firſt.

It has been already obſerved, that they cure Contractions as well as Relaxations; but the Croſs Bath is moſt remarkable for the firſt, as the hotter Baths are for the laſt; and *Guidot* gives a ſignal

ſignal Inſtance of their Efficacy of curing a Prolapſus Uteri of eighteen Years ſtanding. *Pierce* takes Notice of the dead Palſy being cured chiefly by bathing and pumping the Part, and ſometimes drinking the Water. Thus likewiſe Lameneſſes have been cured, attended with falling away of the Fleſh, Coldneſs and Stupor of the Part. A Palſy of the Tongue has been cured by receiving the *Bath Water* from a Cock, at the Root of the Tongue, and another by bathing and gargling. Likewiſe a paralytic Difficulty of ſwallowing was cured by drinking, and afterwards by pumping the Neck and Throat. Children have been cured of Weakneſſes, the Rickets, crooked Limbs, Lameneſs, Numbneſs, and Contractions, and chiefly by bathing.

Dr. *Mead* had affirmed, in his *Monita Medica*, that hot Bathing was hurtful to paralytic Patients; but Dr. *Summers*, a late Phyſician at *Bath*, publiſhed an Anſwer thereto, and appeals to the Regiſter of the general Infirmary at *Bath*, where he finds the Account of theſe Patients to be as follows. In nine Years there was admitted 310; of whom 57 were cured, 151 were much better, 45 were no better, and 42 were incurable: Twelve of theſe died and three ſtill continued in the Houſe. All theſe bathed twice a Week and many thrice. Of thoſe that were cured or diſcharged as much better, 30 were forty Years old, 15 were turned of fifty, and 5 were ſixty and upwards. Beſides it muſt be conſidered, that moſt of them were turned out of other Hoſpitals as incurable. *Guidot* obſerves, that of 31 paralytic Patients, 25 were cured by bathing only; and the Foreſts of Crutches left there are an ample Teſtimony of the Efficacy of bathing in

paralytic Caſes. Palſies are now more frequent than formerly, which is owing to the Employments of ſeveral Tradeſmen, ſuch as Silverers of Glaſs, Colour-grinders, Plumbers, Pewterers, and Chemiſts; to which may be added, a great Number from the *Weſt-Indies*, who become ſo in Conſequence of the dry Belly-ach. There are alſoPalſies from the Scurvy, which have been cured by Bathing only, though the internal Uſe may be joined in many of theſe Caſes. Likewiſe Lameneſs from Loſs or Contraction of the Limbs, from Poiſons, arſenical and mercurial Applications, from Wounds, Ulcers, and Falls, have been cured by drinking, bathing, and pumping.

Theſe Waters are beneficial in cold Rheumatiſms, in ſome Circumſtances of the Gout, in old and wandering Pains, attended with low feveriſh Heat; and in fixed Pains, particularly in the Hip-gout and Lumbago, which have given Way to Drinking, Bathing, and Pumping. The hotteſt Bath is fitteſt for all cold or old Aches, becauſe it diſpoſes the Patient to plentiful Sweating. The Head itſelf may be bathed, with Caution, in violent Head-achs, from a Rigidity of the Membranes, or a Stricture of the Veſſels; but if this fails, they may be removed by pumping, which likewiſe cures Deafneſs from cold Cauſes.

Dr. *Oliver* the younger has given us an accurate Account, in what Circumſtances theſe Waters may be uſeful in the Gout. He affirms, that they are advantageous where the Matter is more clammy, but leſs acrid, than in the true inflammatory Kind; that is, when it lodges in the Tendons, thickening, hardening, and contracting them, and rendering them unfit for muſcular Motion;

Motion; but not ſharp enough to produce Chalk Stones. In this Caſe, bathing, rubbing, and pumping are very beneficial, and it ſeems to have been under theſe Circumſtances, that thoſe Perſons have been relieved, who have left their Crutches as grateful Memorials.

In the irregular, flying, nervous Gout, the Croſs Bath may be uſed, fifteen Minutes twice a Week. In thoſe who have long laboured under the Gout, that has made Havock of their Conſtitutions, depraved their Appetite, weakened their Digeſtion, and depoſited a chalky Matter on their Joints; after proper Evacuations, and particularly a Vomit has been premiſed, the *Bath Water* ſhould be drank ten Days before Bathing; and when the Patient bathes, the Bath ſhould not be too hot, nor the Stay too long therein. Beſides, its Uſe ſhould be foreborn, as Occaſion requires, leſt it brings on a dangerous Fever, or too ſuddenly diſſolve the gouty Matter, in Conſequence of which it may be depoſited on ſome of the noble Viſcera. He that expects to find much Relief in gouty Lameneſſes, muſt ſubmit to a long and tedious Courſe of Bathing, repeated at proper Intervals, and for many Seaſons ſucceſſively. When the Gout becomes irregular, and the Health is not ſo good as when it was periodical, the *Bath Waters* are of great Service, that is, after moderate Evacuations, and a ſhort Courſe of drinking the Waters, aſſiſted with proper attenuating Medicines, and bathing in the Croſs Bath twice a Week.

Some Phyſicians would have theſe Waters drank for a conſiderable Time in ſmall Quantities, with proper Intermiſſions, when the Gout attacks the Head, Breaſt, Stomach, or Bowels. Theſe Waters are of ſignal Service in many female Diſ-

orders; in all Diſeaſes of the Matrix, aſcribed to a cold and moiſt Cauſe, in the Pica, or Longing of Maids to eat Chalk, Coals, and the like, and in all Obſtructions; but in theſe laſt Caſes, aperient Medicines ſhould be joined to Bathing and Drinking. Theſe Waters are alſo of Uſe in ſcorbutic Diſeaſes, eſpecially when they are not attended with Heat; for they correct the Acrimony of the Blood, and have proved effectual in curing wandering Pains, and divers Eruptions of the Skin; inward Eroſions, Excoriations, and Ulcers, particularly by drinking them; but running Ulcers of the Head, and other Parts, thoſe of a ſcald Head and fiſtulous, are cured chiefly by Bathing, as are alſo leprous, ſcabby, and ſcurfy Diſeaſes, and Eruptions of the Skin, that appear like the ſtinging of Nettles. But they are moſt efficacious in the Leproſy attended with white and dry Scabs. Some recommend them in nervous as well as moiſt Aſthmas; however, no Baths ſhould be uſed, except the moſt temperate, in Coughs and hectic Fevers.

After all, it muſt be acknowledged, that the *Bath Waters* are not without their bad Effects, eſpecially the hotteſt; for theſe are prejudicial to Diſeaſes proceeding from a preternatural Thinneſs, or an inordinate Motion of the Humours, in Convulſions, in the Gout and Rheumatiſm in an inflamed State, in Inflammations of the Kidneys, and in the Stone. Likewiſe they are hurtful to thoſe, whoſe Brain, Lungs, Liver, or Kidneys are preternaturally hot, as Dr. *Mead* obſerves. A long continued Uſe of theſe Waters is detrimental to the Stomach, by relaxing its Fibres, and more eſpecially in thoſe Diſeaſes that are owing to ſome Fault in the nervous Fluid. They are alſo pre-

judicial

judicial in Bleedings of all Kinds, in the Bloody Flux, and in the Scurvy attended with Heat; as alſo, in a Penury and Languor of the Spirits, without an Ulcer or Spitting of Blood. Thoſe that are of a dry Conſtitution, or are emaciated, or have hectic Heats, or are ſubject to Spitting of Blood, or *St. Anthony*'s Fire, or an Inflammation in any Part of the Body, or to a Difficulty of breathing with Heat, ſhould avoid bathing. The uſual Seaſon at *Bath* for bathing and drinking the Waters, is in *April*, *May*, *June*, the latter Part of *Auguſt*, and all *September* and *October*. The proper Method of uſing theſe Waters ſhould be determined by a Phyſician who lives upon the Spot.

The Mud of this Water is not entirely uſeleſs; for ſome make a Poultice of it, and ſometimes they mix the Mud and Scum together, to which they add proper Herbs, boiled in *Bath Water* to the Conſiſtency of a Poultice. It is affirmed the Mud will ſoften hard Swellings, help Contractions of the Limbs, and diſſolve a ſizy Matter lying in any Part or Joint; it will alſo diſperſe Wind that diſtends it, and ſtrengthen the Joints and nervous Parts. It has alſo been found beneficial in ſcald Heads and running Ulcers of the Head, being applied as a Poultice till it grows dry; after which it muſt be waſhed off with warm Water.

Pumping any Part is now highly in Requeſt, becauſe it is found more beneficial, in ſome Caſes, than going into the Bath. Some receive from an hundred to two hundred, and ſometimes a thouſand Strokes and upwards; but then when it is going to be left off, it muſt be done gradually, that is, there muſt be a greater Diſtance between the Strokes, and the Diſtance muſt be increaſed by little and little. The moſt convenient Time

is in the Morning, or Evening, or near the Time of going to Bed, when the Stomach is not full. It is chiefly uſed in cold, fixed, inveterate Diſorders of the Head, Nerves, and Joints, particularly Contractions of the Tendons; but it does not at all agree with hot Tumors. Old Pains of the Arm, Hip, and Back, that could not be cured by common Remedies, have been removed by Pumping; but then the Part has received ſometimes three thouſand Strokes at a Time. An obſtinate Hip-gout was cured, firſt by pumping and then cupping the Part, after it was well warmed by that Method.

The uſual Time of the Continuance of Bathing and Drinking is generally five or ſix Weeks, and in an obſtinate Caſe they muſt be repeated every Year till ſome Relief is found. The common Quantity which is drank, is from a Pint to a Quart and half a Pint in a Day; but however ſome Phyſicians allow a great deal more in particular Diſorders, inſomuch that ſome are allowed a Gallon every Day; but then they muſt begin with a Pint at a Time, and increaſe half a Pint every Day till they arrive at the utmoſt Doſe, which muſt be leſſened again in like Manner. The *Bath Waters* always paſs beſt ſitting ſtill and lying in Bed; but the Patient muſt not ſleep till the Waters are pretty well gone off. If they paſs off too much by Stool, they ſhould be drank in ſmall Quantities, or in Bed, It is univerſally allowed, that the Waters are beſt drank at the Fountain Head, and yet in ſome Caſes they may be drank when cool, that is, when Perſons are young and full of Blood, or when there is a Spitting of Blood; but in this Caſe they are ſeldom preſcribed, though they have been drank with Succeſs; and *Oliver* obſerves, that in moſt Diſorders of the Lungs, they are better

better drank cold than hot. To what has been ſaid may be added, that proper Ingredients may be mixed with the *Bath Waters* in various Diſeaſes; but this ſhould be left to the Judgment of the Phyſicians at *Bath*, becauſe, from long Experience, they will be beſt able to tell what is proper and what not.

BUXTON WELLS *in* Derbyſhire.

BUXTON has been famous for having a hot and a cold Spring near each other; for a Perſon might put his Finger into the hot and his Thumb into the cold at the ſame Time; but however this may have been true formerly, thoſe that have been lately there affirm they can ſee nothing of it.

Buxton Well lies at the Bottom of a dirty Village of the ſame Name, and is near an Inn, which is dignified by the Name of the Hall. It is a large commodious Houſe, and a great deal of good Company reſort thither in the Summer Time, and ſtay there for the Benefit of Bathing. The Air is good, and there are ſeveral Diverſions that Gentlemen may employ themſelves in; for there is Plenty of Grouſe or Moor Game for thoſe that love Shooting, and of Trout and Grayling for thoſe that are fond of Fiſhing; beſides others of different Kinds for the Ladies. They are accommodated with a good Aſſembly-Room, in which the Company dine and ſup together, and after Supper they generally have a Ball. The Well is about a Stone's Caſt from the Houſe, and is covered with a handſome Building, it being a Section of a Rotunda; the Inſide is paved with Brick, and the Spring itſelf is ſurrounded with

Stone. The Walks are adjoining to the Well, and are contained in a Field, which is bounded on one Side with a pretty River, and on the other by a Lane. The Walks are not of Graſs or Gravel, but of pure natural Earth, ſtrewed over with fine Aſhes, to prevent the Soil from ſticking to the Shoes. In the Middle of the Field there is a Mount caſt up, and planted with Trees and Shrubs, which has a very fine Effect.

The Water poſſeſſes an intermediate Degree of Heat, between thoſe of *Bath* and *Briſtol*; and is the principal calcarious Water deſcribed by Dr. *Short*. The Heat is thus determined by that Author; for he tells, that if five Eighths of a Quart of boiling Water be added to thee Pints of River Water in Summer, it gives the exact Heat of *Buxton* Bath in that Seaſon.

This Water has a ſweet and pleaſant Taſte, and when cooled, weighs eight or ten Grains in a Pint leſs than River Water. It depoſits a white Sediment when Oil of Tartar or Spirit of Hartſhorn is added thereto; as alſo with the Solution of Sugar of Lead. It likewiſe exhibits a white Sediment with the Solution of Silver, and on Standing a white Purple. It will not tinge Silver when immerſed therein, nor does it ſhew any evident Signs of Sulphur; however, it will brighten the Solution of Gold. Spirit of Vitriol and Oil of Sulphur will cauſe an Ebullition, and Galls, being ſoaked for four Days therein, will become green. Likewiſe Syrup of Violets will turn this Water to a greeniſh Colour.

A Gallon of *Buxton* Water will yield about twenty Grains of a Sediment, which conſiſts chiefly of Lime Stone, Sea Salt, and a little calcareous Nitre; and it is a temperate Bath, and a very

very light Water. Some have thought it partakes ſomewhat of Sulphur; but if it does, it is extremely volatile.

It is not near ſo hot as *Bath* Water, and contains a much leſs Quantity of the impregnating Minerals; for that, as obſerved above, has at leaſt one hundred and thirty Grains of Sediment. *Bath* likewiſe has, among others, a ferruginous Principle, but *Buxton* is entirely without; beſides which the Quantity of Sea Salt is very inconſiderable, the predominating Principle being rather an abſorbent Earth.

The Nature of *Buxton* Waters approaches much nearer to that of *Briſtol* than *Bath*, and it may be ſafely uſed both inwardly and outwardly, in thoſe Caſes where the *Bath* Waters are hurtful. It has relaxing, diluting, ſweetening, and attenuating Qualities, and opens Obſtructions of the ſmalleſt Veſſels. It cools the Parts that are too hot, gently warms thoſe that are cold, and dries up thoſe that are moiſt. It is not followed with ſweating, but rather a Coldneſs, and it is good in Conſumptions, for hot ſcorbutic Humours, and all Fluxions and Bleedings, as well as in hypochondriacal and hyſterical Caſes. It is alſo of great Uſe, both externally and internally in the regular Gout, in rheumatic and ſcorbutic Pains, in ſcorbutic Rheumatiſms, in Vomitings of Blood, and in inordinate Fluxes of the Piles, as well as in other Bleedings. It is proper in an Inflammation of the Liver, in too great a Heat and Obſtruction of the Kidneys, and in Conſumptions of the Lungs; in all which Caſes theſe Waters have been found ſucceſsful, even by external Uſe. Internally Experience has ſhewn that it is good in the Diabetes, in bloody Urine from a Weakneſs

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in the urinary Paſſages, in the bilious Cholic, in want of Appetite, in cold Stomachs from hard Drinking, eſpecially of ſpirituous Liquors; and in an Atrophy from a Sharpneſs of Blood, occaſioned by free drinking at improper times of the Day. To theſe may be added Contractions and Stiffneſs of the Veſſels, eſpecially in old Age, Cramps, Convulſions, the dry Aſthma, without a Fever or quick Pulſe, Barrenneſs from various Cauſes, and alſo in a Gonorrhœa. It alſo cures St. *Anthony*'s Fire, Ring Worms, Scabs, the Itch, Morphew, Nodes, chalky Swellings, and all hard callous Tumours, and old Strains, and withering of the Parts; in all which laſt Caſes bathing is chiefly to be uſed.

Of MATLOCK BATH *in* Derbyſhire.

MATLOCK is a Village near *Wirkſworth* in *Derbyſhire*, and is ſeated ten Miles from *Derby*, ſeventeen from *Nottingham*, and ſixteen from *Sheffield*. It ſtands on the very Edge on the River *Derwent*, and is a very beautiful Place and finely ſituated, eſpecially for thoſe that are fond of Solitude, or would divide their Time between that and an agreeable Society. The Bath conſiſts of one uniform Range of Building, except an Outhouſe of handſome Lodging Rooms nearly adjoining, and the Stables which are out of Sight of the Houſe. In the firſt Part of the Buildings there are two Baths, one for Gentlemen and the other for Ladies; and the Entrance and Dreſſing Rooms are quite diſtinct.

The Ladies Bath is arched with Stone about ten Feet within the Surface of the Water, which renders

renders it very cool and very private. Over the Baths are the Lodging Rooms for the Convenience of thoſe who bathe the oftenеſt. Beyond the Bath, on the Ground Floor, is a Range of Rooms, each capable of entertaining a Dozen People; and at the farther End is a large Kitchen and a Servants Hall. In the Middle of the Building is a grand Staircaſe, fronting the Top of which is the Muſic Room; and on the right Hand is the Aſſembly Room, which is large and commodious; and there is a Paſſage out on the Side of a Hill, which riſes to a great Height, and ſhelters the back Part of the Houſe.

The Company that comes to this Place are, for the time being, in ſome Senſe one Family; for they breakfaſt, dine and ſup together in the ſame Room. On the left Hand of the Muſic Room are Bed Chambers, and there are others on the Floor above that.

Before the Front of the Houſe there runs a ſpacious Terras, from whence a few Steps lead down to a level Graſs Plat, which is very convenient for the Company that walk or play at Bowls. At the Edge of the Green there is a dwarf Wall, beyond which there is a rocky Deſcent to the River *Derwent*, which is here very wide and rapid, and runs with a murmuring Noiſe, which is greatly increaſed by the Repercuſſion of the Sound of the high Rocks that hang over it. The higheſt of them is called *Matlock-Fort*, is 123 Yards high, or as ſome ſay, which is much the ſame, it is ten Yards higher than the Top of St. *Paul*'s Steeple. On one Side of the Houſe is a Grove of lofty Trees, and on the other a delightful ſhady Lawn called *The Lover's Walk*. In ſhort, the whole Place is ſurrounded with agreeable

agreeable Landſcapes, fine Woods, pleaſant Walks, high Rocks, ſteep Hills, and romantic Views, which altogether render it a Sort of a Paradiſe.

About a Mile from hence there is a pretty Houſe, built upon the Foot of a Rock, which is called *The Boat Houſe*. The Garden is ſurrounded with a Vein of grey Marble, nearly a Mile thick. In the Houſe there is a neat Aſſembly Room, where the Company from the Bath frequently come to drink, and have a Concert of Muſic; there being a handſome Orcheſtra furniſhed with an Harpſichord and divers other Inſtruments. Sometimes the Company go in a Pleaſure Boat on the River, with ſeveral *French* Horns, which muſt make a very ſweet Harmony among the Rocks.

This Bath is ſtill rendered more pleaſant by the Politeneſs of the Company, and from the Eaſineſs of the Charges; for here they pay nothing for Lodging nor Bathing, and the uſual Expences is Three Shillings a Day for Meals, and Tea in the Afternoon. There is no Maſter or Miſtreſs, becauſe the Structures were erected by the Subſcriptions of divers Gentlemen round the Country, who employ Servants to take Care of it and the Gueſts, to their no ſmall Advantage.

The Water of this Bath is not ſo hot as that of *Briſtol*; but it is very clear and emits no Steam, except in a cold Morning or in the Winter Seaſon. It is a Pennyweight in a Pint lighter than common Water; and in the Neighbourhood there are found great Heaps of Petrifactions of the calcarious Kind. It curdles with Soap, and diſcovers the ſame Appearances with Oil of Tartar and Spirits of Hartſhorn as *Buxton* Water, as well

as

as with the Solution of Silver. Spirit of Vitriol and Sulphur will occaſion a ſtrong bubbling Commotion, after which the Water becomes exceeding clear, and the Sides of the Glaſs are covered with Air Bubbles. With Galls it gives a ſlight purple Tincture. A Gallon of Water yields forty Grains of Sediment, whereof thirteen are Salt, conſiſting of Nitre and Sea Salt, and the Remainder is a white, rough, alcaline Earth. It may properly be called a calcarious Water, and it pretty nearly agrees with that of *Briſtol*, with regard to the Quantity of Earth it contains; it is greater than that of *Buxton*, and is more powerful in ſweetening the Blood and Humours; but it has leſs Heat and conſequently leſs Activity. Some think there is a little Iron contained in the terreſtial Matter, as appears from the Mixture with Galls.

The Virtues of this Water are found to be nearly like thoſe of *Buxton* and *Briſtol*, both for external and internal Uſe. Both drinking and bathing are good for Gleets, the Fluor Albus, the Cancer, and the King's Evil; bathing is proper for Rheumatiſms, the Scurvy, the Itch and Scabs, and hectic Ulcers are relieved by the outward and inward Uſe. Internally it is good in an Atrophy, from an hectic Fever, where the Blood is thin and ſharp, the Motion quick, and the Veſſels weak. It is alſo ſucceſsfully uſed in ſpitting of Blood, bloody Urine, bloody Stools, frequent Bleedings at the Noſe; as alſo in hectic Fevers and inward Ulcers, with a Milk Diet; it likewiſe cures the Diabetes and the bilious Cholic.

Of

Of SCARBOROUGH WATER *in* Yorkſhire.

Scarborough is ſeated in the North Riding of *Yorkſhire*, on the Sea Shore, and on a ſteep Rock, which has craggy Cliffs, that it is almoſt inacceſſible on every Side, it being waſhed by the Sea all round except on the Weſt. On the Top of the Rock there is a handſome large green Plain, containing above ſixty Acres of Ground; and there is a little Well of freſh Water ſpringing out of the Rock. It was here that *Henry* II. erected a noble large Caſtle, now in Ruins. The Harbour is ſaid to be one of the beſt in the Kingdom; and there are ſeveral Veſſels chiefly employed in the Coal Trade. There is a Pier which is maintained at the public Charge; that is, by a Duty upon Coals from *Newcaſtle* and *Sunderland*. They have a great Variety of Fiſh; ſuch as Hakes, Haddocks, Ling, Whitings, Mackrel, Cod Fiſh, Turbots, and ſeveral others. This Town is inriched by the great Numbers of People of all Ranks that flock hither, in the hotteſt Months of the Year to drink the Waters. The *Spaw Well*, improperly ſo called, is a Spring about a Quarter of a Mile South of the Town, in the Lands, and at the Foot of an exceeding high Cliff. It was diſcovered about 160 Years ago, and it is never dry; but, on the contrary, will yield twenty four Gallons of Water in an Hour. The Top of the Cliff was fifty-four Yards above high Water Mark, until *December* 29, 1737, when it was rent 224 Yards in Length from the main Land, and ſunk with the Cattle feeding on it near ſeventeen Yards perpendicular.

pendicular. During this the Place under the Cliff, where the People uſed to walk, roſe ſix or ſeven Yards above its former Level, for above One hundred Yards in Length on each Side of the Wharf adjoining to the Houſe; and the Wells riſing with it the Water failed, and the Spring was loſt for ſome time. But on clearing away the Ruins for the Rebuilding the Wharf, it was recovered to the great Joy of the Town's People. Here are Aſſemblies and Balls much in the ſame manner as at *Bath* and *Tunbridge*.

This Water has been much uſed of late Years, not only at the Fountain Head, but has been tranſported to many diſtant Places. The Taſte is bitteriſh and ferruginous, and it grows fetid in Bottles that have not been thoroughly cleanſed from all fermented Liquors; but after this it grows ſweet again. It curdles with Soap, and yields a large white grumous Sediment with Oil of Tartar; turns wheyiſh and exhibits a white Incruſtation on the Sides of the Glaſs with Spirit of Sal Ammoniac. With Sugar of Lead it turns milky and yields a Sediment; but with a Solution of Silver, a groſs white Cloud and Precipitation; but with Lime Water it ſuffers no Change. It diſcovers many minute Bubbles with Oil of Vitriol, ſtill more with Spirit of Salt, which ſhows that this Water is an Abſorbent; and Dr *Shaw* obſerves, that an Ounce of the Water will deſtroy the Acidity of a Drop of Oil of Vitriol. If it be boiled with an equal Quantity of Milk it will become curdled; and it will turn green with Syrup of Violets; as alſo to a deep Red with Logwood; a pale Red with Brazil; a deep Orange with Rhubarb; and there will be a deep Blue Circle on the Surface with Aſh Bark. Galls give it a purple

Purple Tincture at the Fountain-head; but it turns Green in twenty-four Hours. The ſpecific Gravity is conſiderably greater than that of diſtilled Water.

When this Water is diſtilled in the common Manner, there is no Difference between it and common diſtilled Water; for it will not change Colour with Syrup of Violets, nor let fall any Sediment with Oil of Tartar; but it becomes a little milky with the Solution of Silver. During the Time of its Evaporation, it throws up a Scum like Lime Water, which will ferment with Spirit of Salt, and ſhews that it is of an abſorbent Nature. A Gallon will yield about two hundred and eighty four Grains of Sediment of a reddiſh white Colour, and of a bitter, ſaltiſh, and roughiſh Taſte. It deſtroys the Sourneſs of Acids, and makes a ſtrong Ebullition therewith; it alſo turns of a light Green with Syrup of Violets. The Proportion of Earth to the ſaline Parts is as 66 to 150; from whence appears the Reaſon of its fermenting with and ſweetening Acids. The Salt, ſeparated from the Earth is greyiſh, with a brackiſh Taſte, is very bitter in the Throat, and when freſh has a ſtrong ſulphureous Smell. Its Solution in diſtilled Water will curdle with Soap and Oil of Tartar, and turn of a pale Amber with Galls and Sumach; it will ferment with Oil of Vitriol, but not with Spirit of Salt or Vinegar; and half a Dram boiled with a Pint of Milk will curdle it.

When this Salt is mixed with Blood flowing from the Veins, it will render it leſs florid, and will form a tough Size on the grumous Part, it will alſo produce ſome Degree of Coagulation in the Serum; and rubbed with Syrup of Violets it will

will turn Green. The Cryſtals from this Salt will diſſolve in about twice the Weight of Water; but before it is cryſtallized, it will not entirely diſſolve in ninety-ſix Times its Weight, after a Week's Infuſion, which is an Argument of its calcarious Nature. Being taken as a Purge diſſolved in ſix Ounces of common Water, to the Quantity of two Drams, it operates very eaſily in an Hour's Time, not ſinking but raiſing the Spirits.

That Part of the Sediment, ſeparated from the ſaline, that will not diſſolve, will excite a great Ebullition with Spirit of Salt, and even with Vinegar; it will alſo blunt the Acidity of equal Parts of Oil of Vitriol. It will turn Green with Syrup of Violets, and after it has been calcined three Hours, it will turn Red with a Solution of corroſive Mercury ſublimate in Water. It appears to the naked Eye like Powder of Talc, and viewed through a Microſcope, a great Part of it appears in the Form of large irregular Cryſtals, and Part of it gritty; hence it is known to be a mixed calcarious Earth, with ſomewhat of Bole, which, by Infuſion, affords a ſmall Proportion of Iron.

This Water has been found very good in hectic Fevers, the Rheumatiſm, Scurvy, preternatural Thirſt, recent and partial Inflammations, Diſeaſes of the Skin, and kills all Sorts of Worms; it is alſo good in Diſorders of the Stomach from Intemperance, as well as in hypochondriac and hyſteric Diſorders, in Stuffings of the Lungs and Aſthmas, in an habitual Coſtiveneſs, the Heartburn, and in all Caſes where Purging is indicated.

It is likewiſe eſteemed for curbing all preternatural Evacuations, as Gleets, the Fluor Albus, and bloody Urine, to which may be added the Green-Sickneſs.

Of TUNBRIDGE WELLS *in* Kent.

TUNBRIDGE Wells are ſituated in *Kent*, about five Mile South of the Town of *Tunbridge*, and are much reſorted to in *June*, *July*, and *Auguſt*. It chiefly lies at the Bottom of three Hills, on which are good Houſes and fine Fruit-Gardens. They are thirty-four Miles diſtant ſouth-eaſt from *London*, and thoſe that frequent them have the Benefit of a good Market; there are alſo Shops of different Sorts, as for Books, Toys, Millinary Ware, a Sort of a Manufacture of wooden Bowls, Cups, and the like, commonly called *Tunbridge* Ware; beſides Coffee Rooms, and a Hall for Dancing. Behind the Wells there is a large Chapel of Eaſe, where Service is performed twice a Day, and where ſeventeen poor Children are taught, who are wholly maintained by the Contributions of the Company that frequent the Wells. The Air here is excellent, and all Proviſions are very reaſonable; they have Plenty of wild Fowl, and good Fiſh almoſt of all Kinds, about three Hours after they are taken.

With regard to the Qualities of the Waters, Dr. *Whiſtler* informs us that in a dry Seaſon he could perfectly diſtinguiſh a Gas of Vitriol; and Dr. *Madan* tells us, it is ſenſibly impregnated with volatile and ſpirituous Exhalations; for if you put a Bottle of this Water about Sun riſing to your Eyes, you will perceive it affects them with an evident Irritation. It turns of a blackiſh purple Colour at the Fountain-head, with Galls, Oak Leaves, and an Infuſion of Green Tea; but if you add ſome Drops of Spirit of Vitriol thereto, the Clearneſs will be reſtored. Dr.

Hales

Hales informs us, that it will give a ſtronger Colour with Galls in wet Weather than dry, which occaſioned him to ſuppoſe, that theſe Waters then paſs through ſome ferruginous Strata, which they cannot reach when the Weather is dry. He alſo teaches us how to preſerve the Virtue of this and other Chalybeate Waters for a long Time, ſo as to be fit to drink in remote Places. His Method is to mix five Drops of Oil of Sulphur with a Quart of this Water, which will prevent its letting fall any Sediment, and preſerves its Property of tinging with Galls from *Auguſt* to *January*.

With Regard to its ſpecific Gravity, about ſeven Ounces and a Quarter weigh ten Grains leſs than Rain Water, and about four Grains than the *German* Spaw. In a very rainy Seaſon, in *January*, a Gallon of it will yield nine Grains of a Sediment; but in *Auguſt* it will afford no more than ſix Grains, which will grow ſoft after ſtanding a few Days. It is a light and comparatively pure Chalybeate, and its Virtues are moſt powerful at the Fountain-head.

Dr. *Madan* obſerves that this Water will have ſuch an Effect, as to ſend forth blackiſh Steams from the Center to the Circumference, and that it will make the Linen of the Drinkers of that Colour, which obliges them to change it often. Others inform us, that it purges moſt by Stool and Urine; but if the Stomach is foul, by Vomit. Some, inſtead of Phyſic, take a Spoonful of common Salt in the firſt Glaſs with a good Effect.

Allen informs us, that it is an effectual Remedy in Obſtructions of the Glands of the Meſentery, wherein, beſides the chylous Excrements and Rejection of Food, an Hour or two after eating the

Patient

Patient has no Complaint of Want of Appetite, nor any diſcernible Fever, nor any other Diſorder, till the Diſeaſe is continued ſo long, as to induce a Cough, a Fever, a Want of Reſt, and Loſs of Fleſh. In this Caſe *Tunbridge* Water has never deceived thoſe that have tried it. It is alſo an effectual Remedy in recent Dropſies, in thoſe whoſe Conſtitutions have been broken by Misfortunes; as alſo in phlegmatic Patients, whoſe Blood is very poor. It is alſo of great Service in Diſorders of the Stomach, and particularly in violent Pains thereof, eſpecially thoſe that are convulſive, in the Hypochondriacal, and in Collections of Wind or Phlegm from Obſtructions. A painful Swelling at the Pit of the Stomach, of many Months Standing, was relieved by theſe Waters; as alſo was a Fiſtula, that had continued for many Years, only by drinking the Water for ſix Weeks; it has alſo cured ſeveral Ulcerations of the Kidneys. Add to theſe, that a Gentlewoman, who had always a periodical Fever and Cough in *October*, was freed from them by drinking theſe Waters.

Rouzee confirms their Efficacy in Ulcers of the Kidneys and Bladder; as alſo when the Bladder is ſtuffed with phlegmatic Matter reſembling the Stone, and in bloody Urine. It cures the Cholic from a tartareous Phlegm, and Vomiting, and Hiccough, as well as Worms. In the ſimple and venereal Gonorrhœa it has a remarkable drying Faculty; and it likewiſe ſtrengthens the Brain and Origin of the Nerves; it is alſo good in Convulſions, the Head-ach, and Vertigo. Beſides this he affirms, this Water is excellent in long and tedious Agues, in the Dropſy, black and yellow Jaundice, hard Swellings of the Spleen, or the

Ague-

Ague-Cake, the Scurvy, Green-Sickneſs, Fluor Albus, and other Female Diſorders; for it opens Obſtructions, cools the Blood, blunts the ſharp Particles therein, ſtrengthens the retentive Faculty, and helps ſore Eyes and red Pimples. Dr. *Slare* acquaints us, that when this Water is drank judiciouſly, it cures obſtinate and inveterate Looſneſſes.

Of EPSOM WATERS *in* Surry.

EPSOM is a Town that lies fifteen or ſixteen Miles ſouth-weſt from *London*, and has been long famous for its Mineral Waters; it is a delightful Place, and lies open to *Banſtead Downs*, near which are many handſome Seats of the Gentlemen and Citizens of *London*. On the neighbouring Downs there are Horſe-Races every Year; but the Wells and Bowling-Greens are not quite ſo much frequented as formerly.

Epſom Water is pretty clear, and without Smell; but if it be kept in covered Veſſels for ſome Weeks in Summer, it will ſtink, and acquire a nauſeous bitter Taſte, with ſomewhat of a maukiſh Saltneſs. It will curdle with Soap, and with Salt of Tartar, and with Spirit of Sal Ammoniac let fall a grumous Sediment; with a Solution of Silver the Sediment will be blueiſh, with that of Sugar of Lead ſmall and white, with a Solution of Allum white and grumous; but if mixed with Lime Water it will continue clear.

With Oil of Vitriol and Spirit of Salt a ſmall Fermentation will be excited; and boiled with an equal Quantity of Milk it will curdle, but the

Whey will be clear. When Galls and Sumach are infuſed therein, it will become wheyiſh on the Surface, and afterwards green, deſcending lower down in the Glaſs. With Syrup of Violets it will turn to a light Green on the Surface; with *Brazil* Wood, of a ſcarlet Colour; with Logwood, of a crimſon; and with Rhubarb, of an orange Colour; with Aſh Bark it had a pale blue Circle at the Surface, and was of a ſlight yellow underneath.

While it is evaporating, it will throw up a Sort of a Cream, which will ferment with Acids, and which Dr. *Grew* took to be a Sort of a Plaſter, and not Lime Stone, as others have thought; becauſe being burnt in a Crucible with Limeſtone, it neither became cauſtic on the Tongue, nor grew hot when Water was poured thereon. A Gallon of Water will yield an Ounce, and ſometimes an Ounce and a Half of this Cream and Sediment, for the Quantity varies according to the Seaſon. The whole is of a greyiſh Colour, almoſt impalpable, of a brackiſh and nauſeouſly bitter Taſte, and an odd ſtrong Flavour. If Oil of Vitriol be poured thereon, it ferments and emits acid Vapours; it will alſo ferment with Spirit of Salt and Vinegar, though in a much weaker and tranſitory Manner. Rubbed with Syrup of Violets it becomes of a light green Colour, and with Salt of Tartar it has a pungent and urinous Smell. When thrown on a red hot iron, it will ſometimes ſparkle and fly a little, and ſometimes lie quite ſtill.

Allen affirms there are 8 Parts of Salt to one of Earth; but *Rutty* tells us he could not find that the Earth was in ſo great a Proportion. The Salt ſeparated from the Earth, by boiling the Sediment

ment in diſtilled Water, and afterwards filtring and evaporated to Dryneſs, is of a whitiſh yellow Colour, and of a ſingular ſtrong Smell, with a nauſeous bitter Taſte. The Solution of the Salt in diſtilled Water, with Oil of Tartar and Solution of Silver, cauſed a Precipitation in the ſame Manner as the Water. It did not ferment with Spirit of Salt nor with Vinegar; hence it is plain, that the Fermentation was owing to the Earth. However it will ferment with the Oil of Vitriol, and the Mixture will emit an acid Fume. A Pound of this Salt put into a coated Glaſs Retort, and diſtilled in a reverberatory Furnace, will afford in the Receiver, according to Dr. *Grew*, a little more than half a Pint of an acid Spirit, in Scent and Taſte ſomewhat like Spirit of common Salt.

Half a Dram of this Salt, boiled with half a Pint of Milk, will yield a ſtiff Curd and clear Whey. Being rubbed with Syrup of Violets, it will become green after ſome Time. It will become moiſt in a damp Air; and thrown on a red hot Iron, it will melt and bliſter like Alum.

All Authors agree, that the Cryſtals of this Salt will require but a ſmall Proportion of Water to diſſolve them; for an equal Weight has been found to be ſufficient; but the Salt, before it is cryſtallized, will require at leaſt twenty-four Times its own Weight of diſtilled Water to diſſolve it, though infuſed warm many Days.

The Cryſtals of this Salt are ſo many rectangular Priſms, with four parallelogram Planes. They ſtand upon a cruſty Baſe of the ſame Salt, and their upper Ends vary much; for there are ſometimes three, but moſt commonly four, inclined or ſloping Planes, making obtuſe Angles with the

ſaid Parallelograms; hence it appears, that theſe Cryſtals are like thoſe of calcarious Nitre.

This Salt has a purging Quality, for half an Ounce of it being taken, diſſolved in Spring Water, will work like other Phyſic. Some take from an Ounce to ten Drams in two, three, or four Pints of Spring Water, with a Dram of Mace, for the ſame Purpoſe, and work it off with Poſſet-Drink. It may alſo be taken very conveniently in *Tunbridge* Water, or any other Chalybeate.

The earthy Matter being dried is of a brown Colour, with a Mixture of whitiſh Parts; it will not ferment with Vinegar, and no longer than a Minute with Oil of Vitriol; but it will ſtrongly ferment with Spirit of Salt, which is a Sign that it is but a weak Abſorbent. However, being calcined, it will turn yellow, with a Solution of corroſive Sublimate, from whence its calcarious Nature plainly appears.

The Water itſelf is a diluent and a mild Abſorbent, and is diuretic and cathartic. Before this Water was preſcribed by Phyſicians, it was uſed by poor People for waſhing old Sores, with good Effect; and this Property belongs to nitrous Waters in general. The uſual Quantity taken is two thirds of a Pint in Summer, and half a Pint in Winter.

Many Years ago the Salt of this Water was mightily cried up for its extraordinary Virtues, which was the Occaſion of its being counterfeited; and though, upon the firſt Diſcovery of this Practice, it was looked upon as a Cheat, yet it is by no Means ſo bad as in many other Caſes. It is in Reality a very uſeful Salt, and is ordered to be kept in the Shops by the Name of the cathartic bitter Salt. It has this Property with the true,

that

that it will diſſolve in an equal Quantity of Water; that is, twelve Ounces of it will diſſolve in a medical Pint of River Water. It is made of the Bittern which is left after the Coagulation of common Salt; and when an Ounce of it is diſſolved in an Ounce of Water, if you pour highly rectified Spirit of Wine upon it, the Salt will immediately coagulate into a ſolid firm Maſs like Ice. Beſides, if you put this Salt, with Powder of Charcoal into a Crucible, it will all fly off with a ſulphureous Fume, that will fill all the Room. Hence it appears that this Salt, conſiſting of ſuch ſubtile Parts, is a better Purge than all other neutral Salts whatever, becauſe it will inſinuate deeper into the Coats of the Inteſtines than any of the reſt. Half an Ounce of it is a gentle Purge, that will neither raiſe any Commotions in the Blood, nor hurt the Appetite, nor weaken the Body.

Of CHELTENHAM WATER *in* Glouceſterſhire.

CHELTENHAM, a Market Town in *Glouceſterſhire*, lies in the Road from *Glouceſter* to *Warwick*, and is between nine and ten Miles from that City; but from *London* it is ninety-five Miles almoſt directly Weſt. It has a handſome Church, and conſiſts of two or three hundred Houſes, and has a good weekly Market on *Thurſdays*. Since the Year 1740 it is become famous for its purging Water, inſomuch that Dr. *Short* gave it the Preference to all other purging Waters in *England*; but it is not now ſo much in Requeſt as at firſt. It was ſaid to be diſcovered by its being caſually evaporated by the Heat of the Sun,

when a white Salt was left behind which the Pigeons flocked to eat.

This Water is limpid, a little brackiſh, and nauſeouſly bitter; and ſometimes it acquires a diſagreeable Smell when bottled. It will curdle with Soap, and lets fall a white grumous Sediment with a Solution of Salt of Tartar and with the Spirit of Sal Ammoniac. The Solution of Silver turns it milky and purpliſh, and precipitates a large white grumous Sediment. The Solution of Sugar of Lead induces a white Cloud with a white Sediment; and the Solution of Allum a large white grumous Sediment. In one Experiment it continued clear when mixed with Lime Water; but in another it diſcovered a Precipitation. It ferments with Acids, particularly with Oil of Vitriol, in which there is a great Number of ſmall Bubbles, which continue to riſe for a Quarter of an Hour or longer. A Fermentation will be alſo cauſed with Spirit of Salt and Vinegar, though not ſo great as with the former; however theſe Experiments are ſufficient to ſhow that it blunts Acids. When this Water is boiled with Milk it will curdle but very little, and ſometimes not at all. Beef and Mutton ſteeped and boiled in it will become of a pale Red within, and pretty firm. It turns of a deep Green with Syrup of Violets, and Cale becomes very Green when boiled therein. With Logwood it becomes of a deep Red, and with *Brazil* of a deeper Red than with ſome others of this Kind; Rhubarb likewiſe turns it of a deep Red, and Aſh Bark of a deep Blue, when viewed with the Back to the Light. Galls turn it wheyiſh and form a green Circle round the Surface, which in three Days ſtanding extends itſelf downwards. When taken immediately

immediately from the Fountain it turns Purple with Galls; but in ſtanding a few Minutes it loſes that Quality.

The ſpecific Gravity of this Water is fifty Grains in a Pint heavier than common Water, and when it has ſtood a little it becomes ſeventy Grains heavier. Dr. *Short* affirms, that he has got 687 Grains of Sediment from a Gallon of the Water upon a Medium. A little of the Scum taken off while it is evaporating, and dried, becomes as white as Chalk, and will ferment with Oil of Vitriol: The Remainder in the Pan appears partly in round Bliſters, is very white, brackiſh, and of a nauſeous bitter Taſte, with an odd diſagreeable Flavour. It will ferment with Spirit of Vitriol, and makes a ſmall Ebullition with Oil of Vitriol, with an acid Fume; it makes alſo a ſmall Ebullition with Vinegar, but none with Spirit of Salt. It contains a little impalpable alcaline Earth mixed with the Salt, which is chiefly calcarious; and the Proportion is 74 Parts of Lime Stone to 673 of calcarious Nitre. When rubbed with Spirit of Sal Ammoniac no pungent Smell is excited; and yet when rubbed with Syrup of Violets it becomes in a few Minutes of a bright Green; it does not ſoon grow moiſt in the Air, nor flame on a red hot Iron or Coals. A little Vinegar thrown on it did next Morning exhibit long nitrous Cryſtals and ſhort ones like thoſe of Sea Salt.

When the earthy Subſtance is ſeparated from the Salt, this laſt is of a nauſeous Bitter, and brackiſh like Sea Salt; likewiſe the Cryſtals obtained by diſſolving forty-ſix Grains of the Salt in an Ounce of diſtilled Water, and evaporated to leſs than ſix Drams, are chiefly like thoſe of

Liſter's calcarious Nitre, among which are a few that are cubical. The Taſte of the Cryſtals ſeems to be cold like Ice, and of a nauſeous Bitter; they likewiſe grow white by ſtanding. This Salt will not ferment with Spirit of Salt nor Vinegar, but with Oil of Vitriol it will ferment a little, and a pungent Fume will be excited. Half a Dram boiled in half a Pint of Milk will curdle it, but the Whey will be clear. It will very ſlowly turn green with Syrup of Violets, and diſſolve in twenty-four times its Weight of Water by the Fire Side. The earthy Matter will ferment ſtrongly with Oil of Vitriol, Spirit of Vitriol and Spirit of Salt, but not with Vinegar. When calcined it is white, and has the Taſte of Lime; but it will grow reddiſh with the Solution of corroſive Sublimate in Water; it will ſparkle and flame on a red hot Iron, and turn green with Syrup of Violets, though but ſlowly.

This is a purging Water, and the Doſe is from one Pint to three or four, which will work off in an Hour and a Half or two Hours. It never is attended with Gripes, nor renders the Patient low ſpirited, nor yet does it either heat or chill the Drinker; the beſt Way of taking it is to warm it a little. It creates a keen Appetite, is a Provocative, and has been uſed with Succeſs in the Gravel; it is good for ſcorbutic Humours, and will cure old Ulcers of that Kind though of twenty Years ſtanding, even though they ſhould happen to be in the Legs. It cures St. *Anthony*'s Fire, ſtrumous Inflammations in the Eyes, and the tormenting Pains of the Hips and Muſcles of the Loins, which proceed from hot ſcorbutic Salts.

Of

Of the PURGING WATER *of* Stoke *in the County of* Surry.

THIS Village lies about two Miles South of *Cobham*, and twenty-two South Weſt of *London*; the Spring is commonly called *Jeſſop*'s *Well*, and has been advertiſed in *London*, in the Year 1750, under the Denomination of *Stoke Mineral Water*. In the Map of this County it is called *Stoke Dalberon*; and ſome name it *Daborn* or *Dabornon*. It is ſeated near the River *Mole*, that runs between *Leatherhead* and *Cobham*, and is in the Midway between thoſe Places.

This Water is thought to contain more Salt than any Purging Water in *England*, as appears from the Experiments of Dr. *Hales*, which he lately communicated to the Royal Society. This Water has a nauſeous bitter Taſte, much like a Solution of the bitter cathartic purging Salt, generally known by the Name of *Epſom* Salt. When put up in Bottles ſome have a ſtrong diſagreeable Smell, and others not; and it is obſervable that thoſe with the ſtrong Smell did not diſcolour Silver when immerſed therein.

It will curdle with Soap, and a Solution of Salt of Tartar mixed therewith will precipitate a white grumous Sediment; it will do the ſame with Spirit of Sal Ammoniac, with a Solution of Silver and another of Allum; but then it will continue as clear as Lime Water. It will turn milky with the Solution of Sugar of Lead and let fall a white Sediment. It will ferment with Oil of Vitriol and Spirit of Salt, but with very ſmall Bubbles, whence it appears that it will deſtroy Acids. Boiled with an equal Part of Milk a Curd will be produced, and the Whey will be clear.

Cale boiled in this Water will not only continue green, but it will become more remarkably tender than with ſeveral other Waters; it will ſoon become of a deep Green with Syrup of Violets; but not ſo deep as with *Upminſter* Water. It will turn crimſon with Logwood, ſcarlet with *Brazil* Wood, and will have a deep blue Circle about it with Aſh Bark when viewed in a ſide Poſition; but the Water will be of an amber Colour underneath. Galls will render it muddy, and the next Day it will have a deep brown Circle on the Surface, which falls lower after ſtanding two or three Days. Dr. *Hales* obſerves, that this Water at the ſpring Head will yield a weak Bluſh with Gall, but not when put into Bottles the next Day; which argues that there is a ſmall Quantity of Steel which is ſoon loſt.

A Gallon of this Water will yield an Ounce and an Half with twenty-two Grains more of Sediment; that is, 742 Grains. This is very white, and has a ſomewhat brackiſh Taſte with a nauſeous Bitter. When rubbed with Sal Ammoniac, a faint pungent Smell will be excited; it will ſoon turn to a deep Green with Syrup of Violets, and will become a little moiſt by damp Weather. The earthy Matter bears but a ſmall Proportion to the Salt, which is of a nauſeous Bitter; it excites a ſmall Fume, though it ferments but little with Oil of Vitriol; and ſoon turns to a bright Green with Syrup of Violets. Half a Pint of Milk boiled with half a Dram of the Salt will curdle, but the Whey will be clear. When the Solution of the Salt has the Water evaporated from it, it will leave large Cryſtals reſembling thoſe of *Liſter*'s calcarious Nitre. Dr. *Hales* acquaints us that it ſhoots into very bitter irregular

irregular oblong Cryſtals; ſome of which retain their Form and Firmneſs for ſeventeen Months after they are cryſtalized; and in a Letter dated *January* 1755, he aſſures Dr. *Rutty*, that they retain their Firmneſs and Solidity five Years, which the cryſtalizing Salts of ſeveral other purging Waters would not do; particularly thoſe of *Scarborough* and *Cheltenham*. Half an Ounce of diſtilled Water will diſſolve ten Grains of the Salt when placed by the Fire Side; it will melt in large Bliſters on red hot Iron, and will crackle a little. The earthy Matter, which is very ſmall in proportion to the whole, according to Doctor *Hales*, will ſparkle on a red hot Iron, as well as ſmell like Wool; it will ferment a little with Spirit of Vitriol, but ſcarcely any thing at all with Vinegar; but after Calcination it has the Taſte of Lime, and will turn yellow and red with the Solution of corroſive Sublimate. Hence it appears that this Water contains a large Proportion of calcarious Nitre, a little Sea Salt and calcarious Earth, and probably a little Natron.

According to Dr. *Hales*, a leſs Quantity of Water will ſuffice for a Doſe than any other; for which Reaſon it ſits better on the Stomach and enlivens the Spirits of thoſe that take it. It has been long noted for a good purging Water in the Neighbourhood; a ſingle Quart will purge pretty briſkly, and cauſe plenty of Urine without Gripes. Dr. *Clark* obſerves that its Salt will ſtimulate the Rectum very much; and that it has performed Cures in obſtinate ſcorbutic Caſes, though at firſt it will heat ſo much as to occaſion cutaneous Eruptions; but two or three more Doſes will carry them off. Dr. *Addee* is of Opinion, that there is a fine volatile Spirit in theſe Waters, and

that they may be drank for a conſiderable time as an Alterative with very happy Conſequences. Dr. *Hales* has found by Experience that there is an extreme Penetrability in this Water; becauſe a Man who ſtood about three Hours bare legged in the Well to clean it, was purged ſo ſeverely for a Week, that he declared he would not venture on any Account to cleanſe the Well again; likewiſe the ſame thing happened to another Man.

Of the WATER *of* ACTON *near* London.

ACTON is a large Village, eight Miles Weſt of *London*, and a noted Thoroughfare on the *Oxford* Road; near it, on *Old Oak Common*, the Wells are ſituated, which are much frequented in *May*, *June*, and *July*. The Water is purging, though it is very clear and without Smell; nor when bottled for ſome time does it depoſite any Sediment. It is of a moderately bitter and ſomewhat of a nauſeous Taſte, like a weak Solution of artificial *Epſom* Salt. It will curdle with Soap, and Salt of Tartar produces a white grumous Cloud; the Spirit of Sal Ammoniac does the ſame, but in a leſs Degree. With Solution of Silver it produces a thick white Cloud, and ſoon after a brackiſh grumous Sediment; the Solution of Sugar of Lead creates a bluiſh Cloud and a white Sediment; that of Allum a groſs grumous Sediment. Oil of Vitriol and Spirit of Salt excite a ſmall Fermentation; Milk boiled with equal Parts of this Water will curdle, and the Whey will be clear. With Syrup of Violets it will turn to a light Green, and with Galls there will be a Greenneſs near the Surface after ſtanding twenty-four

four Hours. It will not turn Beef red when boiled in it as other Waters merely nitrous will, notwithſtanding a ſtrong Solution of the Salt will redden it a little. With Logwood this Water will turn of a deep Red, with *Brazil* Wood of a Scarlet, and with Rhubarb of an Orange Colour; but with Aſh Bark it will turn blue at the Surface and Amber coloured underneath.

A Gallon of this Water will yield 344 Grains of Sediment, which is very white and of a nauſeous bitter Taſte; it will ferment a little with Oil of Vitriol and Vinegar; but very briſkly with Spirits of Salt. The Proportion of the Salt of the earthy Matter is as ſeventy-three to four. *Allen* acquaints us, that a Pint and a Half of the Water yielded forty-eight Grains of Salt, in which was ſix Grains and a Half of reddiſh Earth.

The Salt ſeparated from the earthy Parts is grey, and of a bitter Taſte; ſometimes it will melt in Bliſters on red hot Iron, and ſometimes not; it will not ferment either with Vitriol nor Spirit of Salt. Half a Dram boiled with half a Pint of Milk will curdle it with clear Whey; it will not entirely diſſolve in forty-eight times its own Weight of diſtilled Water; but it will grow moiſt in a damp Air. A ſtrong Solution of it will ſhoot into long Cryſtals like Needles, whoſe Sides, at leaſt ſome of them, have very evident Parallelograms. If they are kept in a cloſe Veſſel for many Years, they will retain their Firmneſs and Tranſparency, which ſhows that the Nitre is much more predominant than the Sea Salt.

Doctor *Grew* obſerves, that the Subſtance like Cream, which riſes on the Surface of the Water while boiling, will ferment with Acids, and will ſeem to have a kind of Heat; and yet it will have

no

no manner of Taſte when burnt with Lime. Dr. *Rutty* obſerves, that the earthy Matter will ſparkle on a red hot Iron, and will ferment with Oil of Vitriol but not with Vinegar. From what has been ſaid it appears that this Water is chiefly impregnated with a calcarious Nitre and a ſmall Proportion of abſorbent Earth, and ſome think with a little talky Matter. It is accounted one of the ſtrongeſt purging Waters near *London*; and is noted for cauſing a great Soreneſs in ano.

Of PANCRAS WATER *in* Middleſex.

PANCRAS lies on the North Weſt Side of *London*, and in the Road to *Kentiſh Town*. It is a very ſmall Walk from *Bloomſbury*, and the Churchyard is greatly noted for being the burying Place of Roman Catholics. The Water has ſcarce any Taſte till one half is boiled away, and then it becomes bitter as well as quicker to the Taſte. Dr. *Shaw* obſerves that the ſame thing will happen with the Addition of Spirit of Sulphur, by which Means it will reſemble the common purging Waters of *Acton* and *Dulwich*. Hence it follows, that Water impregnated with an equal Proportion of calcarious Nitre may prove more or leſs bitter according to the Proportion of the combined Acid.

Dr. *Shaw* has obſerved that it will depoſite a copious white Sediment with Oil of Tartar, and there will be a white Incruſtation on the Sides of the Glaſs with Spirit of Sal Ammoniac, as well as a white grumous Sediment. It will yield a blackiſh grumous Sediment with the Solution of Silver, and a ſmall white Sediment with that of

Sugar

Sugar of Lead; but with a Solution of Allum there will be a ſmall Grumoſity.

There will be a ſmall Fermentation produced with Oil of Vitriol, Oil of Sulphur and Spirit of Salt; it being boiled with equal Parts of Milk it will curdle it and the Whey will be clear. It will turn Beef reddiſh when boiled in it; and with Syrup of Violets it will turn Green. Dr. *Shaw* takes Notice, that Galls will not affect its Colour, from whence he concludes it does not partake of Iron. But Dr. *Rutty* affirms that the Trial that he made with Galls turned the Water Green, which is the characteriſtic of calcarious Nitre; at firſt the Water became wheyiſh, but after ſtanding four or five Days it became of a deep Green almoſt to the Bottom of the Glaſs. Sumach changed it to a bright Green, which became deep in two or three Days; and with Aſh Bark it had a blueiſh Circle with an Amber Colour underneath; with Logwood it turned to a deep Red, with *Brazil* Wood to a pale Crimſon, and with Rhubarb to a deep Orange.

A Gallon of this Water after Evaporation yielded five Drams of Sediment of a whitiſh Colour, of a ſaltiſh and ſtrongly bitter Taſte in the Throat. It will ferment and emit an acid Fume with Oil of Vitriol, which *Shaw* obſerves to be the ſame with the Fume of Aqua Fortis; from whence he concludes the impregnating Salt is not Sea Salt, but rather a calcarious Nitre. It will ferment a little with Vinegar, and turns of a pale Green with Syrup of Violets, though but ſlowly. It will grow a little moiſt in a damp Air, and will riſe in Bliſters on a red hot Iron. The earthy Part of the Sediment in Proportion to the Salt, is as 104 to five. The Salt itſelf is of a

browniſh

browniſh Yellow, with a nauſeous bitter Taſte, and a ſtrong diſagreeable Smell. It will ferment with Oil of Vitriol, and ſend forth an acid Vapour; but Spirit of Salt has little or no Effect upon it. A Pint of Milk will curdle if boiled with half a Dram of the Salt, and the Whey will be clear. With Syrup of Violets it will turn of an obſcure Green, and will riſe in Bliſters on a red hot Iron, as well as grow damp in the Air. The Solution placed in an upper Room will ſhoot into long nitrous Cryſtals; and yet, which is ſtrange, it will not do the ſame in a Cellar. The earthy Matter will flame on a red hot Iron, and will ferment with Oil of Vitriol; when calcined it will turn White, and then Red with the Solution of corroſive Sublimate; but it has no Taſte of Lime. Hence it appears that *Pancras* Water is impregnated with a calcarious Nitre; it is conſiderably diuretic, and ſomewhat purgative; whence it may be of Service in the Stone, Gravel, and ſimilar Complaints.

Of BARNET *and* NORTHALL WATERS *in* Hertfordſhire.

THE *Barnet* here mentioned is not that commonly called *High Barnet*, that lies in the Road from *London* to *St. Alban's*, but *Eaſt Barnet* which lies two Miles South Eaſt of the former, and is a pleaſant Village near *Whetſtone* and *Endfield Chace*; it was formerly more frequented than it is at preſent on Account of its Medicinal Spring, which was found out above 100 Years ago. *Northall* lies about three Miles North of *High Barnet*, and conſequently about fourteen Miles

Miles North Eaſt of *London*. It receives its Name from *Northaw*, which is the ſame as the *North Grove*; there having been a Wood here which belonged to the Monaſtery of *St. Alban's*. In the Reign of Queen *Elizabeth* there was a ſtately Houſe built here by the Earl of *Warwick*, whoſe preſent Proprietor allows the Rent of the Wells to the Poor of the Pariſh.

The Waters of both theſe Wells ſeem to be much of the ſame Nature, and when bottled they generally continue clear and ſweet; though ſome few will have a diſagreeable Smell; but it does not hurt the Operation of the Water. That of *Northall* is a little brackiſh and bitteriſh in the Throat; but not ſo nauſeous as that of *Epſom*. When it is evaporated to one half, it will become intenſely bitter. *Barnet* Water is bitterer than the former; but they both will curdle with Soap, and let fall a large grumous Sediment with a Solution of Salt of Tartar; that of Sugar of Lead will precipitate a white Sediment, as well as the Solution of Silver. But with the Solution of Allum they will let fall white Grumes, which ſhow that they are not alluminous, as ſome have formerly thought. *Northall* Waters will not ferment with Oil of Vitriol and Spirit of Salt; but with *Barnet* Water they will; both will curdle Milk with a clear Whey. Beef boiled in either will become of a pale Red, and with Galls they will turn wheyiſh, with a green Circle near the Surface, that deſcends lower the ſecond and third Day. Sumach will turn *Barnet* Water of a greeniſh Colour, with a green Cloud that deſcends deeper in two Days. They both turn Logwood of a deep Red, and Aſh Bark gives them a blue Circle on the Surface.

The

The Evaporation of a Gallon of *Northall* Water will yield four Drams and twelve Grains of a very white Sediment, with a Whiteneſs on the Sides of the Veſſel. This Sediment appears warm on the Tongue, with a nauſeous bitter Taſte; together with one ſomewhat like that of Urine. It will turn of a pale bright Green with Syrup of Violets, and will ferment pretty much with Spirit of Violets, though but little with Vinegar. A Gallon of *Barnet* Water will yield five Drams and twenty-eight Grains of a brackiſh bitter Sediment; but Mr. *Boyle* acquaints us that he got a Dram from every Pint.

The *Northall* Water had a Sediment that contained eight Grains of an earthy Matter to every four Scruples of Salt; but in the *Barnet* there was eleven Grains to two Drams and twenty-ſeven Grains. The Salt of *Northall* Water, ſeparated from the Earth, is of a pale Ruſſet Colour, of a brackiſh nauſeous Bitter and empireumatic Taſte. The Salt of *Barnet* Water is White, actually warm, a little pungent on the Tongue, and bitter in the Throat. The Salt of *Northall* Water raiſed no Fermentation with any Acid; but with Oil of Vitriol it would emit a Fume; but that of *Barnet* neither fomented nor fumed. They both curdle Milk with a clear Whey; and the Salt of that of *Northall* rubbed on boiled Mutton turned it Red by Spots. They both turn of a pale Green with Syrup of Violets, and they will both diſſolve in twenty-four times their own Weight of Water; the earthy Matter of both will ſparkle on a red hot Iron. Hence it appears, the Salt of both theſe Waters is a calcarious Nitre, with a ſmall Mixture of Sea Salt, and a little Lime Stone. They have both a purging

Quality,

Quality, though they are not above half ſo ſtrong as *Epſom* Water; but that of *Barnet* is the ſtrongeſt.

Of HOLT WATER *in* Wiltſhire.

HOLT is a Village in *Wiltſhire*, ſix Miles Eaſt of *Bath*, and two North-eaſt of *Bradford*. It is of no great Note, except for the medicinal Spring, which was firſt taken Notice of in 1713, on Account of a Child being cured by it, that was over-run with ſcrophulous Sores. It is heavier than common Water by four Grains in two Ounces, and it lets fall a groſs grumous Sediment with Oil of Tartar. When mixed with Spirit of Sal Ammoniac, a white cruſty Subſtance adheres to the Side of the Glaſs, as well as with a Mixture of Sugar of Lead; but a Solution of Silver precipitates a large white Sediment, and with that of Allum one that is ſmall; whence it appears it is but an alluminous Water.

It will not lather with Soap; but Oil of Vitriol will cauſe a conſiderable Fermentation, tho' Vinegar will cauſe only a ſmall Bubbling. When boiled with equal Parts of Milk it will yield a ſtrong Curd, and with Syrup of Violets it will turn greeniſh, after ſtanding for ſome Time; Galls will alſo turn this Water Green, as will Sumach after four Days ſtanding. Logwood turns it of a deep Red, *Brazil* Wood a Scarlet, and Rhubarb a pale Amber Colour. While it is evaporating over the Fire, it will throw up a thick whitiſh calcarious Scum, that will ferment with Spirit of Vitriol, and has a nauſeous bitter Taſte. A Gallon of this Water will yield one hundred and ſeventy-ſix

venty-ſix Grains of Sediment, which is very white, and will ferment with Acids, and turn greeniſh with Syrup of Violets; it has a ſaltiſh bitter Taſte, will grow moiſt in a damp Air. *Lewis* affirms, that ſome Part of the Sediment will ſhoot into Cryſtals like Needles, and others into Priſms, with thin Plates ſticking to the Veſſels. The earthy Part, according to ſome Experiments, is nearly equal to the Salt, though in others leſs.

The Salt is a Kind of calcarious Nitre, and requires ninety-ſix Times its own Weight of Water when cold. When it is diſſolved in diſtilled Water, it has a nauſeous bitter Taſte, and will diſcover a thick white Cloud when mixed with Oil of Tartar. A Solution of half a Dram in four Ounces of diſtilled Water, will turn of a deep Red with Logwood, of a pale Red with *Brazil*, and of a pale Amber with Rhubarb; it has alſo a pale blueiſh Circle with Aſh Bark; but Galls or Sumach will not tinge it all after four Days ſtanding, though the Water itſelf turned Green therewith. The Salt will ferment greatly with Oil of Vitriol, and emit an acid Fume; but not at all with Spirit of Salt or Vinegar. Half a Dram boiled with Half a Pint of Milk will curdle it, and the Whey will be clear. With Syrup of Violets it turns very ſlowly to a Green, and will turn a little moiſt in a damp Air; when thrown on red hot Iron, it will riſe in Bliſters, and has then a ſtrong Smell.

From Dr. *Short*'s Experiments it appears, that the Salt contained in *Holt* Water is principally a calcarious Nitre; and Dr. *Rutty* is of the ſame Opinion. The earthy Matter therein is very white, and will ferment with Spirit of Vitriol,

and

and ſparkle a little on red hot Iron; it turns of a pale Green with Syrup of Violets, though but very ſlowly, and after its Calcination for twelve Hours, it ſcarce acquired the Taſte of Lime.

The Operation of this Water is more mild than other Springs of this Kind, on Acount of the large Quantity of earthy Matter contained therein, which ſerves to envelop the Salt. In ſmall Doſes it is an alterative and a diuretic; but two Quarts will ſufficiently purge. Its Virtues are to dilute, cool, abſorb and ſtrengthen, beſides the Operations juſt mentioned. It is uſed both externally and internally; externally, Rags or Spunge dipt therein will cure ſcrophulous Ulcers, attended with carious Bones; but then it muſt be taken inwardly at the ſame Time. It will alſo cure inveterate running Ulcers of the Legs and other Parts, Breakings out of the Skin, attended with a whiteScurf, and others that are accompanied with great Heat, and ſharp corroſive Humours. It is good for ſore Eyes, the Piles, and Ulcers of a cancerous Nature, when uſed outwardly and drank inwardly. It never fails of giving an Appetite, and is recommended to ſtrengthen the Relaxation of any Part; likewiſe ſome affirm it will cure old Gleets and the Fluor Albus.

Of the WATER *of* MORETON *in* Shropſhire.

MORETON, or rather *Moreton Say*, is a Village in *Shropſhire*, two Miles Weſt of *Market Drayton*, remarkable for a Mineral Water found therein. It will not lather with Soap, but it curdles Milk, and yields a white Sediment with

with Oil of Tartar; it turns Green with Syrup of Violets, and Scarlet with Logwood.

A Gallon of this Water, after Evaporation, will yield two hundred and ſeventy-ſeven Grains of Sediment, whereof ſeventy-ſix is Earth, and the reſt a calcarious Nitre according to Dr. *Short*. This Sediment is white, ſaltiſh, and bitter in the Throat; it ferments a little with Vinegar; but with Spirit of Salt and Oil of Vitriol it is more remarkable; beſides, this laſt will excite an acid Fume. It turns of a pale Green ſpeedily with Syrup of Violets; but it will not ſparkle nor bliſter when thrown on a red hot Iron. *Rutty* tells us in the Experiments he made, this Water yielded nearly equal Parts of a white Salt and Earth. The Salt is peculiarly ſharp, with a pungent Taſte; but it has an intenſe nauſeous Bitter in the Throat.

This Salt will ferment and fume with Oil of Vitriol, but not with Spirit of Salt nor Vinegar. Half a Dram of it boiled with Half a Pint of Milk, will produce a ſtrong Curd, and a clear Whey; and in a damp Air it will become moiſt. It turns of a pale Green with Syrup of Violets in twenty-four Hours Time; and when thrown on a red hot Iron, there is but very little bliſtering or crackling. It will turn Purple with the Solution of Silver; and Beef ſalted with it, and afterwards boiled, will become of an obſcure red. It will diſſolve in twenty-four Times its own Weight of diſtilled Water, and then will precipitate a groſs white Grume with Oil of Tartar; it will turn red with Rhubarb, and will diſcover a blue Circle with Aſh Bark; but it will not turn Green with Syrup of Violets.

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The earthy Part will ferment ſtrongly with Oil of Vitriol, though but very little with Vinegar; it will turn of a pale Green with Syrup of Violets; but has no Taſte of Lime after an Hour and a Half's Calcination; when rubbed with the Solution of corroſive Sublimate in Water, it will turn of a browniſh red.

Dr. *Short* declares that this Water is an excellent cooling Diuretic and Cathartic, and that it purges very briſkly. It bears a great Reſemblance to *Holt* Water, only the Taſte is more pungent, and conſequently it is very likely to have the ſame Virtues; however it deſerves a farther Inquiry.

Of KINALTON WATER *in* Nottinghamſhire.

KINALTON, or *Kynolton*, is a Village of *Nottinghamſhire*, and nine Miles South-eaſt of *Nottingham*. The Well lies in a ſmall Cloſe, one the Right Hand at the Weſt End of the Village; and the Water is clear, pleaſant, cooling, and a little ſaltiſh according to Dr. *Short*. It grows whitiſh, and curdles with Oil of Tartar and Spirit of Hartſhorn, as well as with the Solution of Sugar of Lead; but with that of Silver it turns blackiſh, and lets fall a white Sediment. It undergoes no Alteration with acid Spirits, but it will turn of a beautiful light red with Tincture of Logwood.

The Evaporation of a Gallon of this Water will yield two hundred and eight Grains of a beautiful white Sediment, a fourth Part of which is a white, fine, alcaline Earth, and the Remainder a remarkably pure clear Nitre; but the intire Sediment has the nauſeous bitter Taſte proper to calcarious

carious Nitre. It will ferment with Vinegar, beſides which it will emit an acid Fume with Oil of Vitriol; and it will turn of a bright Green with Syrup of Violets. It will neither ſparkle nor flame when thrown on a hot Iron; but it will melt a little, and riſe in Bliſters in ſome ſmall Spots.

Three Drams of the Solution of the Sediment, boiled in three Pints of diſtilled Water to a Quart, and filtrated, has the ſame nauſeous bitter Taſte, will curdle with Soap, and exhibit a groſs white Sediment with Oil of Tartar. With Spirit of Sal Ammoniac there will be a white Incruſtation on the Sides of the Glaſs; and the Solution of Silver will precipitate a groſs white Sediment; likewiſe there will be a white Sediment with that of Sugar of Lead. It turns to a Crimſon Colour with Logwood, and to a Scarlet with *Brazil* Wood; but both of them will quickly fade; it becomes of a pale Amber Colour with Rhubarb, and has a light blue Circle with Aſh Bark, but it yields no Tincture with Galls or Sumach.

The Salt, when ſeparated from the earthy Parts, is White, and has the ſame nauſeous bitter Taſte as above. It will not ferment with Spirit of Salt nor with Vinegar, nor does it boil ſo much with Oil of Vitriol as other purging Nitres; but it will grow warm and emit an acid Fume. It turns Purple with the Solution of Silver, and becomes of an obſcure Green with Syrup of Violets. It riſes in ſmall Bliſters when thrown on a red hot Iron, and will entirely diſſolve in twenty-four Times its own Weight of diſtilled Water. The earthy Subſtance will ſparkle much when thrown on a red hot Iron, and ferment with Oil of Vitriol, but not at all with Vinegar; it will turn Green

Green with Syrup of Violets, and after an Hour's Calcination, will become yellow and red with the Solution of corroſive Sublimate.

This is a purging Water, and has about half the Proportion of Contents as *Epſom* Water; but will not work except drank plentifully.

Of COMNER *or* CUMNER WELL *in* Berkſhire.

COMNER, or *Cumner*, is a Village in *Berkſhire*, three Miles Weſt of *Oxford*, and the Water is always of a whitiſh Colour, eſpecially in Summer when the Well is low, it being produced of Lime Stone, according to Dr. *Short*. With Oil of Tartar it lets fall a white Sediment, but with Spirit of Hartſhorn turns to a Pearl Colour; with the Solution of Silver it turns to a purpliſh Pearl Colour, and to that of Milk with the Solution of Sugar of Lead; but with Syrup of Violets it becomes Green.

A Gallon of this Water will yield two hundred and ninety-ſix Grains of Sediment, whereof, according to the ſame Phyſician, ſeventy-ſix Grains are Lime Stone, and the Remainder a calcarious Nitre. The Sediment is of a dark brown Colour, of a ſaltiſh and very bitter Taſte. It will ferment with Vinegar, as well as with Oil of Vitriol, and will turn Green immediately with Syrup of Violets. It will neither ſparkle nor bliſter when thrown on a red hot Iron; but will burn to a black Colour. The Salt contains but a very ſmall Proportion of Earth, namely, four Grains to an hundred and nineteen. The Salt itſelf is of a brown, yellowiſh Colour, and has a ſaltiſh nauſeous bitter Taſte.

This Salt will diſſolve in twenty-four Times its own Weight of diſtilled Water; and will let fall a groſs white Grume with Oil of Tartar; but with Aſh-Bark it will diſcover a blue Circle, though it will not turn Green with Syrup of Violets; however, the Salt in Subſtance will turn inſtantly Green when rubbed with that Syrup, and will become Purple with the Solution of Silver. It will not ferment with Vinegar nor Spirit of Salt; but with Oil of Vitriol it will. Half a Dram boiled with half a Pint of Milk will curdle it, and the Whey will be white. Beef rubbed with it, and boiled after it has lain twenty-four Hours, will become as red as with Salt-petre. With Sal Ammoniac, or Salt of Tartar, a pungent urinous Smell will be excited, in the ſame Manner as with the Natron of the Ancients; it will not readily imbibe Moiſture, unleſs the Air is damp; but it will keep dry in a corked Phial for many Years. It will melt and riſe in Bliſters when thrown on a red hot Iron, with a little ſtinking Smell. The earthy Subſtance will ferment a little with Vinegar, and much more with Spirit of Salt; and it will quickly turn Green with Syrup of Violets; after two Hours Calcination it becomes a very imperfect Lime; for it will not taſte but very little of it, either in Subſtance or infuſed in warm Water, and yet it will turn red with the Solution of corroſive Sublimate.

The Salt of this Water is a Kind of calcarious Nitre, but inclines more to an Alkali than moſt others of this Claſs. A Quart or two of this Water will purge a labouring Country Fellow, which is the chief Effect taken Notice of; but it may, doubtleſs, be applied to much better Purpoſes by a ſagacious Phyſician.

Of MALTON SPAW *in the* North-Riding *of* Yorkſhire.

MALTON, otherwiſe called *New Malton*, lies in the Road from *York* to *Scarborough*, and is nineteen Miles North eaſt of the former, and twenty-four South-weſt of the latter. It is half a Mile long on the Road, but is more tranſverſe. It is a pretty good Borough Town, and is divided into the Old and New; in both of which there are three Pariſh Churches; it is watered by the River *Derwent*, and the *Saturday*'s Market is ſaid to be as good as any in *Yorkſhire*. There is a Stone Bridge over the River, which is navigable to this Place, and it had formerly a Caſtle, the Ruins whereof are yet to be ſeen.

The Spring lies at the Weſt End of this Town, and it is ſo ſtrongly impregnated with Chalybeate Qualities, that it will preſerve its Virtues intire, though tranſported to diſtant Parts; for it ſtill continues clear, and has a ſtrong inky ferruginous Taſte, and is bitteriſh in the Throat.

It will curdle with Soap, and let fall a white Cloud with Oil of Tartar; but with Spirit of Sal Ammoniac it is of a greeniſh White. With the Solution of Allum it continues very clear, and almoſt clear with the Solution of Copperas; but with that of Sugar of Lead it exhibited a white ſubtile Cloud, according to Dr. *Rutty*; but in conſequence of the Trial of Dr. *Short*, it had a larger browniſh Sediment. With the Solution of Silver, it let fall a whitiſh Sediment, as the former Author declares; but according to Dr. *Short* a browniſh Cloud. With the Solution of corroſive Mercury ſublimate, it continued clear; but

with Dr. *Short* of a dark white, from whence he is of Opinion, it contains a Portion of Sulphur. With Lime Water it turned to a ſubtile Whiteneſs, and on ſtanding let fall an okreous Grume.

All theſe Experiments plainly ſhow, that it contains a very ſmall Proportion of calcarious Earth. It will not ferment with Oil of Vitriol, nor Spirit of Salt; but it will curdle with Milk, and the Whey will be clear. It turns Green with Syrup of Violets, and with Aſh Bark has a ſubtile blue Cloud; but with Rhubarb it becomes of a dunniſh Colour, tending to an Olive Colour. With Galls it will become Purple, and of a dilute Purple with Sumach; but with Cork it became of a blackiſh Colour; with Logwood it will turn Blue, which in three Days Time changes to Purple; however, moſt of theſe Colours ſoon fade.

This Water is generally covered with a thick reddiſh Scum; and during Evaporation it will have a thick white Scum. The Oker that it precipitates ſpontaneouſly is of the Colour of Ruſt of Iron, and will ſparkle when thrown on a red hot Iron; this will turn red by Calcination, and ſome ſmall Parts of it will be attracted by the Loadſtone. After the Evaporation of ſeven Pints, three Drams and a half of a reddiſh Brown Sediment remained, which had an auſtere bitteriſh Taſte. This Sediment will not ferment with Acids, but it will turn greeniſh with Syrup of Violets, and when thrown on a red hot Iron, it will neither bliſter, nor crackle, nor ſparkle.

Two Drams of the Sediment, boiled in a Quart of diſtilled Water to a Pint, and filtered, has a bitteriſh Taſte, and with Oil of Tartar lets fall a groſs white Grume, and a ſmall one with Spirit of Sal

Sal Ammoniac; but with a Solution of Silver, it precipitates a groſs Cloud. Theſe Experiments ſhow that the Salt is a calcarious Nitre, though different in ſome Senſe from others; it will not ferment with Oil of Vitriol, nor Spirit of Salt; but it will turn greeniſh with Syrup of Violets. Half a Dram boiled with half a Pint of Milk, will produce Curds with a clear Whey. The Salt contained in the Sediment is not quite ſo large as the Earth, which is of a reddiſh white Colour. This Earth will not ferment with Oil of Vitriol, nor Spirit of Salt.

Dr. *Short* informs us, that the Mud and Scum of this Water will dry up and heal old Ulcers, Scabs, and Tetters to a Wonder. Internally it will purge, but not ſo quick as the Water of *Scarborough*; however, it works pleaſantly by Stool and Urine; and if the Stomach be foul, it will vomit the firſt Day or two. The common Doſe is from three Pints to ſix; but ſome think ſmaller Doſes would be more proper. It is good in the hypochondriac Melancholy, in the Beginning of a Dropſy, in an Aſthma with Spitting of Blood, in internal Ulcers and Bleedings, and in Obſtructions of the Liver, Spleen, Uterus, and Meſentery; as alſo in a Relaxation, Weakneſs, Paleneſs, and Languidneſs of the Body, it being both a Strengthener and Deobſtruent, as well as a Purge.

Of CLIFF *or* KING'S CLIFF WATER *in* Northamptonſhire.

KING's CLIFF is a Market Town in *Northamptonſhire*, eight Miles South of *Stamford*, and ſeven Miles North by Eaſt of *Oundle*; but ſixty-ſix North of *London*. It is remarkable for nothing but its Mineral Water, though formerly King *Henry* VIII. had a Park here.

The Water both ſmells and taſtes of Iron, and lets fall a white Sediment with Oil of Tartar and Spirit of Hartſhorn; but with Solution of Silver it is of a purpliſh Pearl Colour. It curdles with Milk, eſpecially when double the Quantity of Water is added to the Milk. With Galls it precipitates a Purple Sediment, turns of an opake Red with Logwood, and of a deep Green with Syrup of Violets.

According to Dr. *Short*, a Gallon of this Water yields an hundred and forty Grains of Sediment, ſeventy-five of which are Lime Stone and Oker, and ſixty-five a calcarious Nitre. The Sediment has an odd Flavour, and has a bitteriſh and brackiſh Taſte; it will ferment with Vinegar, turn Green with Syrup of Violets, and ſparkle a little on red hot Iron. The Salt ſeparated from the earthy Parts, is of a light browniſh Colour, with a nauſeous bitter Taſte. It will not ferment with Spirit of Salt, but with Oil of Vitriol it will; half a Dram boiled with half a Pint of Milk, will curdle it, and the Whey will be clear. It turns of a Sea-green Colour with Syrup of Violets, and ſoon grows moiſt in a damp Air.

The earthy Part, in Proportion to the Salt, is as one to five, which is of a calcarious Nature,

as

as appears by its fermenting with Vinegar, and turning of a bright Green with Syrup of Violets, acquiring the Taſte of Lime by Calcination, and turning reddiſh with the Solution of corroſive Sublimate.

This Water is of a chalybeate laxative Nature, and is impregnated with Iron and calcarious Nitre, with a ſmall Quantity of a Sea Salt, and a calcarious earthy Subſtance. It will not purge a ſtrong Perſon, unleſs he drinks three, four, or five Quarts thereof; but it has been uſed with great Succeſs in Diſorders from Obſtructions, in Eruptions of the Skin, and has cured ſeveral lame Perſons, according to Dr. *Short*.

Of CARLTON WATER *in* Lancaſhire.

CARLTON is a Village in *Lancaſhire*, ten Miles South-weſt of *Preſton*, and ſeven North of *Ormſkirk*. It is remarkable for nothing but its Mineral Water, which is ſomewhat of a Chalybeate, but not much; and it has a faint Smell of Sulphur when juſt drawn, but it taſtes ſweetiſh when the Steam is gone off, according to Dr. *Short*. It will curdle with Soap, turn White with Oil of Tartar, and likewiſe with Sugar of Lead; but with Solution of Silver it changes to a purpliſh Pearl Colour. It curdles in Milk, has a Pink Sediment with Galls, changes to a deep Blue with Logwood, and to a Green with Syrup of Violets.

A Gallon of this Water, after Evaporation, will leave two hundred and thirty-ſix Grains of Sediment behind it, whereof one third Part is Earth, according to the above-mentioned Author.

The Sediment is White, of a brackiſh Taſte and bitteriſh in the Throat; and it will ferment more with Acids than the Sediments of many other purging Waters; it alſo emits an acid Fume with Oil of Vitriol. It turns of a bright Green with Spirit of Violets, and when thrown upon red hot Iron, neither bliſters, crackles nor ſparkles, but emits a fetid Smell.

The Salt ſeparted from the earthy Matter is brackiſh and very bitter in the Throat; the Solution of half a Dram in half a Pint of diſtilled Water precipitates a large white Grume with Oil of Tartar, and a white Incruſtation on the Sides of the Glaſs with Spirit of Sal Ammoniac; but it curdles with Soap, and turns purpliſh with the Solution of Silver. It emits an acid Fume with Oil of Vitriol, but will not ferment, nor change with Vinegar. Half a Dram boiled with half a Pint of Milk curdles it with a clear Whey, and it turns ſlowly to a Green with Syrup of Violets. The Salt thrown on a red hot Iron will melt but not crackle, nor riſe in Bliſters, but it will emit a ſuffocating Fume. It grows moiſt in a damp Air, and requires forty-eight times its own Weight of diſtilled Water to diſſolve it.

The earthy Matter is as twenty-two Grains to ſixty-four of the Salt; and it will ſoon turn to a bright Green with Syrup of Violets; it will ferment greatly with Oil of Vitriol and Spirit of Salt, and it will whiten in Specks when calcined, with ſomewhat of the Taſte of Lime; it will turn yellow and reddiſh with the Solution of corroſive Sublimate. It is a more powerful Abſorbent than many other nitrous Waters, and three or four Pints will purge very briſkly according to Doctor *Short*.

Of the WATER *of* KIRKBY THOWER *in* Weſtmoreland.

Kirkby Thower is a Village eight Miles Eaſt of *Penrith*, and four North-eaſt of *Appleby* in *Weſtmoreland*; it is ſeated near the River *Eden*, and below it are large Ruins of an ancient Town, where *Roman* Urns and Coins are now and then dug up. Theſe are called by the Vulgar *Whelp Caſtle*, and the old Military Way runs through them, called *The Maiden Way*, becauſe it begins at *Maiden Caſtle* in the North Riding of *Yorkſhire*.

This Water is a weak purging Chalybeate, according to Dr. *Short*, and is exceeding clear, ſweetiſh, and has a little Taſte of Steel. It grows whitiſh with Alkalies and with the Sugar of Lead; but it turns to a clear Purple with the Solution of Silver. It becomes of a pink Purple with Galls, a red Purple with Logwood, and a deep Green with Syrup of Violets.

A Gallon of this Water after Evaporation will leave 190 Grains of Sediment behind it, of which 140 are Lime Stone, and 50 a calcarious Nitre, according to the above mentioned Author. Dr. *Rutty* affirms it is White like Lime, and is of a nauſeous bitter Taſte in the Throat, proper to calcarious Nitre. It will ferment greatly with Spirit of Salt of Vinegar, and yet but little with Oil of Vitriol. It becomes Green with Syrup of Violets, and will ſparkle a little on a red hot Iron.

The Salt when ſeparated is bitter in the Throat, and will not ferment with Spirit of Salt, nor with

Oil of Vitriol, which is an Argument of its being a purer Nitre than that of moſt Mineral Waters; which is confirmed by its not growing moiſt in the Air.

This Salt diſſolved in diſtilled Water in the Proportion of a Dram to a Pint, and boiled to half a Pint, will curdle with Oil of Tartar, and turn Mutton red. It will not diſſolve entirely in forty-eight times its own Weight in diſtilled Water; nor will it bliſter, ſparkle or crackle, when thrown on a red hot Iron; but it will turn of a pale Green with Syrup of Violets. The earthy Matter will ferment greatly with Spirit of Salt, and change to a deep Green with Syrup of Violets. It becomes of a whiter Colour by Calcination, and turns reddiſh with the Solution of corroſive Sublimate.

This Water is a more powerful Abſorbent than moſt others of this Kind, and it will purge well; but then the Patient muſt drink to the Quantity of three or four Quarts.

Of HARTLEPOOL WATER *in the Biſhopric of* Durham.

Hartlepool is a Market Town, commodiouſly ſeated on the Sea Shore, and it is encompaſſed on all Sides by the Sea, except towards the Weſt; this again is ſurrounded by Rocks and Hills, except on the Eaſt. It is an ancient Corporation, and had a Market which is now diſuſed, and though it has a good Harbour it is not very rich; becauſe it is chiefly made Uſe of by the *Newcaſtle* Colliers, who take Shelter here in Streſs

Streſs of Weather. It is fifteen Miles South Weſt of *Durham*, and 236 North by Weſt of *London*.

This Water is a laxative Chalybeate, of a pleaſant Taſte, and it is lighter than common Water according to Dr. *Short*. As it riſes up it diſcovers a little Steel and Sulphur, which are loſt after ſtanding a ſhort Time; inſomuch that if it is carried to diſtant Parts it becomes a mere purging Water. It precipitates a white Sediment with Salt of Tartar, as well as the Solution of Silver, and becomes whitiſh with Spirit of Hartſhorn; it turns of a pink Colour with Galls, Green with Syrup of Violets.

A Gallon of this Water will yield 120 Grains of Sediment when evaporated, whereof two Parts are Nitre, one Sea Salt, and the reſt Lime Stone, according to Dr. *Short*. It has a brackiſh Taſte but not bitter, and will ferment greatly with Oil of Vitriol, emitting an acid Fume; it will alſo ferment much with Spirit of Salt, and but a little with Vinegar. It turns of a deep Green with Syrup of Violets, and thrown on red hot Iron it will nether ſparkle nor crackle, but emits a faint fetid Smell. It contains about fifty-four Grains of Salt to five of Earth.

The Salt conſiſts partly of a calcarious Nitre, as appears from its curdling with the Solution of Salt of Tartar and of Silver, from its turning Mutton red, and from its melting and riſing in Bliſters on red hot Iron.

It is an excellent Antiſcorbutic, and has wonderful Succeſs in bilious and habitual nervous Colics, in Lameneſs, in Pains of the Stomach and Indigeſtion, in the Gravel, in Womens Obſtructions, in Hypochondriac Melancholy, in the

Cachexy, in Weakneſs of the Back, hectical Heats, and recent Ulcers, according to Dr. *Short*.

Of ORSTON WATER *in* Nottinghamſhire.

ORSTON is a Village in *Nottinghamſhire*, three Miles Eaſt of *Bingham*, twelve Eaſt of *Nottingham*, and ten South of *Newark*. It is remarkable for nothing but its Mineral Water, which when ſuffered to ſtagnate in its Baſon, has a diſagreeable rough, harſh Taſte; but at its riſing up out of the Spring, has a ſweetiſh Chalybeate, agreeable though ſomewhat roughiſh Taſte. When firſt poured into a Glaſs it ſparkles and flies, and renders the Head of the Perſon that drinks it giddy. It will curdle with Soap and Oil of Tartar; and it will turn whitiſh at firſt with Spirit of Hartſhorn, after which it lets fall a yellowiſh brown Sediment; but with Spirit of Salt it remained very clear, and with Syrup of Violets turned to a pale muddy Green; though with Syrup of Cloves to a very fine Green.

When taken immediately as it ſprings up, it turns to a beautiful opake violet Colour; with Tincture of Galls and with Tincture of Logwood to a pale Blue.

Every Gallon of this Water will yield 128 Grains of Sediment after Evaporation, wherein the Proportion of Earth to the Salt is as twenty-ſeven to nine. The Salt is of a brown Colour, and has a brackiſh Taſte with a Bitterneſs in the Throat. It will not ferment with Oil of Vitriol, nor Spirit of Salt, but half a Dram boiled in half a Pint of Milk will curdle it with a clear Whey; and

and on a red hot Iron it melts like Wax and riſes in Bliſters.

This Water is a rich Chalybeate if taken up as it ſprings, and has alſo a conſiderable Quantity of Sulphur. The predominating Salt appears to be a calcarious Nitre mixed with a ſmall Quantity of Sea Salt.

This Water will purge thoſe of a groſs Habit of Body, while it is only laxative to others. It will make the Tongue, Throat, and Stools of the Drinkers perfectly black. It is found to be good in the Hypochondriac Melancholy, Scurvy, Want of Appetite, Indigeſtion, Pain of the Stomach, Coſtiveneſs, Stoppage of Urine from Sand or Gravel in the Paſſages; in the beginning of Obſtructions of the Liver, Spleen, and other Viſcera; as alſo Ulcers of the Lungs and Spitting of Blood, according to Dr. *Short*.

Of CROFT WATER *in* Yorkſhire.

CROFT is a Village in the North Riding of *Yorkſhire*, and ſeated on the Confines of the Biſhopric of *Durham*, and it ſtands entirely upon Lime Stone. The Spring is in this Pariſh, and is a fine clear ſparkling Water, according to Doctor *Short*, with a ſtrong Smell of Sulphur. It curdles with Soap, turns White with Oil of Tartar and Spirit of Hartſhorn; as alſo with the Solution of Sugar of Lead; but it becomes of a blueiſh White with the Solution of Silver, and it curdles with Milk.

A Gallon after Evaporation leaves behind 177 Grains of Sediment, which is very White, and has a ſtrong Smell of Hawthorn Flowers; it conſiſts

ſiſts of Lime Stone, Nitre, and Sea Salt; but the Nitre is double or treble to the latter. The nitrous Cryſtals obtained from this Water, is of a nauſeous bitter Taſte; and they will turn whitiſh with Oil of Tartar. It is a purging Water, if drank from four Pints to nine; and is ſaid to perform many eminent Cures both by drinking and bathing.

Of UPMINSTER WATER *in the County of* Eſſex.

Upminſter is a Village in the County of *Eſſex*, ſeven Miles South of *Burntwood*, and eight Eaſt of *Barking*. The Water is bitter, with a ſweetiſh nauſeous Taſte, according to *Allen*; and it will curdle with Oil of Tartar, though not very ſoon, however it will ſtrongly with Spirit of Hartshorn, and it will curdle in ſmall Grumes with Soap. It will precipitate a large white grumous Sediment with a Solution of Allum, and let fall a white Cloud with Lime Water. If Silver be thrown in it for a Quarter of an Hour, it will turn of a duſky copperiſh Colour. The Solution of Copperas changes it to a dark dun Colour, and that of Silver to a Yellow, with a livid Circle on the Surface, and a large white Grume.

From theſe and ſome other Experiments it appears to be a ſulphureous Water, of a conſiderable Strength, and a Gallon of it after Evaporation yielded 332 Grains of Sediment. When about a Quart of it was exhaled it became intenſely bitter, and brown Flakes aſcended towards the Surface when it grew hot; however it loſt its fetid Smell, but retained its bitter Taſte. The Sediment is very white, and is of a nauſeous bitter Taſte, accompanied with one that is brackiſh and

and ſomewhat urinous. The Salt, when ſeparated from the earthy Matter, is of a whitiſh Yellow, and has the ſame Taſte as the Sediment. It is chiefly a calcarious Nitre, mixed with a little Natron and Sea Salt. The Water itſelf is purgative and diuretic, abſorbs Acidities, ſtrengthens the Stomach, checks Vomiting, and is a proper Purge in Agues and Dropſies; or rather where there is a Diſpoſition to theſe Diſeaſes.

Of SHAPMORE WATER *in* Weſtmoreland.

Shapmore is a marſhy Heath, lying between Mountains, having *Shap* towards the North, and *Orton* on the South; and the Well is about three Miles to the South of *Shap*, and about three or four Miles to the North-weſt of *Orton*. Likewiſe it is but a little to the Eaſt of the Road from *Kendal* to *Penrith*, and about half Way between both.

This Water ſeems to be of a ſulphureous Nature, for it has a ſtrong fetid Smell, and a ſenſible Bitterneſs; but this ſoon goes off when it evaporates over the Fire. It is a light Water, but it will curdle with Soap, and lets fall a large white Sediment, with a clean Solution of Pot Aſhes. That of Silver cauſed it to let fall a dark brown Cloud, with a white grumous Sediment; and Silver itſelf ſoon became of a dark Copper Colour, which after longer ſtanding turned blueiſh.

A Gallon of this Water yielded 376 Grains of a ſaline Sediment, with a very ſmall Proportion of very white Earth. It is very white and of a ſalt pungent bitter Taſte, and grows moiſt when expoſed

expoſed to the Air. It will ferment a little with Spirit of Vitriol, and will emit an acid Fume with Oil of Vitriol; but rubbed with Syrup of Violets it becomes of a willow Green in forty-eight Hours. It will melt but not flame when thrown on red hot Iron; nor has it any remarkable fetid Smell, from whence it follows, that the Sulphur flies off when placed over the Fire. The earthy Part is very ſmall in Proportion, and will ſparkle greatly when thrown on a red hot Iron; but it will not ferment with Spirit of Vitriol.

The Virtues of this Water have not been inquired into ſo much as they deſerve; however it has been caſually found to work by Stool and Urine, and three Pints has proved a ſtrong Purge. It has cured the Piles in a Perſon afflicted with them fourteen Years, and it has been uſed by common People to cure rheumatic Pains in the Joints, by rubbing it warm on the Parts affected.

Of ALFORD WATER *in the County of* Somerſet.

ALFORD is a Village in *Somerſetſhire*, twenty-four Miles South of *Bath*, nine South-eaſt of *Glaſtenbury*, and eleven South-ſouth-eaſt of *Wells*; it is alſo 121 Miles Weſt by South of *London*. It is only remarkable for its Mineral Water, which was firſt diſcovered in 1670, from the Pigeons that flew thither in great Numbers to drink the Water, well ſaturated with Salt, which it depoſited like a Sediment, from the Water that runs to waſte in the high Road, which paſſes through this Village, towards *Barnſtable* in *Devonſhire*.

It is of a nauſeous bitter Taſte, and it will curdle with Soap, as well as yield a white grumous Sediment with the Solution of Pot Aſhes; with Spirit of Sal Ammoniac there will be an Incruſtation on the Glaſs; and with that of Sugar of Lead it will turn whitiſh, with a very thin whitiſh Cruſt on the Sides of the Glaſs, and a ſmall white Sediment. With the Solution of Silver there will be a white grumous Sediment, intemixed with black Spots. With Syrup of Violets it turns of a dilute Green, with Sumach Green, and Galls will produce a greeniſh Cloud on the Surface, which deſcends deeper in two or three Days.

According to the Experiment of *Guidot*, there is nearly ſix Drams of Sediment to a Gallon, and the Water while evaporating becomes very bitter and ſalt. It will turn Green with Syrup of Violets, and ferment with Spirit of Vitriol. A Dram of the Sediment, diſſolved in ſix Ounces of diſtilled Water, will turn intenſely bitter, and will yield a Scruple of Salt to four Grains of earthy Matter. The Salt is brown and of a ſaltiſh bitter Taſte, and will not ferment with Spirit of Vitriol; when thrown on a red hot Iron it will melt quickly, and turn to ſmall Bliſters. The earthy Matter will flame on a red hot Iron, and ferment in large Bubbles with Spirit of Vitriol.

From the various Experiments made with this Water, it appears to be impregnated with calcarious Nitre and Sea Salt, as alſo a little Lime Stone. *Guidot* informs us it is cooling, cleanſing, penetrating, and will attenuate groſs Humours; that it will deſtroy Acrimony, and temperate Ebullitions of the Blood; that it is good in the Scurvy, Jaundice, and all ſorts of Obſtructions; that it cleanſes the urinary Paſſages, purges briſkly,

briſkly, and promotes Urine and Sweat. *Muſgrave* has recommended this Water for the Prevention of the Colic attending the Gout, as alſo to prevent the ſymptomatic Gout, produced by the Scurvy and attended with bilious Vomitings and a dry Skin; but then it muſt be obſerved that he preſcribed other Things along with their Uſe.

Of Sydenham Wells.

Sydenham is a Village, in the Pariſh of *Lewiſham*, in the County of *Kent*, and the Wells that take their Name from thence are ſeated upon a Common near *Dulwich* in *Surry*. The Water is only a little bitteriſh, until a good Part of it has been evaporated; then it has a ſenſible bitter and brackiſh Taſte. It will curdle with Soap, with the Solution of Pot Aſhes it will let fall a white grumous Sediment, with an Incruſtation on the Sides of the Glaſs like Lime, and the like with Spirit of Sal Ammoniac.

From theſe and other Experiments it appears, that this Water is impregnated with a calcarious Nitre and Sea Salt, joined to a little Natron and calcarious Earth. Two Quarts yielded two Drams and four Grains of a paliſh yellow Sediment, with a nauſeous bitter Taſte; it will ferment with Spirit of Vitriol, and turns of a bright Green on ſtanding with Syrup of Violets. The Salt ſeparated from the earthy Matter is of a pale yellowiſh Brown, and partly White, of a nauſeous bitter Taſte with a little Brackiſhneſs. It ſeems to be much of the ſame Nature as *Epſom* Water, though not half ſo ſtrong.

Of LEMINGTON WATER *in* Warwickſhire.

THIS Water takes its Name from *Lemington Haſtings*, a Village in *Warwickſhire*, three Miles South-weſt of *Dunchurch*, three Miles North by Eaſt of *Southam* and eleven Miles Eaſt by North of *Warwick*. The Spring is about a Stone's Throw diſtant from the River *Leam*, and is only a common brackiſh or ſalt Spring, which will turn White with Spirit of Hartſhorn, whitiſh with Oil of Tartar, and muddy with the Solution of Silver and Galls. A Gallon of this Water after Evaporation yielded 960 Grains of Sediment, whereof thirty were calcarious Nitre and the reſt Sea Salt. Its Taſte is evidently ſaltiſh, and it will partly crackle and fly with a red hot Iron, and partly melt and bliſter. It will ferment with Oil of Vitriol greatly, and emit an acid Fume, which it will not do with Spirit of Salt nor Vinegar. Half a Dram boiled with half a Pint of Milk will curdle it with a turbid Whey; which is more than common Salt does when uſed in the ſame Proportion; and yet it will not diſſolve in ſo ſmall a Quantity of Water as common Salt; when mixed with Syrup of Violets it became Green after ſtanding, and when rubbed with a Solution of Silver it turned Purple, according to Dr. *Short*. The Earth will ferment with Oil of Vitriol and Spirit of Salt, and turn Green with Syrup of Violets.

Dr. *Rutty* thinks it is not an intire ſaline Spring, as *Short* ſuppoſes, becauſe it will turn Purple with the Solution of Silver, and will partly melt in Bliſters when thrown on a red hot Iron; but be

be that as it will, it is certainly a ſtrong Purge and Vomit, and is drunk by labouring People from two Quarts to three. It is noted for curing ſore Legs, breakings out, and freeing Dogs from the Mange.

Of WISHERSLAKE WATER *in* Weſtmoreland.

Iſherſlake is a Village in *Weſtmoreland*, ſeven Miles South-weſt of *Kendal*, and not far from *Levens Bridge*, over the River *Can*. It has a neat Parochial Chapel, which was built and endowed by Dr. *Berwick*, Dean of St. *Paul*'s, it being three Miles from the Mother Church of *Betham*. The Mineral Spring riſes in a Moraſs near this Place, that is, about half a Mile from the Chapel.

This Water has a ſaltiſh Taſte, and in Summer ſmells a little of Sulphur, and throws up a whitiſh Scum. With Oil of Tartar it throws down a pearl coloured Sediment, with the Solution of Silver a white Sediment, and with that of Sugar of Lead one that is milky. With Galls it precipitates a purple Sediment, with Sumach one of the Colour of Peaſe Bloom, and with Logwood a purple Mazarine; but with Syrup of Violets it turns to a deep Green.

A Gallon of this Water after Exhalation yields 547 Grains at a Medium, conſiſting chiefly of a Sea Salt and a calcarious Earth, according to Dr. *Leigh*, with a little Mixture of bitter purging Salt; to which perhaps may be added a little Iron and Sulphur, though ſcarce enough to deſerve being taken Notice of. The Sediment has a very pungent ſaltiſh Taſte, and will ferment greatly, and emit an acid Fume with Oil of Vitriol,

Vitriol, and a little with Spirits of Salt, but ſcarce any with Vinegar.

From theſe and other Experiments it appears, that the impregnating Salt of this Water is chiefly Sea Salt, combined with a Kind of calcarious Nitre, a little Iron, and in ſome Seaſons a ſmall Matter of Sulphur. With regard to its Virtues, it has been found to have been of great Uſe in the Stone, Gravel, Worms, Want of Appetite, the Cachexy, Jaundice, and Dropſy.

Of ROUGHAM WATER *in* Lancaſhire.

Rougham is a Village in *Lancaſhire*, two or three Miles from *Cartmel*, and the Spring ariſes from the Bottom of a rocky Mountain. The Taſte of this Water is ſaltiſh, or a little brackiſh, and it turns White with Oil of Vitriol and Spirit of Hartſhorn; but with Sugar of Lead a little milky, and with Solution of Silver yields a white Sediment. It turns Green with Syrup of Violets, continues clear with Galls, becomes muddy with Sumach, and brown with Log-wood.

This Water by Evaporation becomes lixivial and extremely brackiſh; and when gently exhaled it throws up red Scales to the Surface, which have a lixivial Taſte, and will ferment ſtrongly with an Acid. If Spirits of Hartſhorn be dropped in, at the Beginning of the Evaporation, it cauſes a great Precipitation, with a ſulphureous Smell; if Spirit of Vitriol be dropped into an equal Quantity of the ſame Water, it will ſmell of Sulphur, and cauſe a Precipitation with a fetid Smell.

A Gallon

A Gallon of this Water will yield about three hundred Grains of Sediment, which has a ſaline Taſte, and will ferment with Oil of Vitriol, and emit an acid Fume. It will turn of a pale Green with Syrup of Violets, and will crackle and fly when thrown on a red hot Iron. The Salt in Subſtance, rubbed with Oil of Vitriol, will excite a Fermentation, with an acid Fume; but it has little or no Fermentation with Spirit of Salt and Vinegar; when cryſtallized, the Cryſtals are of a cubical Figure. The Proportion of earthy Matter is as 66 to 440, which will ferment with Spirit of Salt, but not with Vinegar, and turn Green with Syrup of Violets.

This Water purges ſtrongly by Stool and Urine, and the common People will drink from three to eight Quarts, and then it will work briſkly upwards and downwards. It is of great Uſe in bad Digeſtions, Loſs of Appetite, and the Scurvy; and ſome take it to be a Specific in Ring-worms and Tetters. It is alſo of Uſe in habitual Coſtiveneſs, the Stone, Gravel, Cachexy, and a Stuffing of the Meſentery, provided it is not attended with a Conſumption. Some have been cured of the Jaundice by this Water, and others of a Quartan Ague; but in the Longing of young Women to eat incongruous Things, it is accounted a Specific; beſides which, it has brought away prodigious Quantities of Worms.

Of St. Erasmus's Well *in* Staffordſhire.

THIS Well is ſeated in the Grounds belonging to the Lord *Chetwynd*, near *Ingeſtre*, two Miles from *Stafford*. This Water was formerly in

in great Repute for curing both external and internal Diſeaſes; it is clear and of the Colour of Sack; but has no remarkable Taſte or Smell. It will lather with Soap, but will not curdle with Milk, and with Syrup of Violets it will turn to a Graſs Green.

Dr. *Plot* informs us, that upon the Diſtillation of three Pints of it in a Glaſs Body, when about one half of it was come over, in clear Water, there plainly appeared to the naked Eye a prodigious Number of blueiſh ſhining Films, or Plates, floating therein.

A Gallon of this Water will yield three hundred Grains of Sediment, whereof two hundred and ſeventy-two were Sea Salt, and the reſt Moſs, according to Dr. *Short*. From the various Experiments made with it, it appears to be impregnated with a Kind of calcarious Nitre and Sea Salt; but whether it is now made Uſe of at all, or for what Purpoſes, it does not appear; but this is certain, that in Dr. *Plot*'s Time, it lay wholly neglected, and overgrown with Weeds.

Of CAERGYRLE WATER *in* North Wales.

CAERGYRLE is in *Flintſhire*, about ſeven or eight Miles South by Weſt of *Cheſter*, and the Water of the Spring is as clear as Cryſtal. It has lately been much made Uſe of as a Purge, according to Dr. *Short*; and it will turn whitiſh with Oil of Tartar, white with Sugar of Lead, and lets fall a white Sediment with the Solution of Silver; it alſo turns Green with the Syrup of Violets, and red with Logwood. A Gallon of this Water will yield two hundred and twenty Grains

Grains of Sediment, of which ſixty-ſix are Earth and one hundred and fifty-four Sea Salt and Lime Stone. From the various Experiments made therewith, it appears to be impregnated with calcarious Nitre and Sea Salt, and if drank to a Quart or two, it purges pretty well; but it will cauſe griping at firſt, and will produce Sickneſs at the Stomach for ſome Days, after which the Appetite becomes good. It has cured a Woman that had a loathſome Scurf all over her Body, by drinking three Pints of this Water in a Day; and another, that was troubled with a ſcorbutic Diſorder, was perfectly cured in a Week's Time, by drinking a Quart Morning and Night. Likewiſe ſeveral Children, afflicted with ſcorbutic Diſorders, and the Leproſy, have recovered by drinking and waſhing; or at leaſt have been much better.

Of STRETHAM WATER *in* Surry.

STRETHAM is a Village in the County of *Surry*, ſix Miles South of *London*, and four North of *Croydon*. It has been long remarkable for its medicinal Springs, which were formerly much frequented, at leaſt ſince the Year 1671. They riſe out of a cold, ruſhy, clayey Ground, and are without Smell, eſpecially when carried to diſtant Places; for *Allen* affirms they have a ſweetiſh Smell upon the Spot. The Water has ſomething of a yellowiſh Tinge, and throws up a Scum variegated with Copper, Blue, and Green Colours.

This Water has ſomething of a brackiſh Taſte, when it has been boiled for ſome Time; but at the

the Spring Head it has a maukiſh Taſte, or rather one that is ſaline and nauſeous.

A Gallon of this Water yields about two hundred Grains of Sediment, that has a brackiſh pungent Taſte, with very little Bitterneſs. The Salt has a penetrating brackiſh Taſte, with a ſtrong Flavour, and in the Air it becomes almoſt liquid.

From the various Experiments made with this Water, it appears to be impregnated with a Salt, which is partly marine and partly nitrous, that is enveloped with a little Sulphur, and a greater Proportion of abſorbent Earth. When it was moſt in Vogue, three Pints of it were boiled to a Pint and a Half, and given as a Purge; it operates both by Stool and Urine, and ſome affirm, it works more briſkly than *Epſom* Water; however, others are of a contrary Opinion. It has been found uſeful in Diſorders of the Eyes.

Of the PURGING WATER *of the* Dog *and* Duck.

THE *Dog* and *Duck* is a noted Public Houſe in *St. George*'s Fields, in the Pariſh of *Lambeth*; and the new Road to *Deptford* runs cloſe by it. The Fields about it are flat and level, and the Soil pretty deep; below which there is Gravel, and a Bed of Clay, intermixed with Pyrites. It being ſo near *London*, it is greatly reſorted to, eſpecially in the Spring and Summer, and there has been lately a large Room built, for the Diverſion and Entertainment of the Drinkers.

The Water is clear, and has very little Taſte, but it will let fall a white Sediment with a Solution of Salt of Tartar, and likewiſe with Spirit of Sal Ammoniac. It will curdle with Soap, and

with the Solution of Silver will let fall a white Sediment, after ſtanding forty-eight Hours; with a Solution of Lead it will turn of a Pearl Colour, with a ſmall Sediment; and it will turn whitiſh, and precipitate a grumous Sediment with the Solution of Alum. It will ferment conſiderably with Oil of Vitriol, and a little with Spirit of Salt. Beef ſteeped in it twenty-four Hours, and then boiled, becomes red within.

While this Water was evaporating, there appeared but little Whiteneſs on the Sides of the Pan; but there was a Scum on the Surface, and it acquired little or no Bitterneſs by the Exhalation of the aqueous Parts. According to the Experiment of Dr. *Fothergill*, a Gallon of this Water yielded two hundred Grains of Sediment, and Dr. *Rutty* tells us he gained ninety-ſix therefrom, which is of a dirty Colour, and has a pungent brackiſh Taſte; it will grow damp in the Air, will ferment with Vinegar, and very much with Oil of Vitriol, emitting an acid Fume.

The Salt of this Water partakes leſs of an Acid than many other Waters of the ſame Claſs, and the earthy Matter is as one to twelve in Proportion to the Salt; it will ferment ſtrongly with Spirit of Salt and Spirit of Vitriol; but will not turn to perfect Lime by Calcination.

Some Authors inform us, that this Water has been found effectual in the Cure of leprous Diſorders; and Dr. *Baynard* tells us, that it had cured an ulcerated Cancer in the Breaſt by drinking the Water, and keeping a wet Cloth always over it. Dr. *Fothergill* acquaints us, that it ſeems to have nothing volatile in its Compoſition, becauſe it will operate as well, after keeping ſeveral Weeks, as when drank freſh at the Spring. Being drank,

from

from one Pint to three, it generally purges eaſily and briſkly, and without affecting the Strength, unleſs in very tender Conſtitutions. Children, and thoſe who cannot bear a large Doſe, may have it boiled to one half. It may be taken as an Alterative inſtead of common Drink; for it has acquired a great Reputation for the Cure of ſcorbutic Pimples, Tetters, and the Leproſy, as well at the King's Evil, or at leaſt they have been often relieved by it. It is alſo a palliative Cure in cancerous Diſorders, for it has been the Means of prolonging the Lives of ſome with Comfort. When there is a Tendency to this Diſeaſe, this Water has retarded its Approaches. They do no Harm to any, except Perſons advanced in Years, and eſpecially free Livers; for in theſe Caſes they cool too much, and bring on watery Swellings; they are alſo prejudicial to Perſons of a weak Habit of Body, though attended with Eruptions, and to Women particularly, by bringing on the Fluor Albus.

Of DULWICH WATER.

THIS Water has the Name of *Dulwich*, becauſe it riſes in the Hills nearly adjoining to that Village; but in Reality it is in the Pariſh of *Lewiſham* in the County of *Kent*; whereas *Dulwich* is in *Surry*. It uſed formerly to be frequented by Pigeons, which is an Argument that it is a ſaline Water; for theſe Birds are very fond of Salt.

This Water is generally clear, and has a brackiſh Taſte, with a little Bitterneſs in the Throat, and it will curdle with Soap; but with Oil of

Tartar it will let fall a white grumous Sediment, and a thin Cruſt on the Sides of the Glaſs. A Gallon will yield three Drams of Sediment, of a greyiſh Colour and a brackiſh Taſte, with ſomewhat of a Bitterneſs. It will ferment greatly with Oil of Vitriol, and emit an acid Fume like common Salt.

From theſe and other Experiments it appears, that this Water is chiefly impregnated with Sea Salt, calcarious Nitre, and a little calcarious Earth, though in a very moderate Proportion. It is accounted a briſk Purge, and ſomewhat rougher than *Epſom* Water. It has cured a Horſe over-run with the Farcy, who was waſhed therewith, and conſtrained to drink it, by being kept from all other Water. Dr. *Peters* affirms, it was uſed at firſt to cure venereal Ulcers, by waſhing with it, and taking it inwardly; he alſo affirms, it cures old Ulcers by bathing the Parts, and that it diſſolves Swellings, and cures the Leproſy, Itch, Scabs, Pimples, and Ring-Worms by external Uſe. It has been found to be good in Obſtructions of the Liver, Spleen, and other Viſcera; in the Green Sickneſs, black and yellow Jaundice, the Cholic, Gravel, Piles, Cachexy, Scurvy, and removes Difficulty and Sharpneſs of Urine. It is ſaid to be ſerviceable in the Gout, to ſtrengthen the Stomach, and to create a good Digeſtion. It ſtrengthens the Brain and Nerves, prevents or cures the Apoplexy, Palſy, Epilepſy, Dizzineſs, and Pain in the Head, in which laſt Caſes it ſhould be taken warm. The Courſe of drinking ſhould continue twenty Days, and three Pints a Day ſhould be drank at firſt, and ſhould be increaſed half a Pint in a Day, till eight or nine Pints be taken on the tenth Day; and then

it ſhould be decreaſed again in the ſame Manner; but all this is affirmed upon the Credit of Dr. *Peters*.

In 1740 there was a new Spring diſcovered in the Village of *Dulwich* itſelf, which is about five Miles South of *London*, and has a College erected there called, *The College of God's Gift*, by *William Allen*, a Player, in the Time of Queen *Elizabeth*. The Water has a ſtrong ſulphureous Smell, after it has been covered for ſome Time, and it will not lather with Soap; but with Oil of Tartar it will let fall a copious white Sediment. When drank at the Well, five half Pint Glaſſes will purge briſkly, and does not ſink but raiſes the Spirits; it is alſo found to be very diuretic, and in ſhort, it ſeems to be of the ſame Nature with the old Spring.

Of WEST ASHTON WATER *in* Wiltſhire.

WEST ASHTON is a Hamlet in the Pariſh of *Steeple Aſhton* in *Wiltſhire*, and is four Miles Eaſt of *Trowbridge*, five Miles South-eaſt of *Holt*, and twelve South-eaſt of *Bath*. The Spring is plentiful all the Year round, in which Caſe it is preferable to *Holt*, becauſe the Water of that Spring diminiſhes at a certain Time of the Year; and it being much of the ſame Nature as *Holt*, it may be made Uſe of when there is a Scarcity of that Water.

The Water is clear, and will depoſit but a ſmall Quantity of Sediment, after keeping ſeveral Months in Bottles. It has almoſt an imperceptible Bitterneſs in the Throat, and an obſcure Brackiſhneſs, unleſs a great Part of it be evapo-

rated, and then it becomes evidently ſalt, and very bitter. It will curdle with Soap, and lets fall a white grumous Sediment with the Solution of Pot-Aſhes, as well as with the Spirit of Sal Ammoniac, and there will be in both cruſty Adheſions to the Side of the Glaſs. The Solution of Sugar of Lead will precipitate a ſmall white Cloud and Sediment, and the Solution of Silver will cauſe it to let fall partly a white and partly a blackiſh grumous Sediment. It continues clear with the Solution of Alum, and Lime Water precipitates a ſubtle white Subſtance to the Sides and Bottom of the Glaſs, and it will ferment a little with Spirit of Vitriol.

A Gallon of this Water will yield, after Evaporation, two Drams and two Scruples of a white Sediment, with a ſaline bitter Taſte, and Warmneſs on the Tongue. The Proportion of Salt to the earthy Parts is a Grain and a Half to fifteen Grains, and the former will melt on red hot Iron. The earthy Part is partly abſorbent and partly talky; there is a calcarious Subſtance, becauſe it acquires the Taſte of Lime upon Calcination. Hence it appears that this Water is chiefly impregnated with Sea Salt and Nitre, as well as a little Iron; but this laſt has no Efficacy, except at the Fountain Head; it has alſo a ſmall Matter of Sulphur. A Quantity of about three Pints is purging and diuretic, and is beſt drank at the Spot.

Of STANGER WATER *in* Cumberland.

STANGER is a Village in *Cumberland*, two Miles South of *Cockermouth*, and three Weſt of *Keſwick*, and has a Spring of a clear ſaltiſh Water,

ter, with the Taſte and Smell of Iron; it turns white with Spirit of Hartſhorn, and lets fall a great Sediment with Oil of Tartar, as well as a white one with Solution of Silver.

A Gallon of this Water will yield 1170 Grains of Sediment, whereof 1080 were Sea Salt, and the reſt Lime Stone; it is of a white Colour, hot on the Tongue, and grows very moiſt in damp Air. It will ferment and emit a very acid Fume with Oil of Vitriol; but not at all with Spirit of Salt or Vinegar. The Salt will crackle and fly when thrown on a red hot Iron, and will diſſolve in about four Times its Weight of diſtilled Water.

It has been concluded, from ſome Experiments, that there's a little Mixture of Nitre with the Sea Salt; but this laſt predominates, and is joined to a conſiderable Quantity of Iron. Dr. *Short* informs us, that four or five Pints will purge upwards and downwards, and that it is an excellent Remedy in Surfeits, Pains of the Stomach, the Green Sickneſs, the Scurvy, and Sores, Pains of the Breaſt, and Breakings out of the Skin.

Of CAWTHORP WATER *in* Lincolnſhire.

CAWTHORP is a Village in *Lincolnſhire*, two Miles North of *Bourn*, and ſeven North-eaſt of *Stamford*, and the Spring riſes up into a large Baſon in the Middle of the Street. It will turn very White with Oil of Tartar, and afterwards let fall a yellow Sediment; but it will turn Green with Spirit of Hartſhorn. Six Pints, after Evaporation, left ſix Scruples of a very white Sediment, whereof fifty-four Grains were Salt, and ſixty-ſix Earth, which fermented, hiſſed, and

ſmoked with Spirit of Vitriol; and yet the Loadſtone affected it greatly after Calcination. The Cryſtals gained from this Water, are like thoſe of Sea Salt, with ſome little Nitre, according to Dr. *Short*; but the Characteriſtic of the Water, according to *Rutty*, is a ſaline Chalybeate; but *Short* places it among the purging Chalybeates; however, it promiſes to be a more powerful Corrector of Acidities, than moſt other purging Waters, which have not ſo much abſorbent Earth.

Of HARREGATE WATER.

THIS Water is ſuppoſed to be the ſtrongeſt ſulphureous Water in *Great Britain*; and it lies two Miles North-weſt of *Knareſborough* in the *Weſt Riding* of *Yorkſhire*. It will curdle with Soap, according to *Short*, and will turn Milk White with Oil of Tartar and Spirit of Hartſhorn; it will render Silver blackiſh, and turn black with the Solution of Silver and Sugar of Lead, and both will precipitate a black Sediment. It turns of a browniſh Red with Tincture of Rhubarb, Red with *Brazil*, and of a pale Yellow with Logwood.

A Gallon of that commonly drank, for there are three Wells, contains two Ounces of pure Sea Salt, and near two Scruples of Earth; and therefore the predominating Salt muſt be undoubtedly marine.

The Virtues of this Water, according to Dr. *French* and Dr. *Neal*, if a warm Bath be made with it, diſcover themſelves in curing Aches, and Bruiſes, Strains, Lameneſs, Weakneſs of the Back, Beginning of the Dropſy, paralytic Pains and Weakneſs; in diſſolving hard Swellings, curing

ing old Ulcers, Scabs, Itch, the Scurvy, and Leproſy. This Water is alſo is ſaid to have great Power in eaſing the Hip-gout and Gout. Interternally the Doſe is from three to four Pints, and though it purges ſharply, it raiſes the Spirits. It powerfully cleanſes the Stomach and Inteſtines, and kills all Sorts of Worms; beſides which, it will cure the cold Scurvy, and helps the Jaundice of many Years ſtanding. It alſo cures Diſorders of the Spleen, the Green Sickneſs, Cramp, the Headach, and the King's Evil.

Of MAUDSLEY WATER *in* Lancaſhire.

MAUDSLEY is a Village in *Lancaſhire*, which lies to the South of *Preſton*, and is remarkable for a Spring nearly of the ſame Strength with that of *Harregate*, it being impregnated with Salt and Sulphur. It was firſt taken Notice of from the great Flock of Pigeons which reſorted thither to drink the Salt Water, and to pick up the granulated Salt in Summer.

This Water is of a blue Colour, as is alſo the Mud on its Borders; it has a briniſh Taſte, and a ſtrong ſtinking Smell. It turns white with Oil of Vitriol and Spirit of Hartſhorn; and lets fall a browniſh black Sediment with the Solution of Silver, as well as with Sugar of Lead; and tinges Silver of a Copper Colour immediately, according to Dr. *Short*.

A Gallon of this Water contains nine hundred and ſixty Grains of Sediment, whereof thirty are calcarious Earth, and the reſt Sea Salt; and, according to Dr. *Leigh*, an excellent Salt may be made with it. This Water has much the ſame

Virtues as the *Harregate*, and it has been known to cure Diſeaſes of the Skin and Ulcers.

Of Crickle Spaw *in* Lancaſhire.

CRICKLE is a Village in *Lancaſhire*, ſeated a little Mile from *Broughton*, where there is a Spring of clear Water, with a ſtrong fetid Smell. It will turn Silver black in a Minute; the Water itſelf turns black with the Solution of Silver, and likewiſe with Sugar of Lead. The Baſon, and the Earth it runs over, are of a ſhining Black, and yet it will turn Rags, Leaves, and Graſs very white. There are three hundred and twenty Grains of Sediment in a Gallon, twelve of which are Earth, and the reſt Sea Salt and Nitre, according to Dr. *Short*. The Cryſtals will grow moiſt in a Bottle; and when thrown upon a red hot Iron, will crackle and fly. It is a purging ſulphureous Water, and Sea Salt is the predominating Principle.

Of Broughton Water *in the* Weſt-Riding *of* Yorkſhire.

THIS Water proceeds from a Spring on the Side of the Road that leads from *Skipton* in *Yorkſhire* to *Coln* in *Lancaſhire*, the Village being in the Mid-way between thoſe two Places. According to Dr. *Short* it is of a whitiſh Colour, and colder than common Water, as is obſervable in others of the ſulphureous Kind. It turns Silver firſt of a Copper Colour, and then black; and it turns Copper perfectly black. It changes Leaves,

Moſs,

Moſs, and the like, to a Red Colour; but its Baſon, and the Channel it runs in, are of a Raven Black.

A Gallon contains four Drams of Sediment, the fourth Part of which is Earth, and the reſt Sea Salt and Nitre.

This is a ſtrongly ſulphureous Water, and the predominating Salt is marine, though there is a little Mixture of Nitre; the Virtues are much like thoſe of *Harregate* Water, but weaker.

Of SHADWELL WATER.

SHADWELL Water is ſeated in *Sun Tavern Fields*, in the Pariſh of *St. Paul's*, *Shadwell*, and on a Hill about two Miles eaſtward of the Tower of *London*, and about half a Mile from the River *Thames*. It is of an Amber Colour, with a ſtrongly acid and ſtyptic Taſte; for it will greatly corrugate the Lips and Palate; it ferments for ſome Time with Oil of Tartar and Spirit of Sal Ammoniac, and lets fall a large ochreous Sediment, eſpecially with the firſt. It continues clear with the Solution of Alum and Lime Water, as alſo with the Solution of Copperas. The Solution of Silver precipitated a grumous white yellowiſh Sediment, and it will turn Silver of a Lead Colour in a few Minutes; it will turn a Copper Halfpenny a little Black on the Surface, and it turned a Knife black, blue, and ruſty.

A Gallon of it contains a white and yellowiſh Sediment, which weighs thirteen hundred and twenty Grains; that is, two Ounces and ſix Drams, of the Colour of Ens Veneris This had a highly acid and auſtere Taſte, and will ferment

both with Oil of Tartar and Spirit of Sal Ammoniac. The Salt ſeparated from the Earth is as 6 to 1, and has the ſame Taſte as above mentioned.

The predominant Salt of this Water is highly acid and evidently vitriolic, with a Combination of Sulphur. This Water has been chiefly uſed externally, but if a Pint of it be drank at twice, that is half a Pint at a time, in the Space of an Hour, it will procure a gentle Vomiting, and two or three mild Stools. It has done a great deal of good in ſcorbutic and even leprous Caſes; the drinking it will firſt throw out Puſtules, which have been removed by bathing the Part affected. It is alſo ſaid to be effectual in the Cure of the Itch, Scabs, Tetters, and a ſcald Head, as alſo the Farcy and Greaſe in Horſes. Some ſay it has cured Fiſtulas, ſtubborn Ulcers in the Legs, and ſore Eyes, by dipping Linen Rags in the Water, and applying them to the Parts affected; ſome likewiſe affirm it has cured ſcrophulous Ulcers. The internal Uſe has ſtopped inward Bleedings, and has perfected the Recovery of thoſe who have had Camp Dyſenteries; it is alſo good in Gleets and the Fluor Albus, and has done great Service in the Jaundice.

Of Westwood Waters *in* Derbyſhire.

THE Village of *Weſtwood* is near *Tanderſley*, and its Spring is probably a Solution of the Pyrites, which is generally a concomitant of Pit Coal; this is rendered probable by the Waters turning Blue with Galls inſtead of Purple. After the Water is evaporated, the Salt ſeparated from the

the Earth, and ſet to cryſtalize, it will ſhoot into beautiful Cryſtals of mature Vitriol without any other Salt. They will ſoon turn Milk into a fine clear Syllabub if ſquirted into it while new. This Water has been obſerved to cure ſtubborn chronic Ulcers, particularly in a Maid Servant, who had a moſt frightful Ulcer in her Leg for five Years, which was moſt prodigiouſly ſwelled, livid, and uſeleſs. She waſhed it twice a Day with this Water, and was cured in three Months, according to Dr. *Short*.

Of HAIGH WATER *in* Lancaſhire.

HAIGH is a Village, in *Weſt Darby* Hundred, not far from *Wigan*, where there is a handſome Seat of the *Bradſhaigh*'s, which is thought to be one of the beſt Situations in the North of *England*; and in the Park there is a Mount, from the Top of which may be ſeen thirteen Counties, and the *Iſle of Man*. In this Lordſhip there are the faireſt Kennel Coals in *England*, beſides a mineral vitriolic Spring.

Dr. *Leigh* affirms that it will produce a great Fermentation with any Alkali, from which proceeds a neutral Salt like Tartar vitriolic. It will turn inky with Galls, even after it has been expoſed to the open Air. When this Water is diſtilled it preſerves the Taſte of Vitriol, and becomes inky with Galls as before.

A Gallon of this Water yielded four Ounces of Sediment when it was firſt tried, but of late not ſo much; it conſiſts of a Variegation of White and Green, with Oker, Sulphur, and a little Copper. The Operation of this Water is mild, though

though it works plentifully by Vomit and Stool; but what is moſt remarkable, it will ſtop any internal Bleeding, according to Dr. *Leigh*, better than any artificial Preparation whatever.

Of the WATER *near* SWANSEY *in* North Wales.

SWANSEY is a Sea Port Town in *Glamorganſhire* in *North Wales*, and is ſeated on the River *Fawye*, near its Influx into the Sea, and is called *Aber-Taw* by the *Welſh*. It is a large well built Town, and is five Furlongs in length by the River Side. It drives on the greateſt Trade of any in the County, eſpecially for Coals, and has a great Correſpondence with *Briſtol*. The Spring is not far from this Town, and has an acid ſtyptic Taſte like Alum, though the predominant Salt is a martial Vitriol. It will produce an ochreous Cloud and Precipitation with an Alkali, which may be deſtroyed, and the Water in a great Meaſure reſtored to its Tranſparency, by adding a little Oil of Vitriol. It turns blue with Vinegar, and will not curdle an equal Part of Milk. All ſtyptic Drugs turn blue and brackiſh with it, and Green Tea changes to a dun Colour.

A Blade of a Knife immerſed in it, becomes ruſty in an Hour's Time, with a Mixture of a high red Copper Colour; Silver and Copper immerſed in it for a Night, turned the Silver to a leaden Colour, but did not alter the Copper.

A Gallon of this Water yields forty Grains of Sediment, of a highly acid, ſtyptic, vitriolic Taſte, and of a light brown Colour; this will ferment with Spirit of Hartſhorn and Oil of Tartar, and

ſparkle

ſparkle a little on a red hot Iron. We know little of its Virtues by Experience, only that it will ſtop Looſeneſs and ſtaunch Blood externally in Wounds.

Of NEVIL-HOLT WATER *in* Leiceſterſhire.

Nevil-Holt is a Village in *Leiceſterſhire*, to the South of *Market Harborough*, and to the North of *Uppingham* in *Leiceſterſhire*. In digging up a Hill in Search of the Spring, there was found in the Clay, through which the Water was percolated, great Quantities of Talc, ſome of which being powdered, from half an Ounce to an Ounce was given in warm Ale, and was found an excellent Remedy in obſtinate Looſeneſſes. The Earth about it abounds with Nitre, and the greateſt Part of the Mountain near the Spring, is chiefly Lime Stone, but there is a good deal of Iron Stone.

The Water abounds with Salt, and yet it is not tinged brown; for they are not vitriolic, but of another Kind.

The Water is exceeding fine and clear, and has a ſtyptic, bitter, ſweetiſh, and ſub-acid Taſte, leaving the Mouth ſomewhat dry. It is uncommonly briſk and ſharp and agrees well with the Stomach, when drank at the Spring Head, and paſſes quicker out of the Body than elſewhere. Carried to ſome Diſtance from the Spring, or rather two or three Months after a Caſk has been filled with it, it will have a fetid ſulphureous Smell, which may be remedied by making it ſcalding hot, and without hurting its other Qualities.

It curdles with Soap, lets fall a groſs white Sediment with Oil of Tartar, but leſs with Spirit of Sal Ammoniac, with which laſt it will not ferment. With the Solution of Silver it turns of a blueiſh Pearl Colour, and precipitates a thick yellowiſh white Cloud and Sediment; but with the Solution of Sugar of Lead it will turn milky, and give a ſmall white Sediment. It will ſhow a white Cloud, which will after fall down to the Bottom; but with the Solution of Allum and Copperas it will continue clear; hence it appears to contain a calcarious Nitre and Allum, with a fat Clay or Bole, a latent Sulphur, and ſometimes a little Oker, as is confirmed by other Experiments.

This Water uſed externally is a ſpeedy Cure for freſh Wounds, and quickly dries up the proud Fleſh in old Wounds. Uſed outwardly and taken inwardly, it will cure hectic Ulcers, and is excellent for the Eyes, in obſtinate Inflammations, Ulcers, and Diſeaſes from Relaxations. When taken inwardly as an Alterative, it muſt be given in ſmall Doſes, that is, an Ounce or two at a time, five or ſix times in a Day; or four Ounces Night and Morning, and ſometimes half a Pint or a Pint. Thus it may be given to Children, or to Women with Child, or in Child-bed; in theſe Caſes the Doſe is from one Ounce to three, and may be increaſed to five; four, five or ſix times a Day. When it is deſigned to purge, it muſt be taken from one Pint to three, and it will work without Griping; however, in delicate Patients, when drank in a large Quantity, it is apt to cauſe Vomiting; but it may be rendered grateful to a weak Stomach, by adding two or three Ounces of Syrup of Raſberries to every Quart,

or

or three or four Ounces of ſtrong Cinnamon Water to a Pint. If the Conſtitution is cold and phlegmatic, it will be neceſſary to add four Spoonfulls of Brandy, and an Ounce of Sugar to each Bottle of Water, to warm it and take off the diſagreeable Taſte. It works powerfully by Urine, and ſometimes by Sweat, for which Reaſons it is excellent in bloated dropſical Conſtitutions. Dr. *Short* affirms it has no Parallel in Bloody Urine, the Bloody Flux, Vomiting and Spitting of Blood, as well as other Hæmorrhages, and the Fluor Albus; it reſtrains moſt preternatural Secretions; and it is of greater Virtue in the Diabetes than any other Mineral Water, becauſe it purges and binds at the ſame time, and will do more in a Month than others will do in a Year. It will alſo cure the Relics of the Venereal Diſeaſe, when imperfectly cured by Mercurials. It is alſo excellent againſt Gleets and other Diſorders of the ſame Kind; but in Hectics, attended with ſpitting of Blood, its Effects are ſurpriſing; and it has even been ſucceſsful when attended with Shortneſs of Breath. It alſo cures an Inflammation of the Lungs, attended with a Cough and ſpitting of Blood, when Univerſals have been premiſed. There is ſomething very remarkable in this Water; for it is an Aſtringent, and effectually reſtrains uterine and other Hæmorrhages, it does not cauſe any Obſtructions, but keeps every thing in a natural Order. It is good in all exceſſive Relaxations in general, and particularly in a Proneneſs to Miſcarriage, either from a Laxity or a Plethora, in which it has hardly failed in a ſingle Inſtance; the Doſe for this Purpoſe is a Pint in a Day. It has been given with wonderful Succeſs in the King's Evil, and hidden

Cancers,

Cancers, as well as in ſcrophulous Inflammations of the Eyes of many Years ſtanding; for it never fails if the Bones are not rotten. It alſo ſucceeds in ſcorbutic Puſtules, leprous Diſorders, old Ulcers in the Legs, and ſcorbutic Atrophies. It has alſo been found of great Service in hyſteric Diſorders, in Want of Appetite, in the Worms, Stone, Gravel and Strangury; and we have one Inſtance of its curing an Ulcer in the Bladder. It has alſo had ſurprizing Succeſs in curing Rheumatiſms; but when the Pain is attended with a Fever, it is beſt taken as a Poſſet, made with three Parts of the Water and one of boiled Milk.

But this Water muſt not be drank in the Increaſe and Height of Quinſies, Pleuriſies, and Inflammations of the Lungs, nor yet in any Diſorders of the Breaſt, where a plentiful and eaſy Expectoration is required; nor is it good in Inflammations of the Stomach and Liver, nor in any Suppreſſion of the uſual Evacuations, nor in large Stones lodged in the urinary Paſſage; to theſe may be added a colliquative Looſeneſs in the laſt Stage of a Conſumption, in a too rigid State of the Solids, and laſtly where there is a manifeſt Acidity of the Humours.

The Salt of this Water, according to Doctor *Short*, has a ſingular Efficacy in preſerving the Blood and Bile from Putrefaction; beſides which it will reſtore thoſe Juices to Sweetneſs when they are quite putrefied.

Of

Of ILMINGTON WATER *in* Warwickſhire.

Ilmington is a Village in *Warwickſhire*, three Miles North-weſt of *Shipton*, and ſeven South of *Stratford upon Avon*; and the Water found here, according to *Derham*, is paler than Rock Spring Water, has a brackiſh Taſte, and is one of the ſtrongeſt Chalybeates in *England*. At the Spring Head it ſparkles like bottled Cyder; and in a very dry Seaſon is near half a Dram in a Pint heavier than common Water; it will not turn Milk, but with Oil of Tartar there is a ſmall Coagulum. It will turn Purple with Galls, and when more Galls are added to it will become Black; but with Syrup of Violets it changes to Green.

The diſtilled Water is inſipid, and will not change its Colour with Galls; a Quart of the Water in its natural State will yield near a Spoonful of a reddiſh white Powder, that will ferment and fume with Acids. Thoſe that drink this Water have their Stools tinged blackiſh, and when drank in large Quantities will cauſe a Giddineſs. Its Operation is generally by Urine, though it will ſometimes purge; externally it will cure old running Sores, if they are waſhed therewith; internally it is good in the Scurvy, where an Acid prevails; in Obſtructions of the Spleen and Liver, and in the Jaundice and Beginning of Dropſies; it is alſo good in the Gravel, Strangury, and Difficulty of making Water.

Of

Of HAMPSTEAD WATER.

IT is generally known that *Hampſtead* is a large Village, five Miles North of *London*, which is greatly frequented by polite Company in the Summer Seaſon. The Water that is found here was formerly in as great Reputation as that of *Tunbridge*; and perhaps now deſerves to be as much made Uſe of. It is tranſparent, has a ſtrong ferruginous Taſte, and is better in the Morning than in the middle of the Day; but in hard froſty Weather it is prodigiouſly ſtrong. When this Water is bottled, it will hold its Spirit and Virtue a conſiderable Time, and may be carried to diſtant Parts. It lathers with Soap, but does not change with Spirit of Hartſhorn, or of Sal Ammoniac; and yet it will ferment with Oil of Vitriol, grow warm and ſmoke. It will keep Milk ſweet for four Days, and it will turn Purple with Syrup of Violets. Half a Grain of Galls grated, will turn it to a fine deep Purple; in another Experiment, a Grain of freſh powdered Galls turned a Pint of this Water Crimſon, and ſo continued for four or five Days. A Gallon yields about five or ſix Grains of a kind of ſaline Concretion, mixed with a yellowiſh Earth, in Taſte ſomewhat like Vitriol of Steel.

This is not a purging Water, for it works moſt Part by Urine, and has been found good in Want of Appetite and Indigeſtion; in Vomitings and Colics, in nervous and hyſterical Diſorders; and it raiſes the Spirits greatly. It is ſerviceable in the Fluor Albus, in Weakneſs from Miſcarriages, and in the Scurvy and all Diſeaſes of the Skin.

Skin. It is alſo ſerviceable in Obſtructions of the Bladder and Kidneys, from Sand, Gravel, and ſmall Stones; and laſtly, it is good in Obſtructions of the Meſentery, and even in ſome paralytic Diſorders.

Of THETFORD WATER *in* Norfolk.

THetford is a Market Town in the County of *Norfolk*, and a Place of great Antiquity; but it is not ſo well inhabited as it was formerly. It is ſeated on the River *Ouſe*, over which there is a Bridge that leads to *Suffolk*. The Water appears to have ſomewhat of Iron, for Galls will firſt turn it Purple and then Black. A Gallon of it will let fall, without any Mixture, a Dram of an earthy Subſtance, of the Colour of Oker, which being calcined in a Crucible, ſome of its Particles were attracted by the Loadſtone. The okery Subſtance aforeſaid, being rubbed with Mercury, and then placed over the Fire in a Crucible, became Black like Ethiops Mineral; the ſame Mixture being diſtilled in a Retort, yielded a Gas of Sulphur.

This Water ſeems to be impregnated with Iron, Sulphur, and Natron; and *Manning* affirms, that with the Juice of Lemons he precipitated a true Sulphur. It works gently by Stool and Urine, and ſharpens the Appetite; it has cured Melancholy by drinking it ſix Weeks, and Pain of the Stomach and Bowels, with an hyſteric Diſorder, Loſs of Appetite and Strength in a few Months; as alſo a Pain of the Stomach, Worms, Fainting, Vomiting, Pains of the Head, Convulſions, Indigeſtion, Difficulty of Breathing, and the Beginng of a Conſumption, in a Month.

Of

Of COBHAM WATER *in* Surry.

Cobham, is a Village or Town, three Furlongs in length, ſeated on the Road between *London* and *Guildford*; it is ſeven Miles South-weſt of *Kingſton*, ten Miles North-eaſt of *Guildford*, and twenty South-weſt of *London*. The Water has a ſenſible Taſte of Iron, though it is a very light Water, and it has this Property, with others of this kind, that three Drops of Oil of Sulphur, added to a Quart of the Water, will effectually preſerve it two or three Months, will keep it fit to be drank at Places remote from the Spring. A Gallon of it will yield ſeven Grains of a Subſtance like Oker, which was attracted by a Loadſtone without Calcination; it will hardly ferment with Vinegar or Oil of Vitriol, tho' it emitted an acid Fume with the laſt. Is is a ſtrong Chalybeate, and if it was more known, would probably be full as much in requeſt, as the Waters of *Tunbridge*.

Of LINCOMB WATER.

Lincomb or *Lincomb* Spaw, is ſeated near *Bath* in *Somerſetſhire*, and we have an Account of it publiſhed, by Dr. *Hillary* in 1742. The Water when firſt taken up, has a light briſk ſulphureous Smell, which it loſes in ſix or eight Minutes Time; but its Taſte of Iron is more laſting, tho' it loſes this when expoſed eight Hours in an open Veſſel. It is tranſparent at firſt, but on ſtanding becomes of a pearl and blueiſh Colour, and throws up to the Surface, a thin variegated unctuous Scum. A Gallon of this Water after

Eva-

Evaporation, leaves from ſixteen to twenty-four Grains of Sediment, of a pale cinnamon Colour, which will grow damp in the Air.

From various Experiments it appears, that this Water is chiefly impregnated, with Iron and a little Sulphur, or as ſome think with Bitumen, and a ſmall Quantity of alcaline Salt. It ſits light on the Stomach to which it gives an agreeable Warmth, but makes the Heads giddy of thoſe that are not uſed to drink it; it paſſes off quickly by Urine, and ſometimes will purge a little at firſt; it mends the Appetite and raiſes the Spirits. Externally it cleanſes and heals ſcrophulous Ulcers, as well as thoſe that are old, dries up ſharp Humours, and cures Eruptions and ſcurfy Foulneſſes of the Skin. Internally it is ſerviceable in Diſorders of the firſt Paſſages, ſuch as Indigeſtion, Vomitings, Heart-burn, and ſour Belching; it is alſo good in Cachexies, the Jaundice, and recent Obſtructions of the Liver; it alſo deterges and heals Ulcers of the Kidneys, and frees them from Slime and Gravel. It is likewiſe effectual in removing the Strangury and Incontinency of Urine, attended with Heat and Pain.

Of CHIPPENHAM WATER *in* Wiltſhire.

CHippenham is a Market Town in *Wiltſhire*, ſeated on the River *Avon*, over which there is a Bridge of ſixteen Arches. It is a good thoroughfare Town, and is twenty-one Miles eaſt of *Briſtol*, and ninety-four weſt of *London*. This Water was taken notice of in 1759, and was found in a Garden near the River. At the Spring-head, it has a briſk ferruginous Taſte, and will turn of a Claret Colour with Galls. A Gallon will

will yield thirty-nine Grains of a Sediment of the Colour of Oker, and of a very brackiſh Taſte.

It is a pretty ſtrong Chalybeate, and has a ſtrong Sea Salt, beſides, as ſome think, a Natron combined with Iron. It has been chiefly hitherto remarkable for curing ſcorbutic Diſorders; beſides which it has cured other Diſorders, and once a Conſumption pretty far advanced.

Of the NEW TUNBRIDGE WELLS *at* Iſlington.

THE Spring is ſeated very near the *New River* Head, almoſt at the Entrance of *Iſlington* on the Side next *London*. It has a Taſte of Iron, and is a little ſtyptic, with ſome Degree of Quickneſs both in Smell and Taſte, eſpecially in Summer; it is apt to make ſome that drink it giddy or ſleepy, which may be eaſily remedied by the Addition of a little pure common Water. It will lather with Soap, and will turn only a little milky with a large Proportion of Oil of Tartar; it will not let fall any Sediment with volatile Alcalies; but it will grow whitiſh and curdle a little with the Solution of Sugar of Lead; Oil of Vitriol dropped into it produces a Fermentation with Heat and Smoke; and Syrup of Violets changes it to Green. Galls at the Fountain Head turn it firſt of a light Crimſon, which gradually changes to a reddiſh Purple, and at length to a muddy thick Black.

It is obſervable that a fat unctuous Matter, which is always a concomitant with Iron Ore, lines the Inſides of the Glaſs uſed in drinking this Water, and it throws up a Copper-coloured Scum. A Gallon of it has yielded from ten to thirty Grains

Grains of a reddiſh Earth, at different Trials, which fermented with Oil of Vitriol. After a very exact Analyſis of this Water, it appears to be a light and comparatively pure Chalybeate, of conſiderable Strength at the Fountain Head, where it ought to be drank.

It is ſaid to be of great Efficacy in all nervous Diſorders, and reſtores the Strength after it has been weakened by violent acute Diſeaſes. It opens all Obſtructions in Women, and is excellent in the Dropſy; in which Caſe the Doſe is from half a Pint to a Pint and no more. It is a powerful Deobſtruent in ſcrophulous and other glandular Obſtructions, and is of ſome Service in reducing corpulent Habits.

Of ASTROP WELLS *in* Northamptonſhire.

ASTROP is a Village in *Northamptonſhire*, four Miles South-eaſt of *Banbury* in *Oxfordſhire*, and ſeven Weſt-north-weſt of *Brackley*. The Wells that are found here were formerly greatly recommended by Dr. *Moreton*; and Dr. *Short* informs us, that the Water is a briſk, ſpirituous, clear, and well taſted Chalybeate; and juſt taken from the Fountain is much lighter than common Water. It lets fall a white Sediment with Oil of Tartar and Spirit of Hartſhorn, and turns to a purpliſh pearl Colour with the Solution of Silver. A Gallon after Evaporation yields ſeventeen Grains of Sediment, containing Nitre and calcarious Earth.

This Water, when drank at the Fountain, is a light, briſk Chalybeate, and is found a certain Cure in all female Obſtructions, and in the firſt

and ſecond Stage of Conſumptions; it ſeldom fails in the Jaundice, and Beginning of a Dropſy; and it reſtores a Conſtitution weakened by hard drinking; it eaſes rheumatic Pains, and frees the Kidneys from Gravel. The worſt of this Water is, the Largeneſs of the Doſe; for, from three Quarts to five muſt be drank in the Forenoon. Some have affirmed that thus taken, it will cure ſome ſorts of Madneſs and Melancholy.

Of ROAD WATER *in* Wiltſhire.

ROAD is a Village in *Wiltſhire*, and on the Borders of *Somerſetſhire*, eight Miles North by Eaſt of *Bath*. It has a chalybeate and ſulphureous Taſte, and likewiſe a ſulphureous Smell. A Gallon of this Water evaporated will yield near a Dram of a yellow coloured Sediment, that has a ſalt and pungent Taſte, and will turn of a tawney Orange Colour with a Solution of Mercury Sublimate. An Ounce of the Sediment contains a Dram and an half of Salt, of a dark greyiſh Colour, and of a ſaltiſh lixivial Taſte. It will diſſolve in the Air; and rubbed with Salt of Tartar, will produce a penetrating fetid Smell.

This Water appears to be impregnated with Iron, Sulphur, and a ſtrong native Alcali or Natron. At firſt uſing it is a very gentle Purge, and is of Uſe in ſcrophulous Caſes and Diſeaſes of the Skin. A certain Perſon was cured by drinking the Water and waſhing the Sores therewith, and another of ſtrumous Diſorders of the Eyes. Its good Effect in theſe laſt Caſes has been found ſeveral times, as well as in ſcorbutic Ulcers.

Of

Of BURNLY WATER *in* Lancaſhire.

THIS Water, with Galls, will turn to a deep red Colour in a Moment, and with Syrup of Violets it turns to a very deep Green; a Gallon yields twenty-three Grains of a yellowiſh Subſtance, which will melt in the Air like Salt of Tartar; it will ferment with any Acid, and has a ſtrong lixivial Taſte. It works powerfully by Urine and ſometimes by Stool, and has been found ſucceſsful in ſcorbutic Caſes.

Of HANBRIGDE WATER *in* Lancaſhire.

THIS Spring is ſeated between *Burnly* a Market Town in *Lancaſhire*, and *Townly* a Village, which are not above two Miles aſunder. *Burnly* is ſeated near the River *Colne*, and is twenty-one Miles Eaſt of *Preſton*, and 204 Northweſt of *London*. This Water will change with Galls to a faint Orange Colour; *Leigh* affirms it will yield Natron in a greater Quantity than any Spring in thoſe Parts; though Dr. *Short* calls it a Chalybeate. The Salt obtained from it will yield a fetid and penetrating Smell, when rubbed with Salt of Tartar. Theſe two laſt Waters agree with the *Pouhun* at *Spa*, in containing Iron and Natron as the principal Ingredients. It purges by Stool and Urine, and is of great Uſe in the Gravel and Scurvy, in Obſtructions, and in Diſeaſes from an Acid.

Of WITHAM WATER *in* Eſſex.

WITHAM is an ancient Market Town, of four Furlongs in Length, and is a good Thoroughfare; it is ſeated on a Branch of the *Blackwater*, a River ſo called, and is thirteen Miles South-weſt of *Colcheſter*, eight North-eaſt of *Chelmsford*, and thirty-ſeven North-eaſt of *London*. The Water when freſh is perfectly clear, and has a very ſtrong ferruginous Smell and Taſte; when juſt taken up from the Spring it has a remarkable Freſhneſs that renders it agreeable to the Taſte and Stomach; but after it has ſtood ſome time, it loſes this fine Quality, throws up a variegated Scum on the Surface, and depoſites a browniſh Sediment.

The yellowiſh brown Sediment that this Water depoſites ſpontaneouſly, being put into Fuſion with Salt of Tartar, gives a Tincture to rectified Spirit of Wine, and mixed therewith; but by Diſtillation it yields nothing but pure Water; and a Gallon of it evaporated, leaves thirty Grains of Sediment, which will grow damp in a moiſt Air, and being laid on a red hot Iron emits a faint blueiſh Flame, with the Smell of Sulphur.

From this and other Experiments it appears, that this Water is a Chalybeate of conſiderable Strength at the Fountain; and it is likewiſe ſulphureous, with a Mixture of Sea Salt, Nitre, and calcarious Earth; but it is of no Uſe unleſs it be drank at the Spring, for the active Particles are ſoon loſt. It is very diuretic, and has been uſed with great Succeſs in hectic Fevers, in Weakneſs occaſioned by a long Diſeaſe, in Lowneſs of Spirits,

Spirits, Weakneſs of the Nerves, Want of Appetite, Indigeſtion, and the habitual Colic and Vomiting; as alſo in Agues, in the Jaundice, and Beginning of a Dropſy. It is alſo of Service in the Gravel, in ſome ſort of Aſthmas and ſcorbutic Diſorders.

Of TILBURY WATER *in* Eſſex.

TILBURY is a Village in the County of *Eſſex*, which is ſeated over againſt *Graveſend* in *Kent*, and is near two Miles North from *Tilbury Fort*. The Water here taken Notice of is ſituated near a Farm Houſe, on the Top of a Hill, which is elevated 100 Feet above the marſhy Ground, and it is about two Miles diſtant from the River *Thames*. It has ſomething of a Straw Colour; and has a ſoft, ſmooth Taſte, affecting the Tongue with a Senſe of Fulneſs. It makes excellent Punch, and is extremely good for Tea, which is draws very well, and renders ſoft.

This Water with Oil of Tartar will cauſe no immediate Precipitation; and it will curdle with Soap though not with Milk; with a Solution of Alum it will ferment a little, and at the ſame time the Sides of the Glaſs will be covered with plenty of Bubbles. From the various Experiments that have been made with this Water, it appears to be a ſtronger Anti-acid and Abſorbent than any common hard or purging Waters.

The Bubbling of this Water ſhows that it contains a conſiderable Quantity of Air; but the Bubbles are very ſmall, and form themſelves on the Sides of the Glaſs into which it is poured. When this Water has ſtood ſome time it throws

up a Scum, variegated with red, blue and green, which continues thereon until half of it is evaporated, and then it appears to be unctuous or greaſy; but when dried on the Finger, diſcovers ſomewhat of a calcarious Nature, by its fermenting with Spirit of Vitriol.

A Gallon of this Water will yield about 180 Grains of Sediment, of a yellowiſh brown Colour with a ſharp urinous Taſte, like that of a fixed Alkali.

After various Trials with different Subſtances, it appears that the Salts contained in this Water have moſt of the Properties of fixed Alkalies, except the great Acrimony. A Quart of it in a Day is a middling Doſe, which generally paſſes off by Urine or Perſpiration; it uſually ſits very eaſy on the Stomach, and gently warms it, ſtrengthening the Appetite and promoting Digeſtion. It warms the Blood, and is good in Lowneſs of Spirits; but it often occaſions a Tingling of the Skin. According to *Andre* it is as true a Specific in Looſeneſſes, as the Bark in intermitting Fevers. It alſo will cure the Bloody Flux, the Bleeding Piles, and other Evacuations of that Kind; it is likewiſe of Service in the Fluor Albus, the Gonorrhœa, Gravel, the Aſthma, Acidity of the Stomach, and ſome Scurvies.

Of CLIFTON WATER *in* Oxfordſhire.

CLIFTON is a Village two Miles Eaſt from *Deddington*, a Market Town in *Oxfordſhire*. It is ſeated on a riſing Ground, and is a pretty large Place, ſixteen Miles North of *Oxford*, ſix and a half South of *Banbury*; but from *London* it is

is ſixty-two. The Water is about a Furlong South of the Village, which is clear and has little Taſte, according to Dr. *Short*. He alſo tells us, that it yields a peculiar Kind of Nitre, which *Rutty* takes to be a Kind of Alkali.

A Gallon of this Water will yield ſeventy-four Grains of Sediment, of which nine are Earth and ſixty-five a peculiar Kind of Nitre; beſides which there is a little white Sand. It is a laxative Water, and has been much uſed for Diſeaſes of the Skin in Cattle; as alſo in Men by bathing therein.

Of GLASTONBURY WATER *in* Somerſetſhire.

GLaſtonbury or *Glaſtenbury*, is a Town in *Somerſetſhire*, but is chiefly taken Notice of for the Abbey, which appears by its Ruins to have been very magnificent; and ſome pretend it had not its equal in the World. The Water is naturally ſweet, and has no remarkable Contents; and yet in the Year 1751, there were great Numbers of People reſorted thither to drink it and bathe therein, in Conſequence of a Dream of a certain Perſon, afflicted with an Aſthma, who was cured by taking it. It is certainly deſtitute of thoſe Virtues that the Multitude have aſcribed thereto; however Dr. *Clark* acknowledges, that it has relieved many that had ſcorbutic and ſcrophulous Habits attended with Ulcers; but then he believes that common Water will do as much. On the contrary we are told, that many, by their injudicious drinking this Water, inſtead of being cured, were hurried out of the World. Some of the Roman Catholics, who are very fond of Miracles,

racles, believed the Virtue of this Water was owing to its paſſing over the Graves of holy Men; but be this as it will, the Infatuation is now over, and it is generally thought to be no better than any other common Water.

Dr. *Rutty* has been at the Pains of analyſing this Water, and from the Experiments he has made, he concludes that it contains a latent Sulphur, extricated by Putrefaction; and then, that it contains a native Alcali or Natron; for out of about thirty Grains of Sediment, which he obtained from a Gallon, he extracted a Salt of a bitteriſh Taſte, which grew moiſt in the Air, and had a pungent Smell when rubbed with Sal Ammoniac.

Of WIGGLESWORTH WATER *in* Yorkſhire.

Wiggleſworth is a Village, ſeated in the Pariſh of *Long Preſton* in the Weſt Riding of *Yorkſhire*; and it is four Miles South of *Settle*, a Market Town in that County. The Spring is remarkable for yielding a Salt, which Dr. *Short* calls an alcaline Nitre. It is very black and has a ſtrong Smell of Sulphur with a ſaltiſh Taſte; it lathers with Soap, and will not curdle Milk. It turns of a browniſh Black with the Solution of Silver, after which it curdles, and lets fall a Sediment. It is always covered with a white Scum, and turns Leaves, Graſs, Roots, and Sticks white.

When three Gallons of this Water have been evaporated, it left ſeven Drams of Sediment, of which ſix Scruples and a half were black Earth, and the reſt Salt. The Salt extracted from it is of a dark brown Colour, with an urinous Flavour,

vour, and a brackiſh and bitteriſh Taſte. The Solution of it continues clear with Oil of Tartar and Spirit of Sal Ammoniac, and Soap lathered with it after a little Curdling; both the Salt and its Solution will ferment ſtrongly with moſt Acids; and being rubbed with Sal Ammoniac, will emit a pungent Smell.

Hence it appears to contain an alcaline Salt, and its Solution will turn Red with Rhubarb, of a deep Purple with Logwood, of a Crimſon with *Brazil*, of an Olive with Aſh Bark and Galls, and of a deep Green with Sumach. A certain Author affirms, that the Salt being mixed with Sand, and thrown into a hot Crucible, it filled the Glaſs Houſe with an intolerable Smell of Sulphur, and flamed furiouſly as ſoon as ſet in the Furnace; and the Sand ſoon melted, and became a fine Glaſs as black as Jet. The Country People, according to Dr. *Short*, drink four or five Pints of this Water as a Vomit, and ſix or ſeven as a Purge; but it ſeems ſtrange, that more ſhould be required for the latter than the former.

Of BILTON WATER *in* Yorkſhire.

BILTON is a Village, a very little to the Weſt of *Knareſborough*, in the Weſt Riding of *Yorkſhire*, which Town is twenty-two Miles Weſt of *York*, and 175 North by Weſt of *London*. Dr. *Short* informs us, that the Water is ſtrongly ſulphureous, and will turn the Solution of Silver to the Colour of Strong Beer; which afterwards becomes White, and it throws down much white Sediment. *Rutty* thinks the Salt, when ſeparated from the Earth, is an Alkali mixed with Sea Salt.

A Gallon will yield a Dram of Sediment, whereof one ſixth Part is Earth. The Sediment is of a light brown Colour, with a brackiſh Taſte, and it will ferment ſtrongly with Vinegar, and turn immediately of a bright Green with Syrup of Violets; and if rubbed with Sal Ammoniac, it will emit ſomewhat of a pungent and urinous Smell. It appears from various Experiments, that *Bilton* Water is impregnated with Sulphur, and an Alkali mixed with Sea Salt, as well as a little calcarious Earth.

Of Sutton Bog Water.

THIS Water is ſeated in the Pariſh of *King's Sutton*, and almoſt cloſe to that Village, which is four Miles South by Eaſt of *Banbury* in *Oxfordſhire*; though the Village itſelf is in *Northamptonſhire*. The Water has an intolerable ſtrong Smell like rotten Eggs, but the Taſte is ſaltiſh, warm, and pungent, like Salt of Tartar; this like many other ſaltiſh Springs is very much frequented by Pigeons. It turns Silver of a deep reddiſh Copper Colour in thirty Minutes.

This Spring is covered with a blue Scum, but the Mud is of a jet Black. A Gallon of the Water being evaporated, ſometimes yields 166 Grains of Sediment, of which nine are Earth or Clay, and the reſt a Salt, of a browniſh yellow Colour, and of a pungent, brackiſh, and bitter Taſte. This Salt diſſolved has a lixivial nauſeouſly bitter Taſte, and continues clear with Oil of Tartar and Spirit of Sal Ammoniac. In Subſtance it ferments greatly with Oil of Vitriol, with Spirit of Salt and with Vinegar; and it inſtantly

inſtantly turns to a bright Green with Syrup of Violets; in ſhort, it has all the Characteriſtics of an Alkali, and the Water is ſtrongly impregnated with Sulphur and an alcaline Salt, mixed with Sea Salt. In general it is a purging Water, and is uſed both for drinking and bathing, and waſhing; beſides which the Mud is not without its Virtues. It is famous for diſcuſſing and healing of Tumors, Ulcers, and all Diſeaſes of the Skin.

Of CHADLINGTON WATER *in Oxfordſhire.*

Chadlington is a Village in *Oxfordſhire*, three Miles South of *Chipping-Norton*, and ſixteen North-weſt of *Oxford*; the Water has a ſaltiſh Taſte, and ſmells like the Waſhing of a foul Gun. It turns Milk white with Sugar of Lead, of a willow Green with Syrup of Violets, and of a Pink Colour with Logwood, according to Dr. *Short*.

A Gallon of this Water evaporated yielded ninety Grains of Sediment, of which ſeventeen were Earth, and the reſt of a peculiar Sort of Nitre, according to the abovementioned Author. Dr. *Rutty* made ſeveral Experiments therewith, from whence he concluded, that this Water is impregnated with Sulphur, and an alcaline Salt mixed with Sea Salt. As to its Virtue, it is accounted a purging Water, which is all the Account we have of it at preſent.

BIBL

Of the WATER *of* QUEEN'S CAMEL *in* Somerſetſhire.

Queen's Camel is a Village in *Somerſetſhire*, five Miles North of *Sherborne*, and twenty-ſix South of *Bath*. The Spring proceeds from a hard rocky Bank, and is called the *Black Well*; the Water is cold, and has a fetid Smell and Taſte like the Waſhing of a foul Gun. A Gallon of this Water after Evaporation leaves ſixty-four Grains of a whitiſh Sediment, of a very brackiſh and urinous Taſte, which being rubbed with Sal Ammoniac, ſmelleth ſtrongly pungent and urinous, and a little pungent with Salt of Tartar; but being rubbed with Syrup of Violets, it quickly turned of a Graſs Green.

From the Trials that were made with it, it appeared to contain a conſiderable Quantity of Sulphur, ſome Natron, and a calcarious Earth. Doctor *Rutty* is of Opinion, that the Natron is combined with Sea Salt. It has been uſed with good Succeſs both inwardly and outwardly; and here is a particular Place contrived for bathing in, in order to cure ſcorbutic, leprous and ſcrophulous Diſorders. It cures Dogs of the Mange by dipping them therein. It purges very little or nothing, but it might be applied to various good Purpoſes, if directed by a ſkilful Phyſician.

Of

Of the DROPPING WELL *at* Knareſborough *in* Yorkſhire.

THE Situation of *Knareſborough* has been already taken Notice of, and therefore needs not be repeated; the Spring riſes near this Town, about fourteen Yards below the Top of a ſmall Mountain of marly Stone, or Lime Stone, according to Dr. *Short*. It is to the Weſt of the Town, and about twenty-ſix Yards from the Bank of the River *Nid*; it runs in a very ſmall, clear Channel, into a ſpungy Rock about twelve Yards long, which hangs on the Edge of another ſtony Rock, and there diffuſes itſelf, and diſtils through the Pores of the ſpungy Rock, like a plentiful Rain on the Ground below, which is all become a ſolid Rock, and within, if a Stick, Leaf, or Moſs lie for ſome Time, it cruſts them over with a thick Matter, which in Time becomes a Sort of Stone like Lime Stone, but clearer and ſmoother; from thence it runs into the River *Nid* about twelve Yards off, where this Water has made a Rock that advances ſome Yards into the River. There's no Appearance of any petrifying Quality in the Spring till it reaches the Rock; if Moſs or Wood be thrown into it, it will not petrify, or at leaſt but very little.

The Water itſelf is very cold, extremely limpid and ſweet, but it is twenty-four Grains in a Pint heavier than common Water. It curdles with Soap, turns white, and lets fall a white Sediment with Oil of Tartar; it turns very white, thick, and curdles, letting fall a large white Sediment with the Solution of Sugar of Lead; but

it

it will not precipitate any Thing, nor grow blackiſh with the Solution of Silver. It turns Galls, Green Tea, and red Roſes green in three or four Days Time; but it changes Tincture of Rhubarb to a fine yellow Colour, and the Tincture of Logwood reddiſh.

The petrifying Particles conſiſt chiefly of Spar, and ſome Sulphur; and a Gallon of the Water, that fell from the petrifying Rock, after Evaporation, left an hundred and eighty-five Grains of Sediment, of which ſeven Scruples and four Grains left five Scruples and four Grains of Earth, which would ferment with Acids, and two Scruples of Salt, all of which ſhot into nitrous Cryſtals; which ſhows that the ſaline Matter contained in the Sediment is truly a calcarious Nitre.

This Water is found effectual in curing inveterate Fluxes of the Belly, bloody Fluxes, Lienteries, and the Diabetes. It is ſtrongly recommended in all preternatural Diſcharges of Blood, and in profuſe colliquative Sweatings, as well as Ulcers of the Viſcera, hectic Fevers, and waſting of the Fleſh. The Uſe of this Water is always to be preceded with a Doſe or two of Rhubarb, and three half Pints of it are always ſufficient for a Morning Doſe, according to Dr. *Short*.

Of the WATER *of* BALL, *or* BANWELL, *in* Lincolnſhire.

THIS Water is in the Pariſh of *Stenfield*, or *Stanfield*, ten Miles Eaſt of *Lincoln*, and the Water, like the former, is very pleaſant and ſweet; but it will curdle with Soap, becomes of a Pearl Colour with Oil of Tartar, afterwards cloudy,

cloudy, and in a few Days lets fall much Sediment. It ferments pretty much with acid Spirits, turns Green with Syrup of Violets, of a fine deep Red with Tincture of Logwood, and with Tincture of Galls firſt White and then Green. A Gallon of the Water, after Evaporation, leaves four Scruples of a white Sediment, forty-four Grains of which are Earth, thirty Nitre, and eight Sea Salt. It is recommended in the ſame Caſes as *Knareſborough* dropping Well; but the Doſe muſt be five Half Pints in a Morning, according to Dr. *Short*.

Of NEWTON DALE WATER *in the* North-Riding *of* Yorkſhire.

Newton Dale is ſeated in the *North Riding* of *Yorkſhire*, twelve Miles Weſt by North of *Whitby*, and forty Miles North of *York*. The Water is cold, and very aſtringent, and its Stream is much more rapid than that of *Knareſborough* Dropping Well. It petrifies every Thing in its Courſe, and produces various and beautiful Incruſtations and Figures. It effectually cures Looſeneſſes, and Bleedings of any Kind, both in Man and Beaſt, and it quickly and wonderfully reſtores weakened Joints, that are even beginning to be diſtorted, by bathing therein, according to Dr. *Short*.

Of the OILY WELL *near* Edinburgh.

IN the Pariſh of *Libberton*, two Miles South of *Edinburgh*, there is a Well in the Pariſh of *St. Catherine*, commonly called the Oily Well, becauſe at the Bottom there remains a great Quantity of black Oil, according to *Mac Kile*. It has a Smell like the Smoak of Coals, and is like the Oil extracted from thence, by ſome called the *Britiſh* Oil, only it is not quite ſo ſtrong. It is of the Conſiſtence of a moderately thick Balſam, of a black and yellowiſh Colour, and of a Taſte and Smell nearly like that of *Barbadoes* Tar; it diſſolves in Oil of Olives, but not in rectified Spirit of Wine, nor yet did it impart any Tincture to the Spirit after a Month's Digeſtion, nor is the Water itſelf much affected with the Taſte of the Oil, becauſe it will not diſſolve in Water.

This Oil will ſuddenly heal Scabs, and many Diſorders of the Skin, as well as aching of the Bones; it is alſo good in the Palſy, and Pains from a cold Cauſe, and will add Strength to weak Limbs if often anointed therewith warm; in ſhort, it has the ſame Virtues as Oil of Coals.

Of PITCHFORD WELL *in* Shropſhire.

Pitchford is a Village ſix Miles South by Eaſt of *Shrewſbury*, and takes its Name from its pitchy Spring that is found here, on the Top of which there floats a liquid Bitumen, though it is ſcummed off every Day; and over moſt of the Coal-pits hereabouts there lies a Stratum of a blackiſh

blackiſh Rock, out of which, by boiling and grinding, they obtain a Kind of a Pitch, at leaſt the Inhabitants uſe it as ſuch, as well as the Bitumen of this Water. It is found to be excellent for Wounds, and to be good for curing inveterate and ſcrophulous Ulcers, according to Dr. *Short*.

Of the BURNING WELL *at* Broſely *in* Shropſhire.

Broſely is a Village in *Shropſhire*, four Miles North-eaſt of *Wenlock*, ſeven North by Weſt of *Bridgnorth*, and fourteen South-eaſt of *Shrewſbury*. It was diſcovered about the Year 1711, and is ſeated about an hundred Yards from the River *Severn*, in the Neighbourhood of Mines of Coal and Iron, there being Coal Works on every Side, though none very near it.

A Candle being put down into the Well, it will take Fire at the Diſtance of a Quarter of a Yard, darting and flaſhing in a violent Manner, to the Height of 1820 Inches. It is hotter than common Fire, and boils any Thing much ſooner; for it will boil a common Tea-Kettle in nine Minutes, and broil Mutton Chops or Slices of Bacon very ſoon, with an excellent Flavour. It will reduce green Boughs to Aſhes very ſoon, or any Thing elſe that will burn; but the Flame may be put out by holding a wet Mop over it; however, the Water itſelf is extremely cold, and as ſoon as the Fire is out, it ſeems as cold as if there had been none there. Hence it appears that this Water is impregnated with a Sort of liquid Bitumen, called *Petrolæum*, that is, Rock Oil. This Water has ceaſed burning ſince the Year 1752, on the Account of an Earth-

quake.

quake. If it has not recovered this Faculty ſince 1755.

Of the BURNING WELL *at* Ancliff *in* Lancaſhire.

Ancliff is a Village three Miles from *Wigan* in *Lancaſhire*, and the Spring is called by the Inhabitants the Burning Well, but by Dr. *Leigh* a ſulphureous Water, though improperly; for it is without Smell, and will not change the Colour of Silver.

This Water, like the former, will take fire on holding a lighted Candle near it, it ſpreads itſelf upon the Water in a calm Seaſon, and will continue a whole Day, inſomuch that Eggs and Fleſh may be boiled therein; but the Water itſelf is cold.

When this Well has been emptied, and a Candle applied to the ſame Point where the Water burned before, the Vapour will take fire, and burn very bright and vigorous. This Well is but a few Yards diſtant from a rich Coal-Mine; and indeed the whole Country, for many Miles Compaſs, is underlaid with Coal. The inflammable Vapour is undoubtedly a *Petrolæum* quite diſtinct from that of Sulphur. It does not appear that theſe two Waters have any particular Virtues.

Of MOFFAT WATER.

Moffat is a Village of *Annandale* in *Scotland*, about ſixty Miles South and by Weſt of *Edinburgh*, and about five Miles North of *Carliſle*, and

and is one of the moſt eminent ſulphureous Waters in *Great Britain.*

There are two Springs or Wells ſeparated from each other by a Rock, of which the Upper is moſt commonly uſed for bathing, it having a ſtronger ſulphureous Smell than the other. It has the Smell of a Gun newly diſcharged, which it retains in Bottles well corked, which is ſoon loſt in the open Air, and the Colour is milky, or blueiſh. It turns milky with Oil and Spirit of Vitriol, and Spirit of Nitre, but without Precipitation; it changes to a greeniſh with Syrup of Violets, and tinges Silver of a deep Copper Colour; it lets fall a blackiſh Sediment with the Solution of Silver, as alſo with that of Sugar of Lead.

A Gallon of the Water yields about ſixty Grains of Sediment, of which four are calcarious Earth, and the reſt chiefly of Sea Salt.

Thoſe that bathe in the Waters ſtay in it a Quarter of an Hour or more, and it muſt be only luke-warm. For Ulcers or Tumors they bathe the Part affected for about half an Hour, and lay Rags thereto dipt in the Water, the reſt of the Day, continually moiſtening them as they grow dry. When the Lips of the Ulcer are hard and ſwelled, they expoſe the Part to the Steam of the Water, heated and confined by Flannels.

When taken inwardly, it is chiefly diuretic and alterative, though it ſometimes purges. It is drank from eight to ten Quarts in a Day; and a Glaſs of aromatic bitter Wine, taken at or ſoon after the Drinking, helps weak Stomachs to digeſt it, and prevents the Inclination to ſleep. Some drink this Water for five Seaſons running, and it is thought to have no Equal in Pains of the Stomach, and in Colics of every Kind; it is alſo

good.

good in a loſt Appetite from drinking Drams, and in the Gravel. It is alſo famous for curing Barrenneſs, and has been of Service in all female Weakneſſes; but it is not to be drank when the Patient has a Cough, or in a Diſpoſition to a hectic Fever. It is good for Diſeaſes of the Skin both inwardly and outwardly, even when the Limbs have been monſtrouſly ſwelled, and the Skin covered over with Scales, Scurf, and Scabs. It has alſo cured many afflicted with ſcrophulous Sores, and it hardly ever fails unleſs the Conſtitution is decayed.

Of NOTTINGTON WATER *in* Dorſetſhire.

NOttington is a Village near *Weymouth* in *Dorſetſhire*, and the Water has a ſtrong ſulphureous Smell, with a Flavour reſembling that of boiled Eggs, and the Colour, in a Tin Veſſel, is blue.

At the Fountain Head a Shilling put into the Water becomes of a Gold Colour in two or three Minutes; but the Solution of Silver produces a yellow and duſky brown Cloud, with a dark brown grumous Sediment.

From the various Experiments that have been made, it appears that the predominant Minerals, with which this Water is impregnated, are Sulphur and Natron, and it is remarkable for curing Foulneſſes of the Skin by internal Uſe.

Of

Of CUNLEY-HOUSE WATER.

THIS Spring is ſeated two Miles from *Whaley*, and ſeven Miles Weſt of *Burnly* in *Lancaſhire*. The Steam of this Water renders Gold brighter; but preſently turns all white Metals black. It produces a brown Sediment with the Solution of Silver, and that of Lead; it changes Green with Syrup of Violets, and kills Inſects thrown into it, though it has a particular Sort of its own, which may be ſeen ſwimming in it when the Sun ſhines.

The Channel this Water runs in is lined with a bituminous Subſtance that is intolerably fetid, and is black below and white above. It is ſtrongly impregnated with Sulphur, combined with a little calcarious Nitre, and a Mixture of Sea Salt and of abſorbent Earth; but we have no Account of its Virtues.

Of INGLEWHITE WATER.

Inglewhite is a Village in *Lancaſhire*. Dr. *Short* informs us it is a ſtrong ſulphureous and chalybeate Water, and that it is the Product of Shale and *Brazil*. This Shale partly reſembles Slate, and will moulder, when expoſed to the Air, into exceeding thin Flakes, like Leaves of fine Paper, and afterwards turn to a black Powder. The ſame Author thinks that it is a vitriolic Ore, and affirms that by its ſtrong Acid it will waſte the Lead Ore near it. A Gallon contains twenty-four Grains of Sediment, of which nineteen

are Earth and Oker, and five Nitre. It will not purge unleſs drank with Salt, which is all the Account we have of its Operation.

Of Deddington Water *in* Oxfordſhire.

Eddington is a ſmall Market Town ſixteen Miles North of *Oxford*, and ſix South of *Banbury*, and the Water has a ſtrong ſulphureous Smell like the Waſhings of a foul Gun; a Gallon of it yields eighty-ſeven Grains of Sediment, whereof forty-four are Earth, and forty-three Salt.

Deddington Water is impregnated with Sulphur and Iron, which are both ſo volatile that they are ſoon diſſipated; beſides which it has Salt enough to give it a purgative Quality; but what other Virtues it has we are not told.

Of Ganesborough Water.

Aneſborough is a Market Town in *Lincolnſhire*, commodiouſly ſeated on the River *Trent*, fourteen Miles North-weſt of *Lincoln*, and one hundred and thirty-ſeven North of *London*. The Spring lies South-eaſt of the Town, and the Water at the Spring Head ſmells and taſtes of Steel and Sulphur. A Gallon, after Evaporation, will leave an hundred and ninety-two Grains of Sediment, whereof an hundred and twenty are Earth, and ſeventy-two calcarious Nitre, according to Dr. *Short*; ſo that this Water is chiefly impregnated with Sulphur, Iron, a calcarious Nitre, and Earth.

Earth. It has ſomewhat of a purgative Quality, which is all we have to ſay of its Virtues.

Of the WATER *on the Borders of* Northumberland.

WE have little Account of this Water, only *Robinſon*, in his Natural Hiſtory of *Cumberland*, informs us, that it has a Smell like Gunpowder, which may be perceived at a great Diſtance, and that it changes Silver to a Gold or Copperiſh Colour; as alſo that it will cure the Itch, Scabs, and Ulcers, by bathing.

Of CODSAL-WOOD WATER *in* Staffordſhire.

Codſall is a Village twelve Miles South-weſt of *Stafford*, and ſeven North-weſt of *Wolverhampton*, and in the Wood adjoining is the Spring here ſpoken of. Dr. *Plot* affirms that the Water is ſulphureous. He compares it to that near *Ingeſtre* formerly mentioned; but obſerves that the Salt and Sulphur are not equally mixed in this Water as that; for though the Sulphur has ſo blunted the Acidity of the Salt, as to render it as inactive as an Alkali, yet the Salt is too weak to reſtrain the Volatility of the Sulphur, for it always emits a ſulphureous Smell. In the Winter, and ſometimes againſt Rain, one may ſmell it twenty Yards off.

It will not curdle Milk, but it will lather with Soap, and gives a green Tincture with Syrup of Violets. He farther informs us that he tried it with Galls, Oak Leaves, and with the Solution of ſublimated Tartar; but none of them would throw

throw down the Sulphur, except Spirit of Urine, which turned it to a faintiſh red.

The Water of this Well is much clearer than that at *Ingeſtre*; and ſome Perſons, near an hundred Years ago, were at the Pains of digging and boring the Ground near about it, and met with a Kind of mineral Earth, which craſhed in the boring like rotten Wood, which, being carried to *London*, was found ſulphureous.

This Water, many Years ago, when Leproſies were frequent, was accounted an excellent Remedy to cure that Diſtemper; and there was a Houſe built near it called the Leper Houſe. At preſent it is chiefly uſed againſt Scabs and Itch, both in Man and Beaſt, and it operates both by Stool and Urine. It will likewiſe ſometimes vomit if the Stomach is foul, and about three Quarts of this Water is generally drank at a Time. The People hereabouts brew their Beer with this Water; and in Dr. *Plot*'s Time, more eſpecially at a Houſe called *The Brimſtone Alehouſe*; and it is obſervable, that no one that lives there is ever troubled with Diſeaſes of the Skin.

Of WILLOUGHBRIDGE WELLS *in* Staffordſhire.

Willoughbridge is a Place in *Staffordſhire*, ſix Miles North-eaſt of *Drayton* in *Shropſhire*, ten Miles South-weſt of *Newcaſtle*, and ſixteen North-weſt of *Stafford*. The Well is ſeated in *Willoughby*'s Park, and its Water is as clear as Cryſtal, only the Sides of the Glaſſes, after they have been uſed awhile, are a little oily, and of a bright yellow Colour.

If a few Drops of a Solution of Sublimate be let fall into this Water, it preſently becomes of a deepSackColour, which ſeems to ſhow it has ſomething of a lixivial Salt. It will lather with Soap, but will not curdle Milk, nor change its Colour with Syrup of Violets. Contrary to moſt other Waters, there is no Salt contained therein, at leaſt the Evaporation of ſeveral Gallons left nothing behind it. However, the Solution of Sugar of Lead firſt turned the Water of a blueiſh yellow Colour, which afterwards faded to a muddy White. But there is one Thing very peculiar, which is, that its Oil or Sulphur is ſo very volatile, that when this Water was diſtilled in a Glaſs Body and Head, the Oil, or Sulphur, came over the Helm upon the firſt Heat, and was always in the Receiver before the leaſt Drop of Water appeared.

There is ſuch a great Plenty of this Water, that ſixty Springs at leaſt have been counted, and they ſend forth plentiful Streams. Dr. *Plot* informs us farther, that the Waters have performed ſeveral ſtrange and unaccountable Cures; and he is of Opinion they might have performed more, had they been directed by a ſkilful Phyſician, which he attributes to its balſamic Virtue, and great Subtilty and Volatility of the Waters. He farther adds, that if we were to judge of theſe Waters from the many atteſted Cures, he thinks that they would come as near to an univerſal Medicine, as any other in the World.

This Author acquaints us, that there are many other ſulphureous Waters in this County, though not ſo clear and well concocted as theſe; for they are generally thick, and of a blueiſh Colour, with an unpleaſant fetid Smell, like that at *Knareſ-*

borough in *Yorkſhire*. There is one at *Tettenhall*, about two Miles North-weſt of *Wolverhampton*, on the Highway Side near the Pound, which in the Summer Time has been obſerved to depoſit a Sediment of almoſt all Sorts of Colours. He takes Notice of others that have a ſtrong fetid Smell, one of which is in *Watling-Street Road*, not far from *Horſebrook*, and another between *Willenhall* and *Bentley*. There is likewiſe another in a watery Lane not far from *Eccleſhall*. There is ſtill another near *Hartſley Green*, between *London* and *Gayton*, which has a petrifying Quality; and that at *Butterton*, in the Pariſh of *Mothfield*, by *Howbrook* Side, will tinge Silver of a blackiſh Colour in an Hour's Time.

Dr. *Plot* alſo acquaints us, that there are other Waters in this County that have evidently a Sulphur joined thereto. There is one of theſe in a Ditch, in the Park Meadow, under *Broughton* Park Pales, and another at *Monmoor Green* near *Wolverhampton*, both of which will ſtrike, with Galls, ſo deep a Red, that they become after awhile of a blueiſh, and at laſt almoſt of a blackiſh Colour. There is a Third at *Grindleſtone Edge*, about a Quarter of a Mile Eaſtward of *Horton* Church, that will turn Red both with Galls and Oak Leaves, and yet will lather with Soap well enough. Theſe Springs are taken Notice of, not for the Sake of any known Virtues that they have, but to direct ſome future Enquirer where to find them, who may perhaps, upon Trial, be able to aſcertain their medicinal Qualities.

Of the MINERAL WATERS *at* Llandrindod *in* South Wales.

Llandrindod is a ſmall Pariſh of *Radnorſhire* in *South Wales*, ſeated twenty-four Miles Weſt of *Leominſter* in *Herefordſhire*; and *Raynder*, or *Rayador*, is another Market Town, which lies twelve Miles to the North-weſt of this Place. *Knighton*, another Market Town in *Radnorſhire*, and on the very Edge of *Shropſhire*, is twelve computed Miles North-weſt; but it is no leſs than twenty meaſured Miles. It is alſo one hundred and ſixty Miles Weſt by North of *London*.

Llandrindod, in *Welch*, is the ſame as *Trinity* Pariſh in *Engliſh*, and it is ſeated on a Common, which extends itſelf to three more Pariſhes; this Common is about ſix Miles in Length, and about three Quarters of a Mile broad. The Mineral Springs are ſituated in that Part of the Common, that lies in the Pariſh we are now ſpeaking of. Theſe are the ſaline Pump Water, and the ſulphureous Water, commonly called the black ſtinking Well. Beſides theſe, there is a chalybeate Rock Water, that ſprings up in the Common, which is the Property of the Crown.

The Land adjoining to this Common, according to Dr. *Linden* is rural, pleaſant, and open, but has a gradual Aſcent; by which Means it encompaſſes a ſpacious Plain. The Hills that ſurround it, are not ſo high as thoſe in *Caernarvonſhire*, by which Means the Stagnation of the Air is prevented, and the Wind has a free Courſe from whatever Point it blows. The Air is exceeding healthy, inſomuch that weak and con-

ſumptive People ſoon revive and gather Strength, that come here to drink the Waters; which perhaps may be in ſome Meaſure owing to the Abſence of Bogs or Fens, and all damp unwholeſome Vapours.

The Soil hereabouts is rich, and very proper for Cultivation, and there are excellent Cattle that graze here, not to mention that the Inhabitants have all healthful Countenances.

The Neighbourhood produces good Barley, with which they brew excellent Ale; a Circumſtance that is very agreeable to all the Viſitors who are fond of that Liquor.

The medicinal Waters are come in Vogue merely by their own Merit, for nothing elſe has recommended them to the World. They are now frequented by very genteel Company, and Dr. *Linden* affirms they are, upon that Account, inferior to none in *Europe*; to this may be added, that in the Summer Time there is a great Reſort of the common People, who come here in Crouds to make Uſe of theſe Waters; but it is not above twenty-four Years ago ſince the better Sort came hither for that Purpoſe. There are now very handſome Houſes fitted up, one of which in particular is large enough to contain ſeveral hundred Viſitors. At preſent there are no Baths here, but it is very likely there ſoon will, for they now make Uſe of Bathing Tubs, which is a ſufficient Hint to occaſion more convenient Receptacles to be erected.

The Rock Water is ſo called, becauſe it iſſues out of a Rock, which conſiſts of what they call here Water Slate. When this Slate is dug out of the Ground, and expoſed to the Air, it moul-

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ders into Powder, which contains a large Quantity of Iron, Earth, Salts, and Sulphur.

A Glaſs of this Mineral Water, taken up in a clear warm Day, is as bright as Cryſtal; but after ſtanding ſome Time, it changes into a Pearl Colour. While it preſerves the Clearneſs, it has a ſtrong chalybeate Taſte and Smell, which forſake it as ſoon as it changes Colour. The Veſſels out of which it is commonly drank ſoon obtain a deep Tinge, or rather a thick Fur, ſuppoſed to be ferruginous Particles, or natural precipitated Crocus of Iron; but it is accompanied with a greaſy, unctuous Iron Mucilage. This Crocus, being thrown on hot Iron, emits a black Flame, with an offenſive Smell, that cauſes a Coughing in the Standers by.

At the Spring Head this Water changes to a deep Purple with Powder of Galls and Green Tea, and turns at laſt to a Blue. However, when this Water has ſtood an Hour, after it has been carried to the Long Room, it will not change to any Colour with Galls, Green Tea, or Oak Bark. With Cochineal this Water turns Blue, and becomes hot with Oil of Vitriol. Rough Cyder and fine Sugar, mixed together with this Water at the Fountain Head, excites a Fermentation, or Ebullition.

This Water will not curdle with Milk, but with Oil of Tartar and volatile Spirits it will turn as white as Milk, that changes to a yellow Colour inclining to a Parrot Green. It preſerves its Tranſparency with the Spirit of Vitriol, Salt, and Nitre; but with Sugar of Lead it turns firſt Milk White, and at length lets fall a yellowiſh grey Sediment, which being analyſed, is found to contain about fifteen Grains of Crocus of Iron in each

Quart, and about five Grains of the bituminous Mucilage of Iron.

We are not told what Quantity of Salt this Sediment contains, except only that it is great. It does not melt in the Fire ſo eaſily as other Salt; but after it is cold, it appears like ſmelted Borax, and vitriolic Acids have no Effect upon it, nor yet does a damp Air affect it.

From theſe, and ſeveral other Experiments, *Linden* concludes that this Water contains Iron, Salt, Sulphur, and Vitriol.

This Water is generally good for all ſuch chronic Diſtempers that proceed from Laxity of the Fibres, and Weakneſs of the muſcular Syſtem; in particular it is good in ſcorbutic Eruptions, in weak Nerves, in the moiſt and convulſive Aſthma, in *St. Vitus*'s Dance, in Palſies, whether partial or total; in a Weakneſs of any particular Member, in the Falling Sickneſs, in obſtinate Agues, in Obſtructions of the lower Belly, in certain wandering, ſlow, nervous Fevers, in all Female Diſorders, in Fluſhings or Redneſs of the Face, and in all Obſtructions.

Of the SALINE PURGING WATER.

THIS Water is commonly called here the Pump Water, and from various Experiments it appears, that it contains a neutral Salt of native Borax, a ſmall Quantity of Bitumen, an etherial, elaſtic, volatile mineral Spirit, and a mineral Oil.

We are told that this Pump Water is an excellent Remedy in the Scurvy and Tetters, in the hypochondriac Melancholy, in the Morphew, in Fevers upon the Spirits, in the Leproſy, and in all

ſuch

ſuch Diſtempers as proceed from corrupt Humours, and in the Gravel.

This Water, if the Diſeaſe is obſtinate, requires ſome Time to cure it radically, and the Time is confined to the Summer, as being the beſt Seaſon; but they may be drank from the Middle of *March* till the Beginning of *November*, for then it is in the higheſt Perfection.

The Journey to theſe Wells ſhould not be performed in a Hurry, but gently. As ſoon as the Patient is arrived at the Fountain, he ſhould then conſider what is proper to be done before drinking the Water. This ſhould be always out of long narrow Glaſſes, and ſwallowed down gradually, by which Means the etherial, volatile, elaſtic Spirits will diffuſe themſelves more eaſily through the ſmalleſt Veſſels. Perſons troubled with the Scurvy muſt uſe this Water both as a Purgative and Alterative; and it is certainly very proper for the laſt, becauſe it ſtrengthens and warms the Stomach, excites the Appetite, promotes Digeſtion, and renders the Perſon briſk, lively, and vigorous. As a Purgative, enough muſt be drank to procure four Stools; but as an Alterative that Circumſtance ſhould be much more moderate. The general Quantity is about three Pints a Day, taken as an Alterative, of which a Pint and a Half ſhould be taken at three Doſes, leaving a Quarter of an Hour's Diſtance between each Half Pint, and this ſhould be done in the Morning before Breakfaſt. About an Hour before Dinner another Half Pint ſhould be drank, and another about ſix o' Clock in the Evening, as alſo a Third at going to Bed; but if the Body remains coſtive, the Quantity muſt be increaſed.

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As a Purge this Water ſhould be taken twice a Week, and is beſt drank at the Fountain Head, drinking Half a Pint at a Time till it begins to work; but then the Patient muſt walk or ride between each Draught.

When there are Tetters and Boils, the Patient muſt bathe frequently, and waſh the Parts affected with Water, uſing it inwardly at the ſame Time.

In hypochondriacal Diſorders the Patient muſt alſo drink and bathe; but then no more muſt be taken than what the Patient finds agreeable to his Conſtitution; which muſt be generally much leſs than what was before directed; that is, he muſt drink no more than a common Glaſs at a Time; but then it muſt be drank oftener.

In the Leproſy ſo much Water muſt be drank, as to cauſe two or three Motions every Day; to which muſt be joined, bathing twice a Week in a warm Bath, made with equal Quantities of the Pump and ſulphureous Waters.

In the Gravel, let the Patient take every Morning ſo much of the Pump Water as will purge him more than once, and then juſt ſo much as will freely paſs off by Urine; this done, he ſhould afterwards purge once a Week. When the Gravel is diſcharged by this Means, let the Patient drink every Morning Half a Pint of the Rock Water, with Half a Pint of the Pump Water for three or four Weeks more, and Half that Quantity going to Bed.

With Regard to the Diet, the Patient muſt abſtain from Vinegar, Pepper, ſalted Fleſh, and Fiſh, coarſe leavened Bread, Cheeſe, Fruits, Salads, buttered Cakes, and every Thing that is heavy; but he may feed upon rich Broths or Soups, with a ſmall Quantity of Salt, but with

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no Seaſoning except the common Pot-herbs. The other Victuals may be Fleſh or freſh Fiſh, and that is the beſt Fleſh that is freſh and young. The Patient may alſo uſe Beans, Peaſe, Kidney Beans, Aſparagus, Artichokes, Potatoes, Turnips, Carrots, and Parſnips, which ſhould all be well boiled; but too much butter ought by all Means to be avoided.

The Patient may drink good fine Ale, as well Wine, Brandy, or Rum mixed with Water, which ſhould all be the beſt in their Kind. Add to theſe, gentle Exerciſe, taking the Air, chearful Company, and the Diverſions and Amuſements of the Place.

Of the SULPHUREOUS WATER *of* Llandrindod.

THE ſulphureous Water, commonly called the Black ſtinking Water, is ſo named from its ſtrong Smell, and the Blackneſs of the Channel through which the Water paſſes. Moſt Waters of this Kind have ſomewhat of the Smell like the waſhing of a foul Gun; they are actually cold; line the Sides of their Paſſage with a white ſlimy Mucus; they ſtink moſt in rainy Weather; and after a Drought, juſt before rainy Weather, the Spring riſes with greater Impetuoſity than at other Times. They alſo ſtop Fermentation in an Inſtant; they depoſit a black Mud in their Paſſage; they turn Silver firſt yellow and then black; and they kill Inſects. All which Characteriſtics belong to this Water.

From the various Experiments that have been tried by Dr. *Linden*, this Water appears to contain etherial, volatile, mineral Spirits, a ſmall Quantity

Quantity of a vitriolic Acid, a mineral unctuous Mucus, a fine mineral Oil, a ſubtile Crocus that will diſſolve in Spirit of Wine, a perfect Sulphur, and a neutral Salt of a briny calcarious Texture.

This Water is of great Uſe in all Caſes where bathing is requiſite, when made into a lukewarm Bath. This will be highly ſalutary in benumbed Limbs, cauſed by an Apoplexy, in a waſting of the Fleſh of the Limbs, and in paralytic Diſorders. It is alſo good in the hypochondriac Paſſion, in venereal Diſorders; for old Sores, Tetters, the Leproſy, and Scurvy; in the Stone and Gravel; in the Rheumatiſm, and gouty Diſtempers.

It alſo cures the King's Evil, when this Water is uſed internally as well as outwardly; but in the hypochondriac Paſſion, the drinking this Water muſt for ſome Time precede the Uſe of bathing. This Water is alſo an excellent Abſorbent, and is efficacious in Sourneſs of the Stomach, Obſtructions of the Liver, and in the Jaundice; it removes ſcirrhous Tumors, and yields great Relief in Cancers.

It is efficacious in the Bloody Flux, ſtrengthens the Stomach and Bowels, and opens the Mouths of the lacteal Veſſels. It is alſo good in Defluxions, in Contractions and Weakneſs of the Limbs; but then it muſt be uſed both inwardly and outwardly; but it is without compare in hectic Fevers. It is not to be deſpiſed in Weakneſs of the Nerves, in hyſteric Colics, and in the Rheumatiſm. It is alſo beneficial in the Scurvy, teterous Eruptions, and old Wounds; in which Caſes it is adviſeable to drink, bathe, and likewiſe to dreſs the Wounds with the black Precipitate.

Thoſe

Thoſe that bathe in this Water had beſt continue in the Bath a Quarter of an Hour at firſt, and increaſe the Time, till they arrive at two Hours more or leſs, according to the Strength of the Patient. The moſt proper Time is in the Morning, if the Conſtitution will bear it, otherwiſe it muſt be deferred till the Evening.

However, before bathing, the Patient had beſt uſe the Fleſh Bruſh, or Friction with Flannels; eſpecially where the chief Complaint remains fixed, if there be any ſuch.

After the Patient comes out of the Bath, he muſt immediately repair to a warm Room, and being well dried, he muſt go directly into a warm Bed in order to ſweat. After he gets up, he muſt be cautious of expoſing himſelf to the cold Air.

Sometimes this bathing is attended with Eruptions of the Skin; and in this Caſe the Patient muſt remain longer in Bed after bathing; and if he is dry, let him drink the ſulphureous Water Milk warm; by which Means the Eruptions will ſoon diſappear.

In Leproſies, and other obſtinate Caſes, it will be beſt to bathe three or four Times a Day; and then the Patient muſt be put into a warm Bed as ſoon as ever he comes out of the Bath.

In broken Conſtitutions, brought on by hard drinking, the Water ſhould be uſed internally, as well as outwardly; for they may be drank as ſafely on the bathing Days as at other Times. The Patient may bathe from two to four Times a Week, according to the Nature of the Diſorder. But ſometimes it will be better to uſe one of the other Waters rather than this.

The Doſe of this Water cannot in general be determined; but it is always beſt to begin firſt with

with one that is ſmall, that is, from a Pint to a Quart in a Morning, and about Half a Pint each Time, with ſhort Intervals between the Draughts. This Quantity may be increaſed to as much as the Conſtitution will well bear; that is, as much as will ſit eaſy on the Stomach, and paſs off well; for when it gives the leaſt Uneaſineſs the Doſe is too large. The Courſe of drinking ſhould be continued for four or five Weeks for each Time; but in this the Manner of drinking the Bath Waters will be the beſt Rule.

Of the MINERAL SPRINGS *in* Cornwall.

IT is a little ſurprizing, that the mineral Waters of *Cornwall* have ſcarce been ſo much as mentioned by any Writer, eſpecially conſidering that this County abounds ſo much with Minerals, and therefore was moſt likely to excite the Curioſity of Phyſicians and Naturaliſts. However, we are at length enabled to ſay ſomething of them, by the Aſſiſtance of *Borlaſe*, in his Survey of *Cornwall*.

Madern Well he calls a Spring of pure Water, though the Soil round about it is black, boggy, and light; but the Stratum, through which the Spring riſes, is a grey Moor Stone Gravel, called by the *Corniſh*, *Grouan*. This Well is ſeated in the Pariſh of *Madern*, four Miles Weſt of *Penzance*, and is reſorted to by many People afflicted with Pains, Aches, and Stiffneſs of the Limbs. They come hither to waſh, and many Cures have been ſaid to have been performed by it; but *Borlaſe* is of Opinion, that it only acts by its cold and limpid

limpid Nature, becauſe it is without any mineral Impregnation, at leaſt as far as he could find.

Euny Well riſes in the Pariſh of *Sancred*, thro' the ſame Soil as the former; and becauſe it has done extraordinary Cures, there is a Chapel adjoining to it, dedicated to St. *Eurnus*. The Ruins of this ſtill diſcover a great deal of Carving, which plainly ſhews that this Spring was formerly of very great Note. Its greateſt Reputation is for drying up Humours, and for healing Wounds and Sores. It has no evident Mineral Impregnation, and therefore *Borlaſe* thinks its Effects are owing to the mere Coldneſs of the Water, by its bracing up the Nerves and Muſcles, and ſtrengthening the Glands.

Another Well of this Sort is called *Holy Well*, and it riſes about a Mile and a Half to the North-weſt of *St. Cuthbert*'s Church, in a ſmall ſandy Bay, where there are ſeveral Caves made in the Cliff by the northern Sea. In one of theſe Caves, at the North-eaſt Point of the Bay, and at the Foot of a high Cliff, is this Well. The Entrance is low, but by the Help of ſome Steps cut into the Rock there is an Aſcent of about fifteen Feet perpendicular. The Water, which drops from every Part of the Roof, is collected into a little Baſon, from whence a ſmall Rill proceeds, not more in Circumference than a Reed. There are ſhort mammillary Stones of the Stalactites Kind, which hang from the Roof; and the Floor of the Rock is covered with the ſame Subſtance. This Water will not change the Colour of Green Tea, nor curdle Milk; from whence it is concluded, that there are neither Steel nor Alum in its Compoſition. After Evaporation to one Half, no Pellicle appeared, nor did it ſhoot into Cryſtals; for

which Reaſon it is thought to be void of acid Salts; however, it depoſited a ſmall Sediment, of the ſame Colour and Subſtance with the calcarious Incruſtations of the Well. Some of this being reduced to Powder would not melt over the Fire, nor had it any particular Taſte or Smell; nor yet did it flame when thrown into the Fire; likewiſe, when thrown on a red hot Iron, it emitted neither Smoak nor Smell. However, this Water is greatly commended in Fluxes and Diſorders of the Bowels.

There are ſeveral Chalybeate Springs in *Cornwall*; but the moſt remarkable of this Kind riſes in the Tenement of *Colurian*, in the Pariſh of *Ludgvan*. The Bed through which this Water flows is a looſe pebbly Ground, mixed with a gravelly Clay, full of an ochreous Iron Mineral, from which the Taſte and Smell of the Water proceeds. It turns to a deep reddiſh Purple with Galls, and with Green Tea to a lighter Purple. With Oak Leaves it becomes of a blueiſh Black, and has a Purple Caſt. Upon pouring two Thimblefulls into Half a Pint, it made but a ſmall Efferveſcence. After this Water had ſtood with the Galls for ſome Time, it retained its Purple Colour and Tranſparency. Upon dropping gently a large Thimbleful of Syrup of Violets, into three Fourths of an Inch of the Mineral Water, it retained its uſual Colour towards the Top of the Glaſs; but the middle Part turned to a pale greeniſh Yellow, which reached within Half an Inch of the Bottom, and the Remainder was of a light Purple; but upon ſtirring it, after it had ſtood Half an Hour, the whole became of a deep green Colour. When a Thimblefull of Oil of Tartar was dropped into this Water, it fell immediately

diately to the Bottom of the Glaſs, which held about Half a Pint; but it precipitated no Sediment, nor turned the Water milky, thick, or chalky; the Colour was more inclinable to that of a bright Oker, but was ſcarcely diſcernible. Upon ſuſpending a Piece of poliſhed Silver for about Half an Hour in the incloſed Well, it did not turn blackiſh; by which it appears that little or no Sulphur exhales from this Water. In the Morning, before the Water is ſtirred, there is a Film or Skin on the Surface, with all the Colours of the Rainbow ſhooting to and fro. From this there is ſome Reaſon to think, that a Naphtha is mixed with this Water, which riſes to the Top, when it is left quiet for any Time. In a calm, but not very warm Morning, in the Year 1734, on the 7th of *Auguſt*, and before Eight o' Clock, the Water was almoſt Blood warm, and the common Water, which runs about nine Feet from this Spring, was as cold as Ice; but after carrying it about a Mile or two, it loſt its Warmth; from whence *Borlaſe* concludes, that it is beſt to drink the Water upon the Spot. After it has been expoſed in the open Air for twenty-four Hours, it undergoes no Alteration from Galls, which ſeems to be owing to the flying off of the volatile Spirit. This Water is very ſmooth, mixes well with Milk, and lathers readily with Soap. The Virtues of this Water are very great, for *Borlaſe* himſelf knew two Perſons, who by drinking the Water, and waſhing the Parts affected therewith, have been cured of the King's Evil; he likewiſe heard that many others had been cured of the ſame Diſeaſe in the ſame Manner. It is very diuretic, greatly promotes Perſpiration and other Evacuations; it relieves Obſtructions and Swellings

lings of the Belly, and reſtores a loſt Appetite. Externally it cures Sores of every Kind, and the Eruptions of the King's Evil; it is alſo very good to waſh the Eyes with.

Mr. *Vallack*, an eminent Apothecary in *Plymouth*, and well ſkilled in Chemiſtry, affirms, that the Water at *Kern-Key*, near *Redruth* in *Cornwall*, is found to be impregnated both with Iron and Tin; but what its particular Virtues are, is not ſaid; but if we conſider the Virtues of Tin in general, it might probably be of great Uſe to cure Worms in Children.

FINIS.