1. In the Valley of *Lancy*, which runs between the Mountains of *Turin*, grows a Plant like the *Doronicum*, (ſo alſo called by the Inhabitants and Botaniſts;) near the roots whereof you may find pure Quickſilver, running in ſmall grains like Pearls; the juyce of which Plant being expreſſed, and expoſed to the Air of a clear night, there will be found as much *Mercury*, as there is loſt of Juyce. *

* This may be compared with thoſe relations, which acquaint us, that *Moravia*, *Hungary*, *Peru*, and other parts; Mineral Juyces concreted are found to ſtick to the roots of Herbs and Trees, ſome of thoſe Juyces tinging alſo the Leaves of Vegetables.

2. In a Voyage he made a few years ſince to *Genoa*, when he was to paſſe ſome mountains, he met with ſome Peaſants, who digging on the ſides of a Hill, had found and gathered very many *Cockle-ſhels* of divers kinds; which he wondring at, ſtopped his intended journey, and went to the very place, where he was ſatisfied of the truth of the relation, finding great ſtore of different ſhells, as the *Turbinets*, *Echini*, and ſome Pearl-ſhells, whereof one had a fair Pearl in it, which, he ſaith, he put into his *Repoſitory*.

Obſervations *Made by a Curious and Learned Perſon, ſailing from* England, *to the* Caribe-Iſlands.

Henry Stubbe.

Theſe Obſervations ſhall be ſet down in the Authors *own words, as they were obtained from him by Sir* R. Moray; *viz.*

I Took notice at *Deal*, whence I ſet ſail for *Jamaica*, of the great difference in the *ruſting* of *Iron*, in ſuch houſes, as front the Sea, in compariſon of that effect in the Street immediately placed behind that other, in which I made this obſervation. They told me, that it ruſted more at High floods, than at Neap-tides; the height of the *Beach* hindring the *Saline* exhalations. This remark put me in mind of the vanity of the Argument of M. *Ligons* and others, *viz.* That the Air of the *Weſt-Indies* was hot and moiſt, becauſe of the *Ruſting of Iron*;

Iron, ; whereas it indeed ariſes from ſome other principle in the Air; for at the point of *Cagua*, where it ſcarce raineth 40 ſhowers in a year, Iron ruſts as much or more than any where; yet are there other parts of the *Iſland*, in which of 9 months not one paſſes without great raines: beſides, in *Jamaica* it ruſts leaſt in rainy weather.

The Steams of the Sea are found of ſuch a nature, that our ſweet-meats rotted; Sugar of Roſes, and other Lozenges grew moiſt; notwithſtanding that there was no reaſon to attribute it to any rainy weather. And thoſe Pyes and Gammons of Bacon, which had kept well before, after they had been once expoſed to the open Air, decayed more in a day or two, than in ſix weeks before.

On the point *Cagua*, the Iron-Guns at the Fort were ſo corroded, that ſome were near become uſeleſs, being perforated almoſt like Honey-Combs: And I could at any time with 2 or 3 ſtroaks of a Hammer break off ſome pounds of Ruſty Iron, which ſerv'd for prepared *Steel*, and in *Salves*. But the Guns which lay in the Salt-water, were not much endammaged by Ruſt; as we found, upon taking up of ſome.

Many things receive dammage by the Air: Not only *Iron* ruſts, but even *Linnen* rots, and *Silks* once expoſed to the air do rot without loſing their colour. If a *Lancet* be once expoſed to the air it will ruſt, though you preſently put it up again; but if it be never expoſed to the air, it will hardly ruſt.

At *Deal* a certain Ale-ſeller, will warrant, that the Ale, as he orders it, ſhall be carried good to the *Weſt* or *Eaſt-Indies*. His way to prepare it is this, as he told me himſelf, he twice maſhes it with *Freſh-Malt*, and twice boyles it well; yet all this kept it not from ſowring; as I obſerv'd during my ſtay there. We bought of it to carry to *Jamaica*, and then he directed us thus. To every Rundlet of 5 *Gallons*, after it is placed in the ſhip, not to be ſtirred any more, put in two new-laid Eggs whole, and let them lye in it, he ſaid that in a fourth-night or little more, the whole Egg-ſhells would be diſſolved, and the Eggs become like Wind-Eggs, incloſed only in a thin skin; after this, the whole *White* would be prey'd on, but the *Yolk* would not be touch't or corrupted. By this means we did

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preſerve the Ale to *Jamaica*, and it was much better, than at *Deal*. I was told ſince by ſome others, that the Experiment is uſual with them, to keep Ale in *England* a quarter of a year: And if Eggs be thus put into *March-Beer*, they preſerve it from growing ever harſh. They muſt be put in, after the Liquor has done working.

Concerning the *Thames-water*, it is not only obſervable, that in eight months time it acquires a Spirituous quality, ſo as to burn like Spirit of Wine; (and ſome *Eaſt-India* ſhips, I am informed, have run the hazard of firing, by holding a Candle near the Bung-hole at the firſt opening of the Cask;) but alſo that the ſtinking of it is no corruption, nor perhaps unwholeſome; for we drank it all the way, ſo as to hold our Noſes, yet had no ſickneſs, but we had proportion of *Brandy* each week, which perhaps might correct it. If you take off the bung from any Cask, that ſtinks, and let the Air come to it, it will in 24 hours become ſweet again. And if you take a Broom-ſtick, and ſtir it about well, it will become ſweet in 4 or 5 hours caſting a black Lee to the bottom, which re-mixes with it, and ſo occaſions a third or fourth fermentation, and ſtench; after which it ſtinks no more. But, though *Thames-Water* upon ſtench do not putrifie, yet other Waters (as far as hath been hitherto obſerved) do become irrecoverable upon ſtinking, and dangerous to drink.

I obſerv'd at Sea, that though *Glauber* ſay, the water, as it grows *Salter*, becomes *Greener*, yet that is falſe. For, after we were out of the Narrow, the Sea grew *darkiſh*, and after perfect *Azure*, yet was it much more Salt, the further we went; as I tryed by a *Water-poiſe* of Glaſs, with Quick-ſilver at the one end. It roſe about half an inch above the Sea-water in the *Downs*; and at 24 *degrees* more, 2 *inches*; but after that, I never obſerved any difference unto *Jamaica*, the Sea being probably ſo impregnated with Salt, as not to imbibe more; which croſſes another obſervation, that the nearer the *Tropiques* and the *Line*, the Salter the Sea.

As to the *Colour* of the Sea, I conceive there is as great variety in it and its ſteams, as in Grounds at Land; which may occaſion the ſickneſs in ſome places more, than in others: For

For the Sea ſmells differently in the *Narrow* and *Main*. And as to colour, it is of a Sea-green (and more ſickly) in the *Downs*, than at *Torbay*: and on *Plymouth*-coaſt more, than paſt the *Lands-end*; and in the *Bay* of *Biſcay*, than in the *Long-reach*. Something perhaps may be imputed to the difference of the waves, which are ſhort, and make a Copling Sea in the *Bay* of *Biſcay* (yet we came not within 80 Leagues of *Cape Finis Terræ*:) in the *Long-reach* it is a long roling wave, but never breaks. About *Florida*, *Virginia*, & *New-Engl.* it is a great roling wave, but breaks. And as the Sea coloureth from *green* to *darkiſh*, and ſo to *blue*; ſo in our return it colour'd from *blue* to *dark*, and ſo to *green*. When we were in the *Latitude* of *Barbadoes*, and had ſailed ſo for two daies, and apprehended our ſelves to be within 70 or 80 Leagues, I obſerved, the Sea was black and thick, not tranſparently blue, as before, and the foam againſt the ſhip-ſides was turbid, and of another conſiſtence, than before. I had never ſeen the like before, yet was I willing to think the Sun not high enough, to give the water its due colour. I attended the Suns progreſs, but behold, it turn'd *Green*; whereupon I asked the Maſter, who told me, we were within 60 leagues of *Barbadoes*, and that the Sea was there ſoundable, whereas before it was not ſo. But at *Barbadoes*, in the ankoring places, it was *Blue*; and as we row'd aſhore, in the ſhallow it was *Whitiſh*: And ſo at *Jamaica* near the ſhore it is tranſparently *White*, but within three yards more, tranſparently *Blue*.

As to the *Burning of the Sea*, I could never obſerve ſo great a Light, as to perceive Fiſhes in the Sea of the Sterne, though I frequently looked, as well as M. *Ligon*; yet was the light great, and at ſometimes more than other. I ſuppoſe, ſeveral ſubject Earths, Currents and Winds do vary it. I obſerv'd, it burned more at *Deal* the night before we ſet ſaile, than ever in the Voyage: all the water ran off our Oar's, almoſt like liquid fire; the wind was then *South-Eaſt*, and the Sea-men told me, that at *Eaſt* and *South*-winds it burned moſt. And it did never burn ſo much during our ſtay at *Deal*, as then, the wind having been alwaies *Weſterly*. But in the *Harbour* of *Jamaica* I obſerv'd, that it did not burn equally there. As you paſſe the *Current* (which thwarts the middle of the *Harbour* with a moti-

on, different from the water on both sides) the water scarce seems *white* at the stroak of an *Oar*.

I shall not trouble you with an account, how two contrary Winds poise each other, and make a Calm in the midst, ships at a distance sailing with contrary gales at the same time.

It is observable, that in the *Indies* such places, as have any high mountains, have also every night a VVind, that blows from the Land, *Maugre* the *Levantine* VVind, which blows at Sea (but with a slacker gale all night; which seems to shew, it depends not only on the motion of the Earth, but Sun.) VVhence this VVind should come, may be considered; there is none at *Barbadoes* or *Saona*, but at all the other Islands. And in *Jamaica* every night it blows off the Island every way at once, so that no ship can any where come in by night, nor go out but early in the morning, before the *Sea-brise* come in. I have often thought on it, and could imagine no other reason, but that those Exhalations, which the Sun hath raised in the day, make haste (after his strength no longer supports them) to those Mountains by a motion of *Similar Attraction*, * and there gather in Clouds, and break thence by their own force and weight, and occasion a wind every way. For, as the Sun declines, the Clouds gather, and shape according to the Mountains, so that old Seamen will tell you each Island in the afternoon towards Evening by the shape of the Cloud over it. And this *Attraction* appears further, not only from the Rain that gathers on the Tree in the Island of *Ferro*, spoken of by *J. Hawkins* in his Observations, and *Is. Vossius* upon *Pomponius Mela*, as also *Magnenus de Manna*; but also from the Rains in the *Indies*, there being certain Trees which attract the Rain, though Observations have not been made of the *kinds*; so as that if you destroy the woods, you abate or destroy the *Rains*: So *Barbadoes* hath not now half the Rains, it had, when more wooded. In *Jamaica* likewise at *Guanaboa* they have diminisht the Rains, as they extended their Plantations

* Possibly it may be more plain, to say, That those Exhalations, condensed by the Cool of the night, and impelled down-wards, fall by their weight, and then first of all meeting with the higher parts of the Earth, must needs gather and settle about the same, in clouds.

tions. But (to return to *Jamaica*) that this night-wind depends much upon the Mountain, appears by this, that its force extends to an equal distance from the Mountain, so that at *Port-morant*, which is the Easter-most part of the Island, there is little of Land-brise, because the Mountain is remote from thence, and spends its force along the Land thither. I shall further illustrate this kind of Attraction. In the harbour of *Jamaica* there grow many Rocks, shap'd like Bucks-- and Staggs-horns: there grow also several Sea-plants, whose roots are stony. Of these stone-trees (if I may term them so) some are insipid, but others perfectly Nitrous. Upon those other Plants with petrified roots there gathers a Lime-stone, which fixes not upon *other* Sea-fans, growing by them. It is observable also, that a *Monchinel-apple*, falling into the Sea, and lying in the water, will contract a *Lanugo* of Salt-peter: which is confirmed by the Author of the History of the *Antiles*. To conclude this particular, the Captain of our Ship ventured to give me a reason for these winds, which I will not conceal from you, since it may put you upon an Experiment, which he said he had often made: *Viz.* That the Sun did heat the Air, and exhale the Vapours, which after did settle on those hills, and as they grew cold, took up more room than before, and so made a wind by their pressure; as water, put hot into a Cask and closed, would, *he said*, as it cooled, break the Cask.

It is commonly affirmed, That the Seasons of the Year betwixt the *Tropicks* are divided by the Rains and Fair weather, and six Months are attributed to each Season. But this observation holds not *generally* true: For at the *Point* in *Jamaica* scarce fall (as was, on another occasion, hinted above) forty showers in a year, beginning in *August* to *October* inclusively. From the *Point* you may look towards *Port-morant*, and so along to *Ligonee*, six miles from the *Point*, and you'l scarce see, for eight or nine months, beginning from *April*, an afternoon, in which it rains not. At the *Spanish* Town it rains but three Months in the Year, and then not much. And at the same time, it rains at *Mevis*, it rains not at the *Barbadoes*. And at *Cignateo* (otherwise called *Eleutheria*) in the Gulph of *Bahama* it rains not sometimes in two or three years, so that that

Iſland hath been twice deſerted for want of rain to plant in.

At the *Point* of *Jamaica*, where ever you dig five or ſix foot, water will appear, which ebbs and flows, as the Tyde. It is not ſalt, but brackiſh; unwholſome for men, but wholſome for Hogs. At the *Caymans* there is no water, but what is brackiſh alſo; yet is that wholſome for men, inſomuch that many are recovered there, by feeding on Tortoiſes, and yet drink no other water.

The *Bloud of Tortoiſes* is colder, than any water, I ever felt there; yet is the beating of their Heart as vigorous, as that of any Animal (as far as I have obſerved.) And their Arteries are as firm as any Creatures I know: Which ſeems to ſhew, It is not heat that hardens the coats of the Arteries, or gives motion to the Heart. Their Lungs lye in their belly below the Diaphragme, extending to the end of their Shell. Their Spleen is Triangular, and of a firm fleſh (no Parenchyma) and floridly red. Their Liver is of a dark green, inclining to black, and Parenchymatous. In the *Oeſophagus* are a ſort of Teeth, with which they chew the graſs, they eat in the Meadows, which there grow at the bottom of the Sea.

All the *Tortoiſes*, from the *Caribes* to the *Bay of Mexico* and *Honduras*, repair in Summer to the *Cayman Iſlands*, to lay their Eggs and to hatch there. They coot for fourteen daies together, then lay in one night ſome three hundred Eggs, with white and yolk, but no ſhells: then they coot again, and lay in the ſand, and ſo thrice. Then the Male is reduced to a kind of gelly within, and blind, and is ſo carried home by the Female. Their fat is green, but not offenſive to the ſtomack, though you eat it as broath, ſtew'd. Your Urine looks of a yellowiſh green, and oily, after eating it.

There is no manner of Earth, but Sand, at the *Point*; yet I have eaten admirable *Melons*, Musk- and Water-melons, that have grown there. A great many trees alſo grow there, eſpecially *Mangranes*, and *Prickle-pears*. In other parts it is ordinary to ride through woods, that are full of very large Timber, and yet have nothing of earth, only firm Rock, to grow in.

In ſome ground, that is full of Salt-peter, your *Tobacco*, that grows wild, flaſheth as it is ſmoaked.

The

The fruit of Trees there of the ſame kind ripen not at one time: There is a Hedge of Plum-trees of two miles long, as you go to the *Spaniſh-Town*; on it I have many times remarked ſome Trees in *Flower*, others with *Ripe*, others with *Green* fruit, and others to have done bearing, at the ſame time. The like I have obſerved in other Trees. *Jaſmins* I have ſeen to blow before their leaves, and alſo after their Leaves are faln, again.

The *Sower-ſop*, a pleaſant fruit there, hath a flower with three leaves; when theſe open, they give ſo great a crack, that I have more than once run from under the Tree, thinking it all to be tumbling down.

There is a Bird, called a *Pellican*, but a kind of *Cormorant*, that is of taſte Fiſhy, but if it lye buried in the ground but two houres, it will loſe that taſte, as I have been told for certain.

I tryed ſome *Analyſis* of Bodies by letting *Ants* eat them; and I found that they would eat *Brown* Sugar *White*, and at laſt reduce it to an *Inſipid* powder. So they reduced a *pound* of *Sallet-oyl* to *two drams* of powder.

At our firſt coming there, we ſweat continually in great drops for three quarters of a year, and then it ceaſeth: During that ſpace I could not perceive my ſelf or others more dry, more coſtive, or to make leſs Urine, than in *England*. Neither does all that ſweat make us faintiſh. If one be dry, it is a thirſt generally ariſing from the heat of the Lungs, and affecting the mouth; which is beſt cooled by a little *Brandy*.

Moſt Creatures drink little or nothing there, as Hogs; nay, Horſes in *Guanaboa* never drink; nor Cows in ſome places of the Iſland for ſix *months*; Goats drink but once perhaps in a week. Parrots never drink, nor Parrokets; nor Civet-Cats, but once a month.

The hotteſt time of the day to us, is Eight in the morning, when there is no *Brize*. I ſet a weather-glaſs in the window, to obſerve the weather, and I found it not to riſe conſiderably at that time, but by two of the clock it roſe two inches.

Venice Treacle did ſo dry in a Gally-pot, as to be friable; and then it produced a Fly, called a *Weavil*, and a ſort of white-worm. So did the *Pilulæ de Tribus* produce a *Weavil*.

I ſhall

I ſhall conclude with an obſervation of a ſtrange Quality of a piece of Land: There is in the midſt of the Iſland a Plain, called *Magotti Savanna*, in which whenſoever it rains (and the rain paſſes along the Iſland, before it falls there) the rain, as it ſettles upon the ſeams of any garment, turns in half an hour to Magots; yet is that *plain* healthful to dwell in; and an hundred, that have ſeen the thing, aſſured me of it.

Infinite might the obſervations be, if I had alwaies enjoyed my health, for the ſpeculative Philoſophers; almoſt every thing there being new, and Nature being luxuriant in her Productions in thoſe parts: But I ſhall not trouble you with imperfect memorials, *&c.*

So far this curious Obſerver; whoſe laudable Example may both quicken and direct other Travellers in the Particulars, to be taken notice of in their Voyages.

Extract of a Letter, written by Mr. Sam. Colepreſs *to the Publiſher, containing an Account of ſome Magnetical Experiments; as alſo of an excellent Liquor made of Cyder-apples and Mulberries.*

Preſuming, what e're tends to the farther diſcovery of the *Magnetick* vertue, will not be unwelcome to you, encouraged by a hint, given in *pag.* 423. of your *Phil. Tranſact.* I ſhall not ſcruple to relate to you two or three Experiments of mine own, performed in the preſence of Sir *William Strode.*

1. I took a Loadſtone unpoliſh'd, which attracted but meanly; and I heated a Lath-nail glowing hot, nimbly applying the North-pole of the ſaid Magnet to it, which quickly took it up, and held it ſuſpended a great while, till I put down both the Magnet and Nail.

2. I took the ſame ſtone, and caſt it into the Fire, letting it remain there, till it was thorow hot, altering its colour from black to red, and being red-hot, I applied the North pole to another Lath-nail cold, and untoucht before, which it took up, but faintly, yet held it ſuſpended for ſome time.

3. Two or three daies after, I took the ſame Loadſtone, and found, that it attracted then as ſtrongly, as before it was caſt into